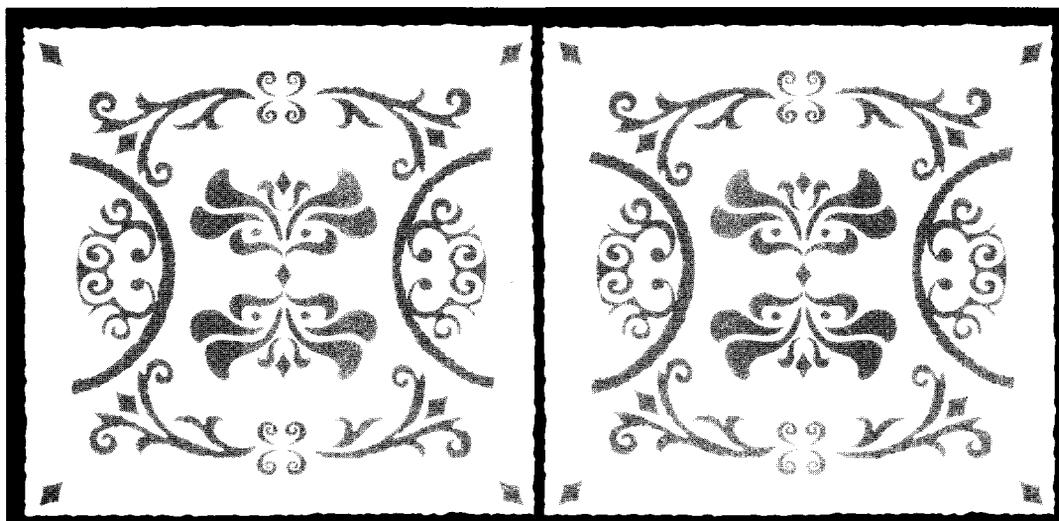


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# Implementing Health Sector Reform in Central Asia

*Papers from an EDI Health Policy Seminar  
held in Ashgabat, Turkmenistan, June 1996*

Edited by Zuzana Feachem  
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Laura Rose



*EDI LEARNING RESOURCES SERIES*

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The World Bank  
Washington, D. C.

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## *Foreword*

The Economic Development Institute (EDI) of the World Bank has provided training in low- and middle-income countries for the past four decades. Its mission is to share best practices, lessons from experience, and practical knowledge with the Bank's client countries to help them make policy choices that are efficient, equitable, and sustainable. Central to the success of EDI activities is the belief that sustainable development is most likely when countries are able to synthesize and adapt policy lessons from the experience of others, to equip managers and leaders with skills relevant to policymaking and effective governance, and to build an engaged and informed civil society.

One of EDI's major concerns is to contribute to better health, nutrition, and population outcomes. Its program on health sector reform aims to improve the development of national health systems through expansion of cost-effective services to the poor, wider access to public and private health services, improved management and decentralization of health care, and sustainable financing. EDI has organized senior policy seminars and other forums of exchange in Africa, Asia, Eastern Europe, and Latin America to share experiences among diverse countries, distill lessons learned, and promote best practices. These forums not only emphasize what to do, but include strategic analysis and recommendations on how to do it.

This publication summarizes the proceedings and papers presented at a senior policy seminar held in Ashgabat, Turkmenistan, in June 1996. Delegations from five countries in Central Asia and from Azerbaijan and Mongolia attended this seminar.

The theme of the Ashgabat seminar and this publication is implementing health sector reform. The seminar focused on topics central to restructuring health sector financing and health care delivery. Ways to maintain and improve the population's health status while preventing rapid escalation of health care expenditure were recurrent themes, with three key dimensions being discussed. The first concerned ways to raise additional revenues for health. Related topics included the "do's" and "don'ts" of implementing user fees, establishing formal health insurance, and improving public-private collaboration. The second dimension concerned ways to use existing resources more effectively. Related topics included reorienting resources toward primary care; improving hospital efficiency; and understanding the respective roles of federal authorities, subfederal authorities, and agencies in regulation and accountability in connection with mechanisms for setting prices and making payments. The third dimension concerned the political economy of reform and the wider environment in which health sector restructuring takes place. Related topics included regulation, consensus building among stakeholders, legislative processes, and the role of the professions.

The purpose of this publication is to disseminate the proceedings of the seminar, thereby contributing to knowledge on health reform implementation and financing issues in low- and middle-income countries.

Vinod Thomas  
Director  
Economic Development Institute



## *Acknowledgments*

The editors wish to thank the sponsoring agencies in Turkmenistan, especially the Cabinet of Ministers and the Ministry of Health and Medical Industry, for their support and enthusiasm during the preparation of the seminar. The seminar itself was made possible by the assistance of the Dutch and British governments; the World Health Organization's Regional Office for Europe; the World Bank, Human Development Network of the Europe and Central Asia Region; and the Economic Development Institute of the World Bank. Ultimately, however, credit for the success of the seminar must go to all those, both from Central Asia and beyond, who participated in the preparations and discussions in Ashgabat.



## *Abbreviations and Acronyms*

AIDS	Acquired immune deficiency syndrome
ARI	Acute respiratory infection
CARs	Central Asian republics
DALY	Disability adjusted life year
DLY	Discounted life year
EDI	Economic Development Institute
FSU	Former Soviet Union
GDP	Gross domestic product
GNP	Gross national product
GP	General practitioner
HIV	Human immunodeficiency virus
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
OECD	Organization for Economic Cooperation and Development
PHC	Primary health care
PPCU	Policy, planning, and coordination unit
STD	Sexually transmitted disease
TB	Tuberculosis
UNICEF	United Nations Children's Fund
WHO	World Health Organization



## Summary

The Economic Development Institute of the World Bank, in collaboration with the Ministry of Health and Medical Industry of Turkmenistan, organized a four-day seminar on implementing health sector reform held in Ashgabat, Turkmenistan, in June 1996. The seminar brought together some 100 senior policymakers from five Central Asian countries: Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Small teams from Mongolia and Azerbaijan also attended.

The participants included senior policymakers from ministries of finance, the economy, and health; members of social sector committees of parliaments; and leaders of health-related professions and relevant nongovernmental organizations. Representatives of the donor community and other organizations attended as observers (see the list of participants in the appendix).

The objectives of the seminar were to:

- Assist in the development of policies to improve health through an enhanced understanding—both administrative and political—of practical issues inherent in implementing health sector reform
- Stimulate an ongoing debate about sustainable health sector financing options and initiatives among the Central Asian republics that will also be pertinent to other countries, and to develop products that will inform this debate
- Facilitate a dialogue among the policymakers and financiers of health sector reform (ministries of finance and the economy), the executives (ministries of health), legislatures (parliaments), and other stakeholders (leaders of health-related professions and other relevant organizations).

The seminar emphasized topics central to the restructuring of health sector financing and health care delivery systems at a time of transition to democracy and a market economy. The recurrent themes throughout the seminar were how to maintain and improve the population's health status while preventing rapid escalation of health care expenditures.

The participants discussed the following topics key to health sector reform initiatives in the countries of Central Asia:

- The current status of health sector reform, including a comparison and analysis of data on expenditures, outcomes, and the availability and use of services in Central Asia
- The restructuring of primary care
- The rationalization and management of hospitals
- The sources of health care financing
- The mechanisms for paying providers
- The political economy of health sector reform.

The seminar concentrated on health sector financing and the restructuring of health care delivery systems. Within this theme, the topics discussed fell into two broad categories, namely, reforms that seek to increase the pool of available resources and those that aim to control costs and use resources more efficiently. Seminar participants did not discuss pharmaceutical policy reforms because of time constraints and the specific nature of such reforms.

The main lessons that emerged from the seminar were as follows:

- All agreed on the high costs of the old social protection system, but the tradeoffs involved in choosing between a market-oriented approach and a more social approach to reform are too complex to allow a simplistic, straightforward choice between reform options.
- When comparing experiences across countries, policymakers need to consider the degree of democratization achieved to date in the different countries and the level of public support for reforms.
- A difficult, but necessary, step is to define more precisely what services will be covered under reformed systems.
- For reformers and their overseas advisers to develop conceptually strong plans on paper that appeal to governments, donors, and academics is easy, but transforming them into successful actions has proved to be extremely difficult.
- Simply changing the financing of health care will not solve all the existing problems in the system, because the reform of financing is not a cure-all or a substitute for well-planned health service reforms.

The participants concluded that the seminar helped them to

- Acquire a better understanding of the reality of implementing health sector reform
- Understand better the pitfalls and costs inherent in poorly thought out reforms by appreciating their neighbors' reform experiences
- Enhance their understanding of best practices associated with health care reform implementation in other countries
- Become better informed about the possible health financing options open to them and the practical issues faced in moving toward new financing arrangements
- Recognize the complex interconnections between health sector financing, the structure of service delivery, and cost containment in the health sector.

While the seminar demonstrated that potential for reform and expertise is available within Central Asia, the international agencies that participated in the seminar have a role to play in assisting the Central Asian countries to access the "know-how" of reform implementation.

**Part I**  
**Seminar Proceedings**



# 1

## *Implementing Health Sector Reform in Central Asia: Context and Lessons Learned*

Laura Rose  
World Bank

The Economic Development Institute (EDI) of the World Bank sponsored a seminar on Health Sector Reform Implementation in Central Asia in June 1996 in Ashgabat, Turkmenistan. The participants were senior officials from ministries of health and finance and parliaments from the five countries of Central Asia: Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Representatives from Azerbaijan and Mongolia participated as observers. An additional 30 resource persons and observers from the World Bank and other international agencies, the U.S. Agency for International Development, the U.K. Know-How Fund, the Dutch government, the World Health Organization, and the London School of Economics were also present.

The seminar represented one of the first components of EDI's program of support for learning in the field of health sector reform and sustainable health financing. The objective of EDI's work in health sector reform is to empower the World Bank's client countries to make more informed choices about efficient, equitable, and sustainable health system development. To this end, it seeks to broker knowledge, lessons learned, and best practices about what to do and how to do it. It also seeks to maintain a two-way learning process, in which Bank staff are exposed to novel approaches and successful ideas that have originated in the client countries.

A series of technical papers were prepared for the seminar, which sought to present up-to-date overviews of the critical issues involved in restructuring health systems. Each delegation also prepared background papers on the health reform context in its country, while other contributors described relevant experience outside Central Asia. This volume represents the final step in disseminating the materials and knowledge brought together in Ashgabat.

The seminar was opened on June 4, 1996, by Turkmenistan's Minister of Health, Chary Kuliev. Kuliev introduced the heads of the delegations from the participating countries, the external resource team members, and the international observers. The distribution of Central Asian participants was more or less as follows: ministries of health, 42 percent; ministries of the economy and finance, 25 percent; parliaments, health-related professions, insurance funds, and others, 33 percent.

The Central Asian republics find themselves operating in a difficult social policy context, with key problems that include an acute fiscal crisis, exploding social needs, weak capacity in the public sector, and pressures to increase health expenditures. Nevertheless, in their responses to these problems, the countries must be careful not to lose the vital benefits of the old system, such as high immunization rates and malaria control programs.

This volume contains all the technical papers commissioned for the seminar. The papers sought to summarize existing theory and experience on critical areas of health sector reform; to provide a focus for debate among the delegates from the Central Asian republics; and to provide a resource for all those involved in reform, both in Central Asia and elsewhere.

The country presentations by each delegation highlighted the commonality of the problems faced and the diversity of the approaches adopted in each country. They provide a valuable

insight into the similarity of the concerns, yet the differences in emphasis that have been the hallmark of health sector reform in the region. Each country is, to some extent, developing a leading role within the region in certain key areas, for example, Kazakhstan is taking the lead in health insurance, the Kyrgyz Republic in planned capacity rationalization, Turkmenistan in instituting countrywide general practice based on primary care, and Uzbekistan in pharmaceutical sector development. Regionwide communication between those responsible for health reform has always been good, but the seminar demonstrated that the scope for improving the dissemination of lessons between the countries about what works and what does not work is plentiful. The presentation and discussion of the papers formed the centerpiece of the seminar, and important issues became apparent during the discussions. The following pages summarize the most salient of these issues.

### **The Context of Health Sector Reform**

The countries of Central Asia face considerable challenges as they seek to modernize their health sectors and improve their populations' health status. Their inheritance is one of state owned, centrally planned, tax-funded health care. Only five years ago what are now the ministries of health of five independent states responsible for developing comprehensive public health and health care programs were branch offices answering to Moscow, with little ability to influence policy, let alone to develop it from start to finish. While health conditions differ significantly across the region (primarily because of differing income levels and environmental factors), the Central Asian countries share many key problems, and consensus has been growing that all the Central Asian republics need to tackle the following four fundamental issues:

- Financing and efficiency of the health sector
- Rationalization of the health infrastructure
- Management and budgeting
- Health promotion and disease prevention.

The seminar was designed to contribute to these in three ways, namely:

- To assist in the development of policies to improve health through an enhanced understanding of the practical issues—both administrative and political—inherent in implementing health sector reform
- To stimulate ongoing debate about sustainable health sector financing options and initiatives among the policymakers of Central Asian countries and to develop products that will inform this debate, as well as benefit other countries outside the region
- To facilitate a dialogue among the policymakers and financiers of health sector reform (ministries of finance and the economy); the executives (ministries of health); the legislators (parliaments); and other stakeholders, such as leaders of the health professions, non-governmental organizations, and the private sector.

Health sector reform efforts around the world fall into three general models. Countries such as the Czech Republic, New Zealand, and the United Kingdom have often adopted the "big bang" model for political reasons during periods when public expenditures for health services are rising. Countries often adopt the "collapse and rebuild" model out of necessity, when their former system has totally collapsed and they have no choice but to rebuild. The "slow and steady" approach, which is characteristic of reforms in countries such as Canada, the Netherlands, and Romania, has also often been chosen largely for political reasons, and countries can pursue this approach even in times of decreasing public expenditures on health. These models of health sector reform proved useful in the country discussions and in the debates on the most appropriate models for the Central Asian countries.

The discussion of Klugman and Schieber's survey of health sector reform (see chapter 2 in this volume) highlighted a number of significant points, namely:

- The old social protection system entailed high costs, but the tradeoffs involved in choosing between a more market-oriented approach or a more social approach to reform are too significant and too complex to permit a straightforward choice between reform options.
- The degree of democratization achieved to date and the level of public support for reforms should be taken into account when comparing different countries' experiences.
- The precise definition of what services will be covered under reformed systems is difficult, but necessary.
- The development of conceptually strong plans by reformers and their overseas advisers that appeal to governments, donors, and academics is easy, but transforming them from paper into successful action has proven to be extremely difficult.
- The emphasis on changing the financing of health care by several seminar participants will not solve all the system's current problems. It is not a cure-all or a substitute for well-planned health service reforms.

### *Primary Care*

The papers by Godinho (chapter 3) and Scintee and Traistaru (chapter 13) stimulated debate on the need for well-integrated, efficiently managed care systems across primary and secondary care boundaries, and emphasized that concentrating on primary care to the exclusion of secondary care can be as damaging as an over-reliance on hospital services alone.

The example of successful reform in Romania (chapter 13) and the role of a World Bank-financed project in the reform stimulated much discussion and interest among the participants, who wanted to learn more about

- Training programs for general practitioners
- Experiences of starting with a pilot project
- Changes in referral systems
- Mechanisms for increasing physicians' salaries
- Components of the project the World Bank financed.

The high level of interest the Romanian paper generated clearly demonstrates the general shortage of information about reform measures that can be shown to work. The delegates were all familiar with the various theoretical models that might be applicable to their countries, but were hungry for hard information about which had really worked elsewhere.

### *The Hospital Sector*

Discussions of Hensher's paper (chapter 4) on hospital rationalization suggested that while many of the participants accepted the need to reduce capacity in a way that eliminated new spending on fixed costs and released resources, that is, the need to close hospitals, at a theoretical level, they were skeptical about their practical ability to do this. Delegates were daunted by the political and administrative costs of facility closures to the point where some felt this to be an unpromising area for reform. While accepting the possibility that market-oriented mechanisms may not be an effective way to reduce capacity, delegations from certain countries appeared happy to place their faith in insurance-based market models to achieve this objective. The discussions suggested that practical issues of hospital or facility ownership and responsibility need to be clarified before reform can begin, otherwise the necessary measures may not be taken.

### **Health Financing**

The papers by Le Grand (chapter 5) on sources of health care financing and by Schieber (chapter 6) on alternative payment mechanisms provoked lively debate, with the following three key points stressed in relation to the latter subject:

- The importance of demonstrating and evaluating any provider payment system before nationwide implementation
- The conclusion that experience from the former socialist world indicates that including economic incentives in payment mechanisms does achieve the desired results
- The possession (or development of) reliable data is essential if robust and workable financing mechanisms are to be planned and managed successfully.

In a presentation Vladimir Omelchenko, director of mandatory health insurance in the *oblast* of Kaluga, the Russian Federation, highlighted the lessons Russia has learned in connection with reforming provider payment systems. Omelchenko repeatedly stressed the importance of beginning the reform process with primary health care reform, controlling health care expenditures by using capitation payments for primary health care, and strengthening the role of general practitioners as gatekeepers.

At the end of the discussion of financing issues, two further points emerged: (a) the need to find a viable method of formalizing and legitimizing the under-the-table payments health care providers now receive, which are prevalent throughout the region; and (b) the need for all the countries to make better use of the money they have already devoted to health care, given that simply increasing sectoral revenues is insufficient.

### **Lessons Learned from the Seminar**

Aikan Akanov, from Kazakhstan, closed the final session with an excellent summary of the seminar. He highlighted the achievements of each of the countries present: the health insurance scheme in Kazakhstan, the Manas program in the Kyrgyz Republic, the success in lowering infant mortality rates and increasing life expectancy at birth in Mongolia, the support for basic science in Tajikistan, the social protection scheme in Turkmenistan, and the primary and rural health care services in Uzbekistan. He stressed that reform is inevitable, and that the countries of the region need to coordinate and to learn from each other. Finally, he noted that he would like to see the World Bank, with its narrower approach, and the World Health Organization, with its broader approach, develop a more integrated approach to working together in the region.

Following the three days of discussions and presentations on health care reform in the Central Asian republics, we can draw the following tentative conclusions regarding the status of health sector reform in the region:

- All the countries are trying to keep some features of the old system.
- Huge changes are taking place in all the countries of the region.
- Reform is inevitable and ongoing.
- All the countries must maintain a clear-headed approach toward where the reforms are heading.
- Each country should have an integrated strategy for health reform.
- Great potential and expertise is available within Central Asia.

The participants believed that future areas of work in which further discussions and assistance would be valuable included

- Understanding the legal aspects of reform
- Using primary health care as the engine of reform and undertaking the additional work needed on financing, clinical protocols, training, incentives, and levels of public ownership and privatization
- Collecting private expenditures and increasing risk pooling.

During the concluding discussion, the participants repeatedly emphasized the value of learning from each other. They could see the positive and negative sides of what other countries were doing and inform their own future actions from the lessons others were learning. While they indicated overwhelming support for continuing the meetings, they suggested that in the future meetings should focus on one topic to allow more in-depth discussion.



# **Part II**

## **Overview**



# 2

## *A Survey of Health Reform in Central Asia*

Jeni Klugman and George Schieber  
World Bank

Independence and transition from the Soviet command economy have created both enormous difficulties and great opportunities for Central Asia. This is especially true in the health sphere. The impressive achievements in health status that set the region apart from its neighbors of comparable income are now under pressure. The stresses at the individual and household level associated with the collapse of the inherited economic system have been compounded by sharply reduced funding for health services.

This chapter surveys health care reform in Central Asia in the context of the socioeconomic, epidemiological, and institutional realities the countries face. It examines demographic and epidemiological trends, which indicate the necessary scope of and priorities for health services. It also discusses the countries' recent economic performance, highlighting the worsening fiscal constraints; evaluates current health systems, focusing on their primary strengths and weaknesses; addresses critical institutional elements of the reform process, including decentralization and staffing issues; and examines the reform agenda facing Central Asian health policymakers.

Improvements in health status in Central Asia will depend on a number of factors. Income growth and its distribution (as measured, for example, by the incidence of poverty) are probably the most important determinants of health status in the long run. Thus recent reversals in this area are likely to have adverse repercussions. Maintaining educational achievements, especially of women, is also important. Of course, health programs play a critical role, especially by developing cost-effective interventions, promoting health, and improving water supply and sanitation facilities.

The goals of health sector reform are relatively straightforward to state, that is, to improve the population's health status, assure equity in and access to health services, improve efficiency, improve clinical effectiveness, and assure quality and consumer satisfaction. How to reach those goals in practice is a far less tractable task.

As far as possible, this chapter attempts to provide an empirical, as well as a conceptual, overview of the issues to be addressed. While important distinctions exist between the countries, some generalizations are possible. Indeed, the problems faced in financing and delivering health services in an efficient and equitable way present a difficult challenge for all countries, rich and poor.

### **Demographic and Epidemiological Trends**

As table 2.1 indicates, the people of each of the Central Asian countries enjoy relatively good human development outcomes, especially in relation to their income levels. High literacy rates,

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This chapter was prepared with the assistance of Timothy Heleniak and Vivian Hon of the World Bank. It represents the views of the authors, not of the World Bank. It was revised in the light of participants' comments. It draws on the background contributions of Peter Cowley (ABT Associates) on epidemiological analysis, and of Michael Borowitz, Jack Langenbrunner, and Sheila O'Dougherty (ABT Associates) on experience with financing reform. It also benefited from the advice and cooperation of colleagues, in particular, Robert Anderson, Richard Feachem, Zuzana Feachem, Bernard Funck, Billy Jack, Rita Klees, Robert Liebenenthal, Costas Michalopoulos, Helga Muller, Mamta Murthi, Barbara Ossowicka, and Gero Verheyen.

**Table 2.1.** Human Development Indicators, Selected Countries and Years

Country	Annual population growth 1960-92 (%)	Life expectancy at birth (years)	Adult literacy rate (%)	Real GDP per capita (PPP\$, 1991)	UNDP human development index
Kazakhstan	1.8	69.0	97.5	4,490	0.8
Turkmenistan	2.8	66.0	97.7	3,540	0.7
Kyrgyz Republic	2.3	68.0	97.0	3,683	0.7
Uzbekistan	2.9	69.0	97.2	2,790	0.7
Tajikistan	3.1	70.0	96.7	2,180	0.6
Afghanistan	1.8	42.9	31.6	700	0.2
Iran	3.3	66.6	56.0	4,670	0.7
Pakistan	2.9	58.3	36.4	1,970	0.4
Russia	0.7	70.0	98.7	6,930	0.9
Turkey	2.4	66.7	81.9	4,840	0.7
Medium HDI	n.a.	68.0	80.4	3,420	0.6
Low HDI	n.a.	55.8	47.4	1,170	0.4

n.a. Not applicable. GDP Gross domestic product. HDI Human development index. PPP Purchasing power parity. UNDP United Nations Development Programme.

Source: UNDP (1994, tables 1, 22, 23, 44, 45).

especially for females, represent a significant achievement and stand in stark contrast to literacy rates in neighboring countries. Coupled with relatively high life expectancy, these high literacy rates mean that the human development ranking of each republic is higher than that based simply on income, especially for the poorer countries. This section explores the demographic and epidemiological trends underlying health status in Central Asia in further detail.

### Demographic Trends

An analysis of recent demographic trends in Central Asia is a useful basis for evaluating the performance of countries' health systems and needed reforms. Overall, populations are young, and are likely to become younger in some countries despite recent declines in fertility rates. Since 1989, mortality rates have increased and life expectancy has declined. Significant outmigration has also taken place. These demographic trends have important implications for health service priorities, including a greater need for safe motherhood, immunization, and management of the sick child (see Jamison and others 1993).

As table 2.2 shows, population increased in all five countries between 1989 and 1995, with Turkmenistan leading in percentage terms (16.1 percent), and Uzbekistan growing the most in absolute numbers (2.7 million people). All the countries except Turkmenistan showed a combination of high natural population increases with outward migration. Kazakhstan's population grew only minimally, because its relatively low natural increase almost matched outward migration, which consisted mainly of Russians. Recent demographic trends are not entirely a drastic reversal of the past, but rather a rapid acceleration of some trends that have been occurring for several decades. Birth rates have been declining slowly since the 1960s, and immigration by Russians and other nationalities began to reverse in the mid-1970s. Nevertheless, population growth is quite high relative to that in Western countries.

Between 1989 and 1994 fertility, as measured by either the crude birth rate or the total fertility rate, declined in each republic (table 2.3). Analysis of age-specific fertility rates shows that older

**Table 2.2.** *Population Changes in Central Asia, 1989–96*  
(thousands)

Country	Total population			Percentage change, 1989–95		
	1989	1995	1996	Total	Natural increase	Migration
Kazakhstan	16,536	16,679	16,533	0.9	7.3	-6.5
Kyrgyz Republic	4,290	4,483	4,547	4.5	12.7	-8.2
Tajikistan	5,109	5,786	5,885	13.3	17.8	-4.6
Turkmenistan	3,523	4,089	4,565	16.1	16.7	-0.6
Uzbekistan	19,905	22,563	22,978	13.4	16.6	-3.2

Source: Statistical Committee of the Commonwealth of Independent States (CIS) and national statistical offices data.

women, who presumably already had at least one child, have shown the largest fertility decreases. The age group that showed the largest decline was women aged 40 to 44. Women under 20 showed either slight declines or increases in fertility. The only exception was Tajikistan, where fertility declined for every age group. Total fertility rates are nonetheless still high relative to countries of the Organization for Economic Cooperation and Development (OECD), which average a rate of 1.9, and Russia, whose average fertility rate is 1.4.

Despite the long-term downward trend in fertility, overall population growth remains high because of the demographic momentum created by the young age structure. During 1960–89 overall growth was double or triple that during 1939–59. More than 40 percent of the population is younger than 16 years old in every republic except Kazakhstan, where the figure is 31 percent. This has important implications for health policies and practices and indicates the mix of health care facilities and personnel that will be needed. As these cohorts move into their childbearing years, the momentum for future population growth is tremendous. By 2015 Tajikistan, Turkmenistan, and Uzbekistan are still expected to have roughly the same skewed age structures that they have today, with more than 40 percent of their populations below age 16 and about one in ten people being of retirement age.

The outmigration of Russians and other Slavic and European nationalities has had, and will continue to have, an enormous impact on the region's demographics. The Russian population is older; is more urbanized; and has birth rates between one-third and one-half of the titular nationalities and higher death rates, resulting in much lower rates of natural increase. This trend of differential rates of natural growth is long-standing, and has become even more marked in recent years. In terms of their nationality composition, the Central Asian countries can be classified into two groups: Kazakhstan and the Kyrgyz Republic, with their much larger Russian populations (38 and 22 percent, respectively, in 1989) on the one hand, and the remaining three countries, whose populations are less than 10 percent Russian, on the other hand. Outmigration has played a much more important role in population change in the former group. Tajikistan has also seen outmigration, particularly during the civil war, although this was largely temporary.

The crude death rates have increased in each republic, most dramatically in Kazakhstan and the Kyrgyz Republic. Life expectancies have declined in all the countries since 1989, although some evidence indicates that life expectancies are overstated in the states of the former Soviet Union (FSU) because of a variety of statistical and registration problems (see Anderson and Silver 1995). As in every other former Soviet republic during the transition (though much less so than in Russia), the male-female gap in life expectancy has widened in all the countries except Turkmenistan. By contrast, the infant mortality rate has declined in all the countries except Kazakhstan and Tajikistan.

Analysis of trends in age-specific mortality reveals a pattern that is somewhat different from patterns exhibited elsewhere in the FSU. In Russia, the age groups with the largest mortality

**Table 2.3. Selected Demographic and Health Characteristics, Central Asian Republics, 1989 and 1994**

Country	Crude birth rate (per 1,000 population)			Crude death rate (per 1,000 population)			Rate of natural increase (per 1,000 population)			Total fertility rate <sup>a</sup>			Infant mortality rate (deaths in the first year per 1,000 births)			Maternal mortality rate (per 1,000 births)			Life expectancy (years)		
	1989	1994	Percentage change	1989	1994	Percentage change	1989	1994	Percentage change	1989	1993 <sup>b</sup>	Percentage change	1989	1994	Percentage change	1989	1993 <sup>b</sup>	Percentage change	1989	1994	Percentage change
Kazakhstan	23.0	18.2	-20.9	7.6	9.6	26.3	15.4	8.6	-44.2	2.877	2.300	-20.1	26.0	27.4	5.4	53.1	49.6	-6.6	68.7	65.8	-4.2
Kyrgyz Republic	30.4	24.6	-19.1	7.2	8.3	15.3	23.2	16.3	-29.7	3.875	3.270	-15.6	32.4	29.6	-8.6	42.6	44.5	4.5	68.5	65.4	-4.5
Tajikistan	38.7	28.2	-27.1	6.5	7.0	7.7	32.2	21.2	-34.2	5.236	4.300	-17.7	43.3	45.9	6.0	38.9	74.0	90.2	69.4	67.7 <sup>c</sup>	-2.4
Turkmenistan	35.0	32.0	-8.6	7.7	7.9	2.6	27.3	24.1	-11.7	4.401	4.000	-9.1	54.8	42.9	-21.7	55.2	44.4	-19.6	65.2	63.9	-1.8
Uzbekistan	33.3	29.4	-11.7	6.3	6.6	4.8	27.0	22.8	-15.6	4.179	3.800	-9.1	38.1	32.7	-14.2	42.8	24.1	-43.5	69.2	67.9 <sup>d</sup>	-2.0

a. The total fertility rate is a synthetic measure of the number of children a woman would have if she passed through her childbearing years at the current age-specific fertility rates.

b. Figures for 1994 not available.

c. 1992.

d. 1993.

Source: CIS Statistical Committee and national statistical offices data; World Health Organization (WHO) *Health for All* database.

increases during the transition period were those aged 35–44, especially males. By contrast, in Central Asia, the age groups with the largest increases in death rates tended to be younger, between 10 and 30 years old. Further investigation is needed to explain this trend.

Comparison among the countries is also interesting. Tajikistan and Turkmenistan have the highest under 5 mortality rates for both males and females, whereas for males older than 15, Kazakhstan has the highest age-specific mortality rates. In Kazakhstan, females between 5 and 44 years old tend to have lower age-specific mortality rates than those in the rest of Central Asia. Women older than 44 in Turkmenistan have the highest age-specific mortality rates in Central Asia.

The mortality patterns are even more striking when the cause-specific mortality trends are examined (table 2. 4). With a few notable exceptions, the same general pattern emerges of cause-specific mortality in Central Asia as in the other transition states of the FSU and Eastern Europe. This pattern is true for most developing countries with adequate data: noncommunicable diseases (including cardiovascular diseases and cancers) and injuries are the leading causes of adult death (see Phillips and others, p. 61, in Feachem and others 1992). In Central Asia the largest increases in mortality have been deaths from heart and circulatory diseases, which are related to stress, diet, sedentary lifestyle, and smoking. These diseases account for between 30 to 100 percent of the increase in death rates between 1989 and 1993 (except in Tajikistan), and make up the largest share of the overall increase. For the Kyrgyz Republic, while deaths from heart and circulatory system diseases explain 35 percent of the increase for males, the largest category is "other causes," which includes unexplained causes of death (and may indicate poor coding or diagnosis). For females, "other causes" is purported to explain 158 percent of the increase, which obviously indicates measurement problems. Because of the civil strife in Tajikistan, deaths from external causes, including homicides, was the largest explanatory variable for males, accounting for 62 percent of the increase. For females in Tajikistan, increased deaths from infectious and parasitic diseases accounted for the largest part of the increase, followed closely by deaths from heart and circulatory diseases.

### *Rural-Urban Differentials*

Urban and rural trends in demographic structure and health indicators differ significantly. In all the countries the urban share of the total population has declined since 1989. The reasons include the outmigration of Russians, the differential rates of population growth between urban and rural areas, and some urban outmigration back to rural areas (for example, to engage in home agricultural production). Total fertility rates in rural areas are 13 to 30 percent higher than national averages, and life expectancies do not differ to any appreciable extent, thus rural rates of natural population increase are considerably higher than urban rates.

While life expectancies do not reveal large urban-rural disparities, infant mortality rates do; however, the trend is rather surprising. In 1989 infant mortality was higher in rural areas of all five countries. Since then, the gap has narrowed in every republic, and except in Kazakhstan, the rural rate was lower than the urban rate in 1994. (Note that this may partly be due to the recording of deliveries with expected complications being transferred to higher level urban facilities, and clearly requires further investigation.)

Urban-rural differences in population growth rates are striking. In Tajikistan, Turkmenistan, and Uzbekistan rural populations are expected to grow about twice as fast as urban populations and to account for 67 to 84 percent of total growth during the next two decades. By contrast, in Kazakhstan and the Kyrgyz Republic urban populations are expected to grow faster than rural populations, although the overall rates of growth are expected to be below the regional average. Thus the urban share of the population is expected to increase from its present levels in Kazakhstan and the Kyrgyz Republic and to decrease in the other Central Asian countries.

**Table 2.4. Death Rates by Cause and Gender, Central Asia, 1989–93**

Gender and cause	Kazakhstan		Kyrgyz Republic		Tajikistan		Turkmenistan		Uzbekistan	
	Percentage change	Percentage of change explained by cause	Percentage change	Percentage of change explained by cause	Percentage change	Percentage of change explained by cause	Percentage change	Percentage of change explained by cause	Percentage change	Percentage of change explained by cause
<i>Males</i>										
Total deaths	23.1	100.0	8.0	100.0	54.1	100.0	-5.9	100.0	2.7	100.0
Infectious and parasitic diseases	23.7	3.7	7.2	4.3	54.4	13.1	-10.5	6.3	-15.0	-4.2
Cancer	4.2	4.8	-10.3	-5.6	-21.3	-1.8	-17.8	-0.5	-14.5	-4.8
Heart and circulatory system	30.8	46.6	8.7	35.0	12.1	9.1	10.6	79.4	17.5	80.9
Respiratory system	11.4	6.1	-9.6	-8.7	13.7	7.6	-19.0	-3.3	-3.6	8.6
Digestive system	22.3	3.2	10.0	4.9	-7.9	0.0	-9.7	2.6	31.4	13.9
External causes	33.4	26.8	6.0	14.3	386.7	62.2	-10.4	6.7	-18.2	-11.0
Other	24.1	8.7	68.6	55.8	31.3	9.8	-8.0	8.7	6.4	16.6
<i>Females</i>										
Total deaths	18.4	100.0	5.5	100.0	14.7	100.0	-6.7	100.0	7.4	100.0
Infectious and parasitic diseases	-5.7	-0.5	-19.8	-8.6	57.6	35.7	-18.9	-2.1	-16.3	-3.6
Cancer	0.4	1.9	-6.8	-4.8	-25.0	-5.8	-6.8	8.0	-13.4	-2.0
Heart and circulatory system	23.9	67.4	-4.1	-7.8	10.5	28.2	8.9	103.4	21.2	85.5
Respiratory system	1.4	1.6	-18.7	-38.9	11.8	19.4	-22.9	-12.6	-5.9	2.7
Digestive system	29.1	10.0	2.1	3.7	14.3	5.0	-6.1	5.1	-16.8	-3.1
External causes	29.1	10.0	2.1	3.7	14.3	5.0	-6.1	5.1	-16.8	-3.1
Other	38.1	17.1	138.7	158.1	21.7	18.8	-11.4	5.0	9.6	12.7

*Note:* Other causes of death include endocrine, nutritional, and metabolic diseases; immunity disorders; mental disorders; diseases of the nervous system; diseases of the genitourinary system; complications from pregnancy; and undefined causes.

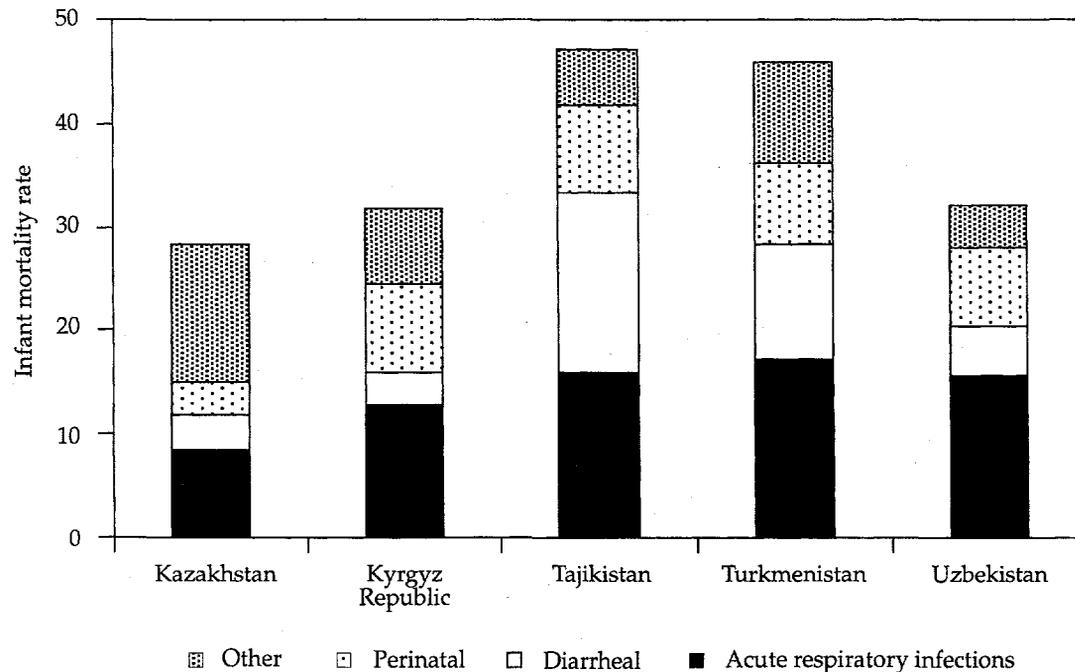
*Source:* 1989: Goskomstat SSSR (1990); 1990–93: CIS Statistical Committee (1995a,b).

### Epidemiological Situation

A clear indicator of health needs and demands is the population's epidemiological situation. International experience suggests that changes in the pattern of disease proceed in two stages. The first stage is the demographic transition, when mortality from infectious diseases declines and, partly as a result, fertility also decreases. The second stage is the epidemiological transition, when the population becomes older and noninfectious diseases become the main causes of ill-health (World Bank 1993b). In Central Asia, however, the pre-epidemiological transition disorders, such as infectious diseases and high infant mortality, co-exist alongside certain risk factors (unhealthy diet, smoking, and alcohol abuse) and associated health problems such as ischemic heart disease, emphysema, and motor traffic accidents, which are typical of richer industrial countries. A similar challenge faces many other developing countries, where noncommunicable diseases and injuries are prevalent alongside high rates of certain communicable diseases such as tuberculosis (TB).

The patterns of disease that prevail in Central Asia today suggest that the countries have yet to pass completely through the epidemiological transition, and that some disorders that had previously been eradicated have seen a resurgence. Furthermore, in some Central Asian countries such as Tajikistan and Turkmenistan, classic pretransitional disorders such as acute respiratory infections and diarrheal diseases cause high infant mortality, indicating that they have never been completely controlled in these areas (see figure 2.1). High mortality (and morbidity) from disorders related to childbirth continue. While the data do not suggest that either maternal or perinatal mortality rates are rising in Central Asia, these rates are still high relative to the levels of health care access and female literacy. The relative importance of pre-epidemiological transition disorders in a

Figure 2.1. Infant Mortality by Cause, Central Asia, 1993



Note: According to the World Health Organization, the infant mortality rate is defined as the number of deaths of infants under one year of age per 1,000 live births. The perinatal mortality rate is defined as deaths per 1,000 births of fetuses and infants between 22 weeks of gestation (or weighing 1,000 grams or more) and one week after birth. There is often confusion in using national and international criteria for such statistics, especially in Central Asia, because the former Soviet definitions differed. This also suggests the need for caution in any time series analysis.

Source: Authors' research.

country depends on a host of factors, including public health and clinical effectiveness. Other significant factors include dietary inadequacies that cause anemia in women and children, and also fertility rates (birth spacing). Environmental risk factors include poor quality and inadequate quantities of water, poor sanitation, contaminated food, and poor personal hygiene practices. Bacteriological contamination of water has increased as a result of poor sanitation and the absence of functioning chlorination systems. Salinity and heavy metal concentrations have increased, and pesticide contamination, while decreasing, is still of concern.

Maternal mortality rates in Uzbekistan are reported to be only about half the regional average, and only about one-third of the rate in Tajikistan (table 2.3). Exploring why this striking difference has emerged is important. Fertility and infant mortality rates have recently declined in Uzbekistan by 9 and 14 percent, respectively. However, Uzbekistan's perinatal mortality achievements are not the best in the region (33 per 1,000 in Uzbekistan in 1990, compared with a range of 31 per 1,000 to 44 per 1,000 for other countries in the region), which is interesting given that maternal mortality is normally highly correlated with perinatal mortality. Researchers have attributed the improvements in Uzbekistan to a comprehensive program aimed at women of child-bearing age that was launched in 1991, and includes special preventive and treatment centers in hospitals and polyclinics and the promotion of birth spacing, although some have suggested that these initiatives are too recent to have had such striking results.

As pointed out in the note to figure 2.1, data on perinatal mortality, especially time series data, are difficult to interpret. Nonetheless, perinatal mortality seems to be high because relatively few births (less than 5 percent) involved access to significant obstetric care, such as cesarean section. While data are not available on prematurity and its possible link with anemia and on environmental toxins, low birth weight does not appear to be a regional problem. The maternal mortality picture is complicated by the relationship between access to health care and predisposing maternal disease, such as anemia or hepatitis. The exact causes of high maternal and perinatal mortality are unknown. Death audits in such cases, including family lineage histories, would help clarify the sources of the problem, especially in the most badly affected countries.

The profile of mortality among young children (one to five years old) suggests a profile of causality similar to infant mortality. The available evidence suggests that diarrheal diseases, and especially acute respiratory infections, are the major causes of child death. The extent of child malnourishment is generally unknown. Recent surveys in Kyzyl-Orda in Kazakhstan suggest that stunting (long-term deprivation) is more problematic than wasting (Ismail and Hill 1996). Table 2.5 compares children's nutritional status in selected countries. Investigators have found that dietary quality plays a more important role in determining nutritional status than dietary quantity. However, not all the factors associated with poor nutritional status among children and women are due to poverty. Some links found between anemia and reproductive history, for example, reflect long-standing cultural values and practices.

Infectious diseases have generally not been important in determining the health of the general population. The possible exceptions are now TB and diphtheria. While the incidence of TB may be under-reported, the official incidence of diphtheria has risen sharply across the region. In the Kyrgyz Republic and Tajikistan, the rates per 100,000 population rose in both countries from about 0.2 in 1990 to 6.8 in the Kyrgyz Republic and 33.4 in Tajikistan in 1994. Available evidence suggests that the rates of sexually transmitted diseases (STDs) have also risen rapidly. The incidence of syphilis rose from 2.3 per 100,000 population in 1993 to 11 per 100,000 in 1994, and these rates are likely under-reported. The entire region has reported few AIDS cases, less than 100 total.

The most important cause of death throughout the region is ischemic heart disease. Other significant causes of death in adults are cerebrovascular and respiratory diseases, with some slight regional variations. These are diseases that are closely associated with lifestyles in industrial countries—cigarette smoking, diets high in fat, and lack of exercise—and with the postepidemiological transition health profile.

**Table 2.5. Children's Nutritional Status, Selected Countries and Years**

Country	Year	Percentage stunted	Percentage wasted
Kazakhstan (Kyzyl-Orda)	1994	15.0	0.5
Kyrgyz Republic	1993	—	7.0
Uzbekistan (Muynak)	1993	25.9	3.6
Brazil	1989	15.4	2.0
China	1987	32.1	3.6
China (poor rural provinces)	1989	41.8	2.2
Ethiopia	1992	64.2	8.0
India	1988	62.1	19.2
Mongolia	1992	26.4	1.7
Tanzania	1991–92	42.6	6.0

— Not available.

*Note:* Children are considered to be stunted or wasted if they are less than -2 standard deviation below the reference median.

*Source:* Ismail and Hill (1996).

### **Burden of Disease**

Traditional mortality statistics do not reflect the relative importance of different causes in terms of healthy years lost. A useful tool to help consider the relative importance of different diseases is to calculate the potential years of life lost (this is referred to as burden of disease analysis). The discounted life year (DLY) approach includes mortality and loss of future life, whereas the DALY (disability adjusted life year) approach extends to losses resulting from disability as well as death (see, for example, World Bank 1993b). Both analyses have been carried out in several Central Asian countries, the results of which are presented in table 2.6. The comparisons are illustrative only, and do not represent every major cause of death and disability.

The most interesting results of the burden of disease analysis in table 2.6 can be highlighted by comparing rates of diarrheal diseases and acute respiratory infections. The situation in Uzbekistan is particularly striking, although this is attributable in part to the relatively young population; also the picture has improved since 1990, as infant mortality has fallen significantly. The table shows that ischemic heart disease plays an important role in death and disability and that other important diseases include alcoholism, which is particularly significant in the *oblast* of Issyk-Kul in the Kyrgyz Republic. These differences are depicted in figure 2.2.

The burden of disease analysis in table 2.6 suggests that diseases that could be prevented by vaccines imposed a relatively small cost in terms of lost DALYs and DLYs, although the incidence of certain diseases, such as diphtheria, has risen recently. However, table 2.6 does not reflect the enormous potential for loss of life if current control efforts are not sustained. The same argument applies to TB and STDs.

Burden of disease analyses could be further enriched by considering such risk factors as alcoholism and smoking. There is also a wider picture that is excluded from traditional DALY statistics, for instance, some injuries are due to alcohol abuse and smoking is associated with the risk of cancer. Estimates indicate that about 5 to 10 percent of DALYs lost in the region are due to tobacco use, and a similar figure was found for alcohol abuse in the Kyrgyz Republic.

### **The Macroeconomic Context and Constraints**

Macroeconomic performance is a critical element in the analysis of health outcomes and policy reform. The average level of national income per capita is clearly important. More specifically, the importance of income growth for health outcomes lies in its role in reducing poverty and

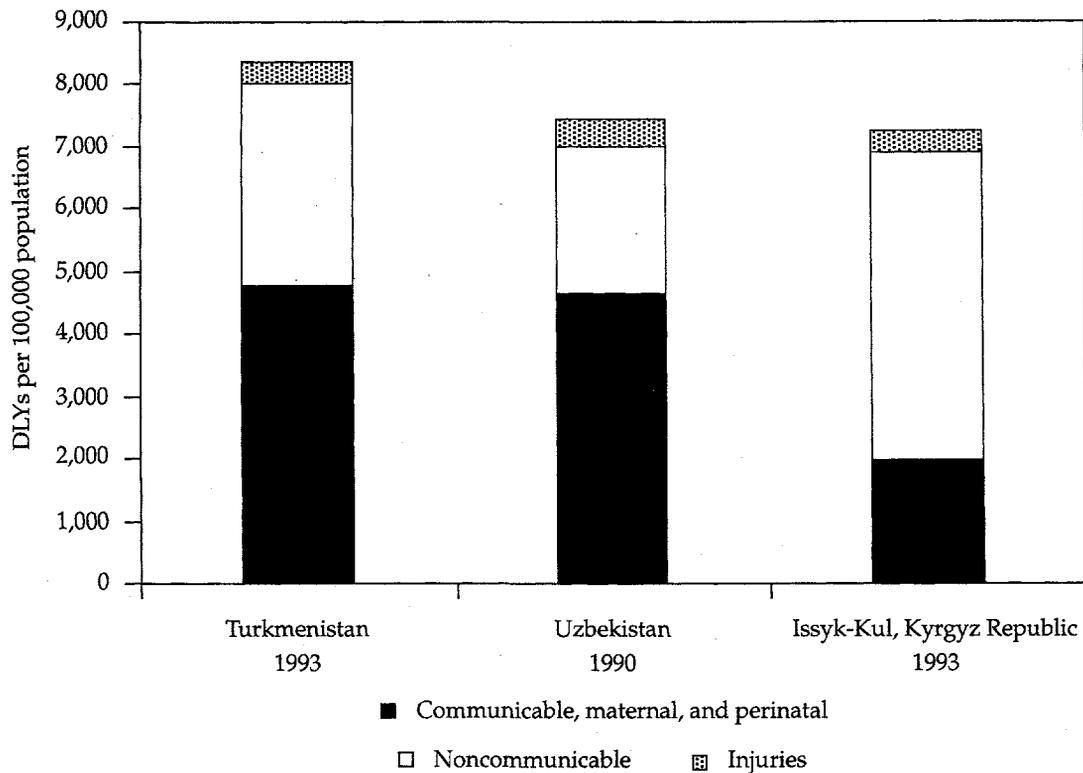
**Table 2.6. Burden of Disease Analysis, Selected Central Asian Locations and Years**  
(DLYs or DALYs lost per thousand population)

<i>Condition</i>	<i>Turkmenistan, 1993 DLYs</i>	<i>Uzbekistan, 1990 DLYs</i>	<i>Issyk-Kul, Kyrgyz Republic, 1993 DLYs</i>	<i>Turkmenistan, 1993 DALYs</i>	<i>Issyk-Kul, Kyrgyz Republic, 1993 DALYs</i>
Tuberculosis	336	114	162	360	172
Diarrheal disease	1,317	583	245	1,330	419
Hepatitis	136	218	112	184	—
Respiratory infections	1,784	2,658	1,075	1,812	1,432
Maternal	102	22	35	236	272
Perinatal	1,090	1,045	344	1,372	417
Esophageal cancer	111	72	81	156	92
Stomach cancer	72	92	198	98	221
Lung cancer	88	79	118	82	128
Diabetes	88	73	75	340	116
Psychosis	20	10	32	143	232
Alcoholism	88	4	73	482	1,449
Ischemic heart disease	1,727	1,044	1,830	2,053	2,203
Cerebrovascular disease	622	549	1,534	935	2,056
Rheumatic heart disease	74	96	104	121	104
Chronic obstructive pulmonary disease	127	79	371	700	798
Asthma	25	46	31	25	58
Gastritis/ulcer	32	25	327	655	589
Genital/urinary	181	173	166	200	308
Motor vehicle accidents	359	450	333	503	363

— Not available.

Source: World Bank data.

Figure 2.2. Burden of Disease, Selected Central Asian Locations and Years



Source: World Bank staff.

enabling public health expenditure. Increased income allows individuals and households to buy better living and housing conditions and more health care. Similarly, economic growth expands the revenue possibilities for governments, and thus the opportunities for expenditures to provide preventive and curative health services, construct and maintain safe water and sanitation systems, and provide education, for example. Because rising average incomes tend to reduce poverty, a strong link is generally apparent between incomes and health status. World Bank analysis suggests that more than 75 percent of the difference in child mortality across countries is associated with income differences, and that the relationship is causal rather than merely associative: in a sample of 58 developing countries, a 10 percent increase in income per capita, all else being equal, reduced infant and child mortality rates by between 2.0 and 3.5 percent. This section summarizes recent economic developments and trends in household welfare and poverty, and is based on Falkingham and others (1996, chapter 1).

All the countries of Eastern Europe and the FSU have faced serious difficulties during the transition from command systems. The collapse of the eastern trading bloc, the demise of central planning, and, in many cases, the adverse shifts in the terms of trade represented significant macroeconomic shocks that typically led to collapses in output and incomes and, in most of Eastern Europe, to high unemployment rates. Central Asia has faced additional challenges: lower initial levels of per capita income, rapidly growing populations and excess labor supply, and the withdrawal of central budget transfers from Moscow. It was a difficult environment in which to embark upon far-reaching liberalization of prices and other controls on economic activity and on economic restructuring, and the slow progress with economic restructuring should thus not come as a surprise.

The most dramatic reported aspect of the transition in Central Asia has been the collapse of output. During 1990–95 output fell by about half in Kazakhstan, the Kyrgyz Republic, and

Tajikistan (table 2.7). Stabilization, which is a necessary prerequisite for the resumption of growth, has begun to take hold, most notably in the Kyrgyz Republic in 1995. World Bank analysis (World Bank 1996c) suggests that stronger, more sustained liberalization is associated with a deeper recovery of output.

As elsewhere in the FSU, adjustments in employment have been slow and small relative to reported declines in output. Official open unemployment has remained low at rates of 3 percent or less (table 2.7). Broader definitions of unemployment, including unregistered individuals and those on short-time work and furloughs, indicate significantly higher unemployment rates. Nonetheless, more significant adjustment in the labor market has taken place on the price side: real wages have declined significantly throughout Central Asia, and to a greater extent than output. In all the countries, the real minimum wage has shown significant erosion since 1990. Although few workers are paid only the minimum wage, it remains a relevant benchmark for employees, especially in the civil service, where wages are set according to a centralized tariff norm, and also for setting the level of certain cash benefits, in particular, minimum unemployment benefits and family allowances. Thus overall, there has been a lagged response of labor demand to falls in demand for output. At the same time, extensive welfare provision has continued, which can be explained in terms of significant price (wage) reductions, as well as benevolence on the part of enterprises and the state as employers. This is also largely true in the civil service.

The macroeconomic paths and performance of the Central Asian countries have been quite different. In the goods market, all the countries experienced a sharp initial price rise in response to the liberalization measures adopted in early 1992. The subsequent rapid rates of inflation during the early years of transition were attributable initially to the monetary overhang (excess cash relative to available goods, given price controls) that had developed in the late 1980s, and subsequently to monetary deficit financing and subsidized central bank lending to the public sector. Monthly inflation rates have been high, but volatile. Attempts to stabilize, including the introduction of new national currencies in 1993 and 1994 and monetary restraint, were undertaken under highly adverse conditions, and were often thwarted by the refinancing of interenterprise arrears. Kazakhstan and the Kyrgyz Republic sought relatively tight policies because of their serious balance of payments and fiscal problems, especially the Kyrgyz Republic. In Kazakhstan the macroeconomic and stabilization situation in mid-1996 was somewhat fragile: although inflation had slowed, in the face of declining revenues, fiscal adjustments relied largely on expenditure cuts, which could be unsustainable. Uzbekistan, with a fairly healthy balance of payments and strong revenue performance, has successfully pursued a more cautious and deliberate pace of reform and stabilization. By contrast, until recently Tajikistan's economic reform

*Table 2.7. Key Macroeconomic Indicators during Transition, Central Asia, Selected Years*

Country	1995 GDP as a percentage of 1990 GDP <sup>a</sup>	Average inflation (%)		Registered unemployment (%)		Real wages, 1995 (1990 = 100)
		1993	1995	1994	1995	
Kazakhstan	46	1,660	180	1.0	2.1	27
Kyrgyz Republic	50	1,210	50	0.6	3.0	20
Tajikistan	47	2,140	400	—	1.8	4
Turkmenistan	58	1,630	1,005	—	—	29 <sup>b</sup>
Uzbekistan	82	1,230	320	0.7	0.3	52

— Not available.

Note: GDP Gross domestic product.

a. Figures for Tajikistan and Turkmenistan refer to net material product.

b. As a percentage of 1994.

Source: Goskomstat data.

efforts had been paralyzed by war and internal dissension, and as of mid-1996 Turkmenistan had yet to embark seriously on stabilization and economic reform.

Adverse fiscal conditions have seriously constrained the governments' ability to sustain inherited levels of public expenditure. The initial shock created by the loss of Union budget transfers was exacerbated by the erosion of the tax base associated with declining output that most formerly planned economies have experienced, especially in Kazakhstan, the Kyrgyz Republic, and Tajikistan. The relative diminution of formal sector economic activity has also undermined tax revenue receipts.

Given concerns about the social costs of fiscal restraint, initial attempts to stabilize and reduce budget deficits tended not to be sustained. Kazakhstan, for example, cut its fiscal deficit sharply from 7 percent of gross domestic product (GDP) in 1992 to little more than 1 percent in 1993, but the deficit had returned to its previous level by 1994. Uzbekistan's deficit grew from 6 percent of GDP in 1991 to a mammoth 21 percent in 1993, before adjustment sharply reduced the deficit to 4 percent of GDP in 1995. On the expenditure side, governments reduced their extensive subsidies to support enterprises and farms and to finance low consumer prices for goods and services, in some cases rapidly, and elsewhere more slowly.

As figure 2.3 shows, the impact of overall fiscal constraints on the social sectors varied from country to country. Even those countries that were better able to maintain their social expenditures as a share of GDP have exhibited steep declines in the level of real spending per capita. The structure of expenditures (salary versus nonsalary recurrent, such as on drugs) has also varied significantly to the extent that it has affected the quality of services.

How have all these changes affected people's living standards? In general, they have suffered severely. Although reliable household data are sparse, a representative household survey in the Kyrgyz Republic suggests that by 1993 nearly half the population was poor, and that nearly one-third was in severe poverty, that is, living at below half the poverty line (World Bank 1995a). Gomart (1996) reports that in Tajikistan 20 to 40 percent of children show signs of poor nutrition.

At the same time, however, the virtual disappearance of shortages and queues that had been brought about by price liberalization is a positive influence on household welfare. Also falls in measured output and money incomes may be a poor guide to changes in average welfare, because they reflect changes in investment as well as in consumption and may not include food production on private agricultural plots. The latter was of considerable importance during the Soviet period and is likely to have expanded (or at least held up) since 1991 (see Marnie 1992).

Changes in aggregate or household income may not fully reflect changes in people's well-being. For example, the costs of increased insecurity and uncertainty are not easily quantified. Yet in a positive sense, the transition has significantly widened individuals' choices of consumer goods, types of employment, and places of residence. Political liberalization has also contributed to improvements in well-being, although the pace of political change has generally been relatively slow, and the inherited political apparatus remains largely intact in most of the countries.

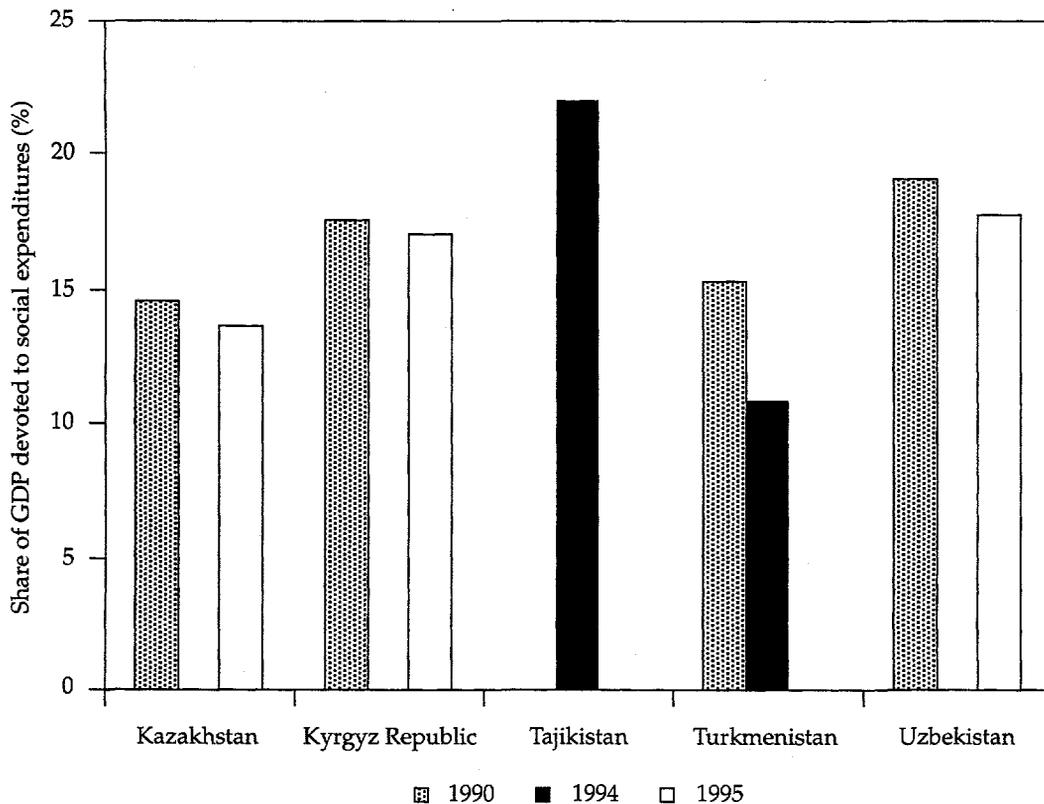
### **Inherited Health Systems**

This section describes and evaluates Central Asia's basic health systems in terms of expenditures and the availability and use of services. It discusses the systems' strengths and weaknesses in the context of the goals of health system reform, namely: improving people's health status, assuring access and equity, achieving microeconomic and macroeconomic efficiency, improving clinical effectiveness, and assuring quality and consumer satisfaction.

The systems in all the Central Asian countries are based on the centrally planned national health service model of the FSU. The characteristics of this system were, and largely remain, as follows:

- *Eligibility.* The entire population is eligible for services.
- *Benefits.* The state provides all necessary services to treat individuals' medical conditions free of charge.

Figure 2.3. Trends in Social Expenditure during Transition, Central Asia, Selected Years



Note: Social expenditures include health, education, and income transfers (including pensions, unemployment benefits, sick leave, and maternity benefits financed from extrabudgetary funds).

Source: World Bank staff.

- *Financing.* The public system is financed from the general state budget (for example, national general revenues), enterprise budgets, and extrabudgetary funds. In the past private payments were limited to a few nonessential services and some unofficial payments to public providers for preferential treatment.
- *Payment of medical care providers.* The state owned virtually all facilities and all health care personnel were state employees. Polyclinics and hospitals were reimbursed based on 18 categories of line item budgets. Physicians and other health personnel were salaried employees. Provision and financing were combined, that is, the public financing authority owned, budgeted, and managed facilities.
- *Service delivery system.* The system was conceptually a well-integrated hierarchical structure of *feldsher* stations (*feldshers* are medical assistants who provide primary care in rural areas); health posts; polyclinics; and local-, regional-, and national-level institutions. The human and physical capital infrastructure of the system was based on planning norms that were used to allocate facilities and physicians across geographic areas. Norms were used for staffing patterns, facility structural characteristics, and medical treatment protocols. Quality of care was enforced through a hierarchical review process based on reprimands for inappropriate behavior. Public health programs were targeted to maternal and child health and communicable diseases.

While significant differences existed across the Union countries, prior to the breakup these centrally planned systems generally performed well in terms of assuring equity, assuring access to all,

and achieving relatively good overall health outcomes for the amounts spent. In Central Asia, in particular, health outcomes were good relative to per capita income (see table 2.1). However, the systems tended to be underfunded by Western standards (as social sectors were given low priority in the state planning process), were inefficient, and provided low-quality care. Moreover, the systems were unable to cope with the epidemiological transition (Chernichovsky and others 1996).

The disruptions associated with the breakup of the Soviet Union exacerbated these problems. As a result, the melange of problems in the health care financing and delivery systems in all the Central Asian countries includes the following:

- The declining health status of populations because of environmental risk factors and socioeconomic trends that have drastically increased mortality from heart disease, violence, injuries, and suicide
- The poorly structured or absent public health programs for health promotion, disease prevention, family planning, adult health, occupational health, and environmental health
- The chronic underfunding (as an “unproductive” service sector) relative to Western countries
- The rigid 18-category budgeting system for paying polyclinics, physicians, and hospitals, which provides few incentives for economic efficiency and tends to encourage inpatient over outpatient treatment and care at the highest, most expensive levels of the system
- The presence of too many physicians, too many specialists, and too many hospital beds, along with people’s excessive utilization of services, particularly inpatient care
- The poorly trained primary care physicians, low salaries for health care personnel, limited inpatient and outpatient diagnostic capacity, and obsolete and poor condition of the capital stock
- The outdated treatment norms that promote ineffective medical practice (see box 2.1), inefficient facility configurations, and staffing norms that restrict facility managers from making rational staffing decisions
- The lack of modern quality assurance systems
- The inefficient and outmoded production, procurement, distribution, and management systems for pharmaceuticals, along with the outmoded lists of essential drugs and reimbursement policies that encourage individuals to be hospitalized to receive free drugs
- The lack of consumer choice
- The lack of accountability on the part of consumers or medical care providers for the consequences of their decisions
- The confusion about roles and responsibilities at the national level as a result of the decentralization of responsibility for financing and delivering health care
- The use of hospitalization as a safety net to compensate for inadequate referral systems, poor transportation and housing, high costs of food and pharmaceuticals, and governments’ general reliance on the health sector as an employment maintenance mechanism.

These problems are fundamental and affect almost every aspect of the financing and delivery of health care at all levels in Central Asia and virtually all other FSU countries. Nonetheless, the system retains substantial elements of success, including an extensive and well-integrated hierarchical system of *feldshers*, health stations, polyclinics, and local, regional, and national institutions; access to care for all as a right and the associated equitable distribution of health resources in terms of household income and location; and, at least until recently, relatively good health outcomes for the limited funds spent.

### **Expenditures, Availability, and Use of Services**

The following paragraphs discuss available evidence on financial indicators and the availability and use of services in Central Asia and Azerbaijan. While this reveals certain differences among the countries, both the levels and trends over time for most measures are markedly similar.

**Box 2.1. *Inappropriate Medical Protocols***

Among the array of factors that inhibit the cost-effective delivery of health care services to the populations of Central Asia, inappropriate medical protocols and practices are especially important.

High rates of hospitalization continue for conditions that are not criteria for admission in most countries. Diagnoses include minor osteoarthritis, limited cellulitis, varicose veins, mild hypertension, mild asthma, and so on. The over-reliance on injectable (intramuscular) medications is a major reason for hospitalization for conditions that elsewhere would be treated with oral medications.

A clear example is TB treatment. TB patients are hospitalized for 9 to 12 months in most of the region. In addition, patients are not treated with the standard regimens recommended by the World Health Organization (WHO). Instead drug combinations tend to be individualized, and this, alongside a serious lack of essential drugs, results in low cure rates and the creation of chronic infectious cases, often infected with drug resistant strains. Increasing treatment default rates also favor continued production of both bacilli and drug resistance. WHO-recommended reporting and recording systems are not in place.

Further examples of inappropriate medical protocols are evident for STDs. Throughout most of the region, all confirmed syphilis cases are hospitalized for a one-month course of injections given several times a day. This practice is contrary to international evidence and practice with respect to both the type of drug given and hospitalization. Similarly, hospitalization is encouraged for gonorrhea cases and the therapies used are not proven in the internationally accepted literature. Although officials have argued that hospitalization is warranted by fears of an epidemic, in reality most cases do not present themselves to the authorities.

Finally, the types of common screening mechanisms that are used are inefficient. TB screening in much of the region relies on mass miniature radiography of a large share of the population. This is expensive and yields poor results, not least because diagnosis is based on giving priority to chest radiography rather than to smear microscopy (against WHO recommendations). In parts of the region, a large number of employees are screened biannually for STDs and skin infections. This is not cost-effective (because it detects few cases per thousands screened), and also raises privacy and ethical considerations.

As a share of GDP, the levels of public health spending are typically below 5 percent, and have declined since 1990. Real per capita spending has fallen even more dramatically. Table 2.8 and figures 2.4 and 2.5 provide information on health expenditures measured in a variety of ways for 1990–94. Unfortunately, because of a lack of information on private spending, only public spending on health is presented. Even the public expenditure figures may not be strictly comparable, because the countries may spend different amounts through enterprises and extrabudgetary funds that are not captured. Furthermore, caution is needed when interpreting health to GDP ratios, as serious GDP valuation issues arise in connection with whether exports are valued at local or world market prices. For all the countries except Tajikistan, the public health to GDP ratio (the percentage of national income going into the health sector) has declined since 1990, prior to the breakup of the Soviet Union (figure 2.4).

Although the health to GDP ratio is the most commonly used measure of expenditure performance, to get a complete picture one must also look at other measures. For example, if the health expenditure to GDP ratio remains constant, but GDP declines by 50 percent in real (inflation-adjusted) terms, this means that health spending is effectively half of what it was in the base year. Also, given the high rates of population growth, health spending should be analyzed in per capita terms. Thus one must also analyze real per capita health spending, and for comparisons in the absolute levels of spending across countries, spending must be converted into one numeraire currency. This information is presented in table 2.8.

The health sector appears to have been somewhat protected, at least in terms of its share in a declining economy in Azerbaijan, Tajikistan, and Uzbekistan. The elasticities of health spending relative to GDP (that is, the annual percentage change in health spending relative to the annual

Table 2.8. Public Health Expenditures, Central Asian Countries, 1990–94

Country and indicator	1990	1991	1992	1993	1994
<i>Azerbaijan</i>					
Health to GDP ratio	2.9	2.9	2.9	2.8	2.5
Real per capita health spending as a percentage of spending in 1990	100.0	99.0	77.0	57.0	41.0
Per capita spending (PPP\$)	100.0	108.0	72.0	54.0	38.0
<i>Kazakhstan</i>					
Health to GDP ratio	3.3	4.2	2.1	2.5	2.0
Real per capita health spending as a percentage of spending in 1990	100.0	118.0	54.0	56.0	37.0
Per capita spending (PPP\$)	183.0	203.0	86.0	86.0	56.0
<i>Kyrgyz Republic</i>					
Health to GDP ratio	4.1	3.6	3.2	2.6	3.2
Real per capita health spending as a percentage of spending in 1990	100.0	77.0	57.0	39.0	36.0
Per capita spending (PPP\$)	136.0	124.0	83.0	56.0	62.0
<i>Tajikistan</i>					
Health to GDP ratio	4.8	4.5	5.2	5.4	6.4
Real per capita health spending as a percentage of spending in 1990	100.0	84.0	75.0	51.0	46.0
Per capita spending (PPP\$)	117.0	101.0	87.0	63.0	60.0
<i>Turkmenistan</i>					
Health to GDP ratio	3.7	3.7	2.0	1.8	1.2 <sup>a</sup>
Real per capita health spending as a percentage of spending in 1990	100.0	92.0	47.0	34.0	17.0
Per capita spending (PPP\$)	—	—	—	—	—
<i>Uzbekistan</i>					
Health to GDP ratio	4.6	4.6	4.7	4.1	4.0
Real per capita health spending as a percentage of spending in 1990	100.0	96.0	87.0	72.0	66.0
Per capita spending (PPP\$)	131.0	135.0	124.0	103.0	95.0

— Not available.

PPP Purchasing power parity.

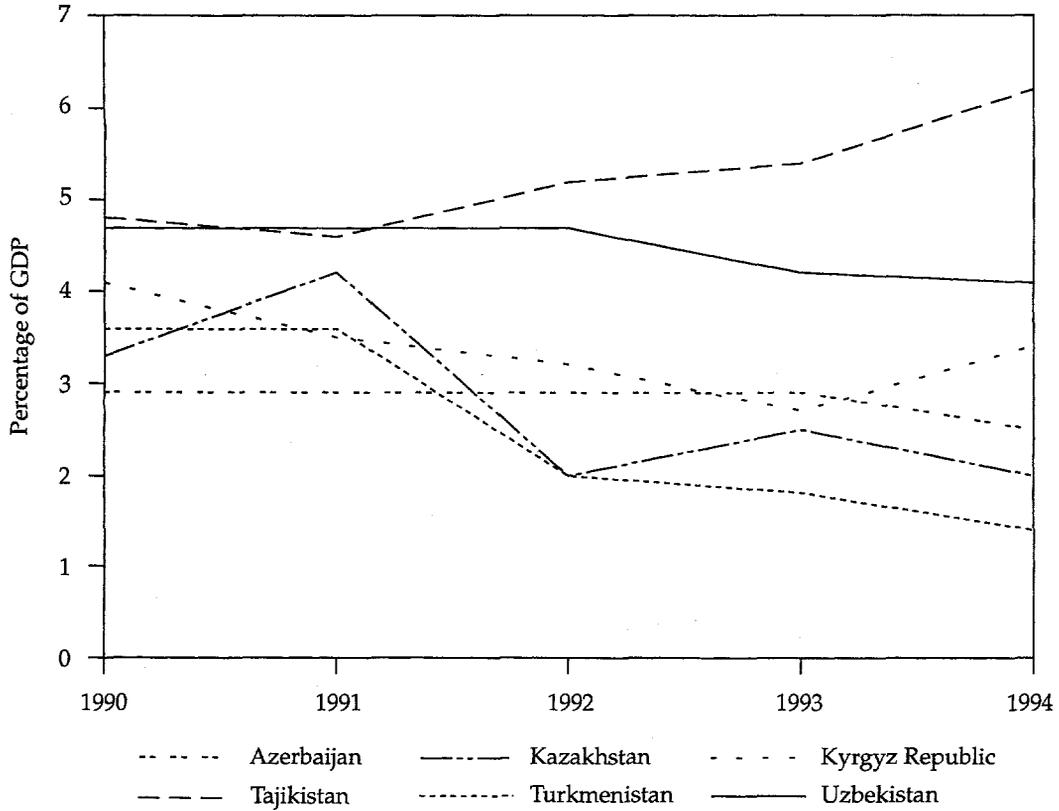
a. If reported GDP is not adjusted for world market prices for Turkmenistan's exports, the 1994 health to GDP ratio is 2.7. Such adjustments have little or no effect in preceding years.

Source: World Bank data.

percentage change in GDP) for all six countries were clustered between 0.87 and 1.05 (0.98 for Azerbaijan and Uzbekistan, 0.93 for Kazakhstan, 0.94 for the Kyrgyz Republic, 1.05 for Tajikistan, and 0.87 for Turkmenistan). An elasticity of 0.87 means that a 10 percent change in GDP was accompanied by an 8.7 percent change in health spending.

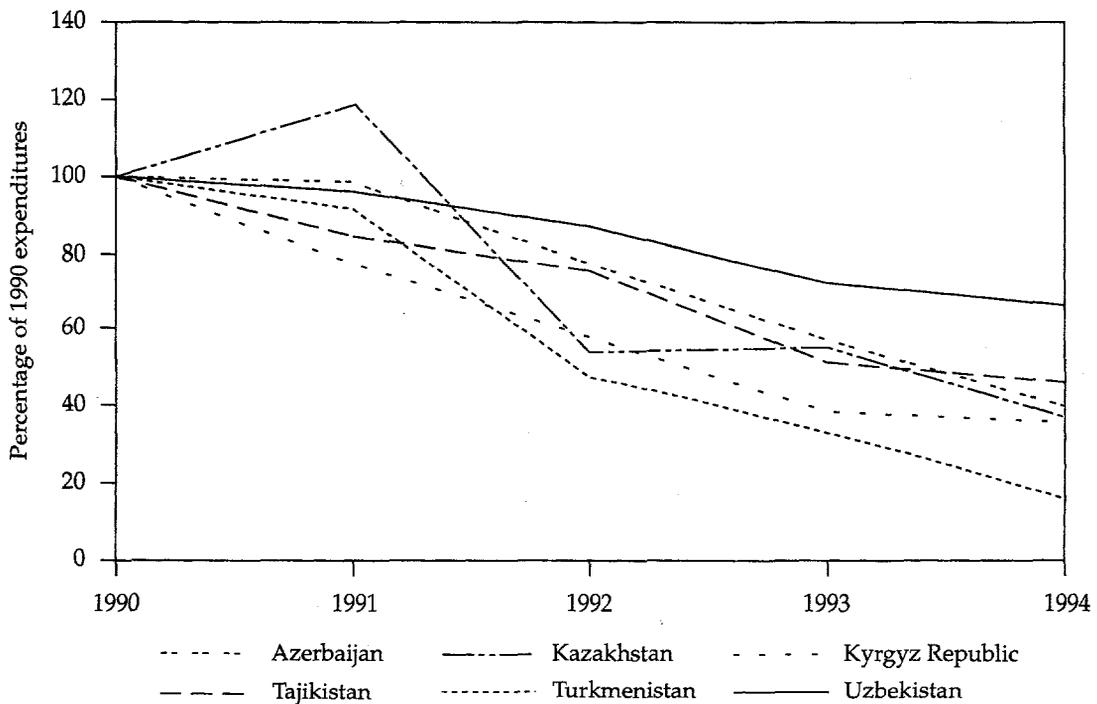
Real GDP has fallen substantially throughout the region since 1990 (table 2.7), in several countries by 50 percent or more. Reductions in real health spending have largely paralleled these trends. By 1994 real public health spending had also fallen throughout the region, by half or more in all the countries except Azerbaijan and Uzbekistan. Given the large increases in population, real per person health spending suffered even larger declines, in 1994 ranging from 17 percent of the 1990 level in Turkmenistan to 66 percent in Uzbekistan (figure 2.5). Such large declines have resulted in serious deterioration of the health infrastructure, and with the attendant

**Figure 2.4.** Public Health Expenditures as a Percentage of GDP, Central Asian Countries, 1990–94



Source: World Bank staff.

**Figure 2.5.** Real Per Capita Public Health Expenditures as a Percentage of 1990 Expenditures, Central Asian Countries, 1990–94



Source: World Bank staff.

general declines in income and socioeconomic conditions are contributing to increased morbidity and mortality and worsening health status of the population.

Little information is available on private sector spending in Central Asia. However, survey data from Kazakhstan and the Kyrgyz Republic indicate that out-of-pocket payments by individuals for pharmaceuticals as well as for many inpatient services normally publicly covered have increased significantly. Household survey evidence from the Kyrgyz Republic shows that between 1993 and 1994 the incidence of formal charging for medical consultations increased significantly, from 11 to 25 percent of the population. Informal payments to medical staff are also widespread, are reported by about one in four inpatients, and are likely to be increasing. By far the most significant item of private medical expenditure is on drugs (Abel-Smith and Falkingham 1996; World Bank 1995a). An October 1994 survey in South Kazakhstan Oblast found that more than 35 percent of users of pharmaceuticals and hospital services were making large out-of-pocket payments for these services (Langenbrunner, O'Dougherty, and Borowitz 1996).

One legacy of the Soviet period was the widespread ownership, provision, and/or financing of social services by enterprises and collective farms, which extended to health facilities. The share of enterprise health facilities in total social services was 10 percent in Kazakhstan in 1991 and somewhat less in Uzbekistan. The range and quality of involvement tended to vary according to the size and strategic importance of the enterprise. Evidence suggests that the enterprises tended to provide facilities of significantly higher quality than government authorities (World Bank 1995b). Transition has brought about the closure or divestiture of many enterprises' social facilities. Uzbekistan is an outlier, in that up to 1996, the Ministry of Health was explicitly encouraging greater employer provision.

In absolute U.S. dollar terms, using purchasing power parities for conversion (a special exchange rate that takes into account cost of living differences across countries), annual per capita health spending in Central Asia ranges from US\$56 in Kazakhstan to US\$95 in Uzbekistan. This compares, for example, to annual per capita health expenditures of US\$149 in the Arab Republic of Egypt, US\$185 in Turkey, and US\$374 in Jordan (World Bank 1996a). Spending is well below the 8.1 percent health to GDP ratio and US\$1,500 annual per capita expenditures for OECD countries, 75 percent of which are public expenditures. Perhaps more pertinent is the ability of the Central Asian countries to maintain the vast health infrastructures that were developed when more budget resources were available. Can they afford these systems now, and if not, what should they do?

Table 2.9 contains information on physicians, hospital beds, admission rates, lengths of stay, occupancy rates, and hospital days per capita. As in all FSU countries, the Central Asian countries are characterized by large quantities of inputs and high rates of hospital use. Central planning norms resulted in large numbers of hospital beds and physicians, while the budgeting systems for paying hospitals provided strong incentives to keep beds filled. Poorly paid salaried health personnel at the lower levels of the system, who often lacked appropriate equipment, supplies, and medications, had incentives simply to refer individuals up the system rather than to treat them. As the higher levels had more equipment, supplies, and drugs and the best physicians, individuals also had strong incentives to bypass lower levels of the system.

The basic statistical profiles of the delivery systems in Central Asia reflect all these factors. In terms of physicians, in 1994 physician to population ratios varied between 2.1 physicians per 1,000 population in Tajikistan to 3.9 in Azerbaijan, with a six-country average of 3.3. This compares with an OECD average of 2.5. Since 1990 these ratios have fallen slightly in all the Central Asian countries except Azerbaijan and Uzbekistan. Nonetheless, except in Tajikistan, the ratios throughout are still well above the OECD average.

The available evidence reveals that widespread reductions had occurred in the number of beds, hospital admission rates, and lengths of stay since 1990 (table 2.9). Nonetheless, the levels remain high and exceed those in OECD countries, which have substantially larger elderly populations. As concerns hospitals, in 1994 the number of beds per 1,000 population ranged from 8.8 in Tajikistan and Uzbekistan to 12.1 in Kazakhstan. Since 1990, the hospital

**Table 2.9.** *Availability and Use of Services, Central Asian Countries, 1990–94*

<i>Country and category</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>
<i>Azerbaijan</i>					
Physicians per 1,000 population	3.9	3.9	3.9	3.9	3.9
Hospital beds per 1,000 population	10.0	10.0	10.5	10.5	10.1
Average length of stay (days)	18.0	17.6	18.0	17.9	17.9
Occupancy rate (%)	—	—	—	65.0	—
<i>Kazakhstan</i>					
Physicians per 1,000 population	4.0	3.8	3.9	3.8	3.6
Hospital beds per 1,000 population	13.7	13.7	13.5	13.2	12.1
Admission rate (% of population)	22.9	22.6	21.3	20.2	17.6
Days per capita	3.7	3.6	3.5	3.3	3.0
Average length of stay (days)	16.0	16.0	16.3	16.3	16.8
Occupancy rate (%)	79.0	79.0	78.0	76.0	74.0
<i>Kyrgyz Republic</i>					
Physicians per 1,000 population	3.4	3.4	3.3	3.1	3.1
Hospital beds per 1,000 population	12.0	12.1	11.9	10.7	9.6
Admission rate (% of population)	23.0	22.5	21.7	19.9	17.0
Days per capita	3.4	3.4	3.3	3.0	2.6
Average length of stay (days)	14.9	14.9	15.3	15.3	15.4
Occupancy rate (%)	80.0	78.0	78.0	80.0	78.0
<i>Tajikistan</i>					
Physicians per 1,000 population	2.6	2.4	2.3	2.2	2.1
Hospital beds per 1,000 population	10.7	10.7	11.2	10.6	8.8
Admission rate (% of population)	21.0	20.5	16.3	—	—
Days per capita	3.0	3.0	2.4	—	—
Average length of stay (days)	14.3	14.6	14.5	—	—
Occupancy rate (%)	94.0	88.0	—	—	—
<i>Turkmenistan</i>					
Physicians per 1,000 population	3.6	3.7	3.6	3.6	3.5
Hospital beds per 1,000 population	11.5	11.6	11.4	11.7	11.5
Admission rate (% of population)	19.8	19.4	18.4	18.4	16.6
Days per capita	3.1	2.9	2.7	2.7	2.5
Average length of stay (days)	15.6	15.2	14.7	14.9	15.1
Occupancy rate (%)	73.0	72.0	69.0	70.0	64.0
<i>Uzbekistan</i>					
Physicians per 1,000 population	3.4	3.4	3.3	3.3	3.4
Hospital beds per 1,000 population	12.5	10.9	10.8	9.4	8.8
Admission rate (% of population)	24.6	24.5	23.6	22.0	19.3
Days per capita	3.6	3.6	3.5	3.2	2.8
Average length of stay (days)	14.8	14.8	15.0	14.5	14.3
Occupancy rate (%)	83.0	82.0	85.0	88.0	87.0

— Not available.

Source: Church and Koutanev (1995); Tulchinsky (1996); WHO (1993); World Bank (1993a).

bed to population ratio has declined significantly in most of the countries, but the average level of 10.2 is still well above the OECD average of 8.4. Hospital admission rates (percentage of the population admitted to a hospital each year) varied from 16.3 percent in Tajikistan in 1992 to 19.3 percent in Uzbekistan in 1994, with a regional average of 17.4 percent. While

all five countries remain above the OECD average of 16.2 percent, admission rates have declined in all five countries since 1990.

Hospital bed occupancy rates ranged from 64 percent in Turkmenistan in 1994 to 88 percent in Tajikistan in 1991, with a six-country average of 76 percent, about the same as the OECD average. Since 1990, occupancy rates have declined in all the countries except Uzbekistan. In 1994 average lengths of stay in hospital varied from 14.3 days in Uzbekistan to 17.9 days in Azerbaijan, with a six-country average of 15.7 days. Given the young population structure in most of the region, these lengths of stay are high compared with the average length of stay of 14.4 days in OECD countries. The number of hospital days per person per year ranged from 2.4 in Tajikistan to 3.0 in Kazakhstan, with a regional average of 2.7. Again these figures exceed the OECD average of 2.5. Since 1990 the number of bed days per capita has tended to decline.

The foregoing evaluation of existing health sectors has revealed striking trends. Public funding has been substantially reduced, yet in terms of personnel and facilities the health infrastructures remain extensive and inefficient, and have not fully adjusted to the reduced funding levels. Health outcomes are still good compared with those in other lower-middle-income countries, but overall mortality rates have increased, life expectancy has declined, and certain infectious diseases appear to be on the rise. The health infrastructure, in particular, basic public health programs and treatment norms, are not well targeted toward dealing with the population's underlying health needs, especially given the sharply reduced funding. While at different stages in all six countries, the reforms currently being initiated are designed to deal with these problems.

### **The Enabling Environment for Health Reform**

Several dimensions of the current environment are relevant to the nature and success of health sector reform. The difficulties created by the economic context, in particular, the severe fiscal constraints and high and variable inflation, have already been highlighted. Successful health reform will depend on the design of appropriate policies and their implementation in legislative terms, and then in administrative practice. This section examines various pertinent institutional factors: the role of decentralization, staffing, regulation and data for decisionmaking and looks at the range of stakeholders who have interests in the outcomes of health sector reform. It explores various, albeit inter-related, aspects of the enabling environment and the opportunities and constraints that have emerged in the health sector.

#### ***Decentralization***

The decentralization of financing responsibility has been a pervasive theme in many former Soviet countries in transition. Governments are divided into three tiers: the center, the *oblast* (or equivalent), and the *raion* or municipality, with the health sector generally set up along similar lines. Ironically, alongside the current fragmentation of government structures dealing with health care, the apex of the government structures associated with the president, prime minister, and/or the ministry of finance typically exhibits a high degree of centralization of top-level policymaking and control. In some respects, this co-existence of centralized policymaking authority and decentralized financing and implementation to the local level dilutes the responsibilities of the health and other sectoral ministries, and possibly also demoralizes ministerial staff.

Decentralization is particularly important in the social sectors in Central Asia, where the vast bulk of expenditures (around 85 percent) are locally financed. Decentralization in the health sector, in principle, carries certain advantages, the most important being that local providers might be more responsive to the needs and demands of the local community. In practice, the local level tends to have significant discretion in implementing local budgets. Even at the facility level, the extent of expenditure autonomy has increased, which appears

to have promoted the adoption of such cost-cutting measures as the elimination of beds. However, greater responsiveness to local needs depends on the existence of institutions that provide for choice as well as accountability.

However, decentralization also entails risks, especially from an equity perspective. Local financial responsibility for the provision of health services could imply unacceptable disparities in the level of service provision within the country. Where large inter-regional disparities exist, as in the Kyrgyz Republic, for example, this could threaten the provision of minimum health services and other key aspects of the social safety net. As a result, redistributive transfers have a role to play. In Kazakhstan, detailed analysis of local budget execution data revealed increasing disparities in levels of health expenditure among *oblasts* between 1992 and 1994: the coefficient of variation almost doubled, to 0.33. However, the dispersion has evidently been random, because past rankings of *oblasts* in terms of actual social expenditures are not a good indicator of current or future rankings (World Bank 1996b).

By contrast, the available evidence suggests that central transfers in the Kyrgyz Republic and Uzbekistan have successfully redistributed resources to poorer *oblasts*. Per capita revenues in the Kyrgyz Republic in 1994 ranged from KGS980 in Bishkek to KGS110 in Naryn, yet there was actually a negative correlation between local expenditure and local income (revenue) and the degree of urbanization. In Uzbekistan the level of health spending per capita was almost equal across *oblasts*, at least up to 1995. However, even when the existing transfer system is equitable in terms of impact, it is generally problematic, in that it can create soft budget constraints, where the center automatically covers local spending commitments, as well as lack of transparency.

### *Staffing*

Staffing is a critical issue underlying the enabling environment, which currently reflects several problems that affect motivation, quality, and skills. In Central Asia, overstaffing is prevalent throughout the public sector; however, this does not mean that the health (or other) ministries are overstaffed. A recent World Bank (1996b) report on Kazakhstan concluded that central ministries are typically understaffed. While the numbers of medical staff are excessive overall, unmet demand exists for medical assistants and nurses, and the ratio of doctors to nurses is high (1:3.3 in Uzbekistan in 1995, for example). Similarly, the distribution of physicians is biased toward high-level specialists, and family or general practice is not well developed.

Despite the massive budgetary contractions, the number of government employees and the quantity of public services supplied to the population has remained largely unchanged in most of the countries, at least on paper. This is also true in the health sector, where there are 41 people per health sector employee (40 percent of government employment) in Kazakhstan, compared to 52 (21 percent of government employment) in the United Kingdom, which also operates a national health service. As a result, the amount of expenditure per public service unit supplied has declined drastically, and public sector wages have suffered significant declines, even relative to the overall drops in the real wage described earlier. Individual compensation is unsustainably low at both ends of the pay scale: wages at the bottom end fall far below subsistence levels, while wages at the top of the scale represent only a fraction of the wages offered for similar jobs outside the government. Salaries of health professionals that have been historically low have deteriorated further. This is likely to have serious repercussions for the quality of service.

### *Regulation*

Various regulatory issues are relevant to the enabling environment for health sector reform. For example, the decentralization of financing and implementation raises local versus central regulatory issues, while the increasing diversity and independence of health facilities also raises important questions. This applies especially to newly emerging private practice by doctors and the privatization of pharmaceutical retailers.

Regulation in any context raises information issues: effective regulation is only possible when decisionmakers have access to timely and appropriate information. On the one hand, extensive information is available on health outcomes in Central Asia, based on sanitary-epidemiological service reporting. However, the inherited information systems are in many ways inappropriate for the emerging health sector during the transition and beyond. Data on enterprise spending are sometimes scarce, as are data on extrabudgetary funds. Available information on health expenditures tends to be classified in ways that inhibit useful analysis. Planned expenditures can be misleading, because approved allocations are often revised, and disbursement patterns do not necessarily reflect actual allocations. Expenditures for hospitals cannot be broken down between *oblast*, city, and central *raion* hospitals. Expenditures cannot be broken down by types of services provided within a single facility. This makes calculating unit costs difficult and categorizing expenditures among primary and secondary services impossible. Finally, available local budget execution data do not easily permit rural-urban breakdowns. The present paucity of data for decisionmaking is a critical element to be taken into account in designing feasible health sector reforms, while improved data will be an essential part of management strengthening.

### *Stakeholders*

A range of groups and agencies affect and are affected by developments in the health sector. These are sometimes referred to as stakeholders. First are the individuals and households—consumers—for whom health services are provided. This is clearly not a homogenous group, as it encompasses people of different ages (elderly versus children), people living in different places (the capital versus remote areas), and people with increasingly different income levels, all of whom have different health needs and demands on the system. Second are the personnel involved in health care delivery, and again these groups consist of a variety of subgroups, from specialists to nurses, *feldshers*, and support staff, who work in a range of facilities, from central hospitals to rural health posts. The medical profession is likely to become a more important political force over time, affecting the shape, as well as the implementation, of reform. International experience suggests that doctors are often particularly concerned about medical technology, pay, and status. Third, various government structures have specific interests in the health sector. Agencies involved in health care management and financing exist at the *raion*, *oblast*, and national levels. At the national level, in most of the countries the ministry of health exists alongside a national pharmaceutical firm, each of which tends to have distinct, and not always directly compatible, concerns. Powerful institutions outside the health sector also affect its policies and allocations, including the president and cabinet. All the foregoing groups have a stake in the health sector, and their attitudes and behavior will affect the nature and success of reform. Stakeholders should be considered a critical part of the enabling environment, because each will affect the prospects for implementation of reform.

### **Health Policy Reform Agenda**

This section sets out the criteria and preconditions for reform, evaluates relevant case studies from the region in these terms, addresses how countries could implement reforms, and looks at the factors that influence the effectiveness of such reform efforts. A clear consensus has emerged among policymakers in each of the countries about the need for reorienting spending priorities toward more effective public and environmental health programs, emphasizing primary care, providing less hospital-based tertiary care, and having appropriate financial incentives in place.

All six countries have either initiated or are contemplating reforms to deal with the underlying financing and delivery problems facing their health systems. The generic policy directions virtually all these countries are pursuing are similar, namely:

- Obtaining additional financing through nonbudgetary sources, such as earmarked payroll taxes on employers, voluntary insurance, and other private financing, including patient cost-sharing
- Reducing pressure on the national budget by decentralizing the financing of care to regional and local levels
- Getting better value for money by improving efficiency through the separation of financing from provision and having money follow patients
- Improving system efficiency by introducing incentive-based provider payment mechanisms
- Improving the cost-effectiveness of the service delivery system by restructuring in favor of primary care, promoting general and family practice in medicine, and eliminating unneeded hospital capacity
- Instituting major reforms of pharmaceutical regulation, management, procurement, management, distribution, and pricing, along with reforms of essential drug lists.

Financing reforms being undertaken in Central Asia are loosely modeled on those undertaken by Russia, which implemented health insurance legislation in 1993. Implementation in Russia has been fraught with many of the same fiscal problems the Central Asian countries are facing, and progress across Russia's 89 *oblasts* has been uneven. Because many *oblasts* have implemented the health insurance system, many of the problems experienced in Russia are relevant for Central Asia.

Kazakhstan and the Kyrgyz Republic have proceeded the furthest in terms of introducing legislation to establish health insurance funds based on contributions from employers for the working population and from the government for the nonworking population. Both countries have also experimented with health insurance and provider payment reforms based on general practitioner fundholding mechanisms in selected regions. Turkmenistan has established a publicly run voluntary insurance system to pay for outpatient pharmaceuticals and provide for priority use of publicly covered services. Turkmenistan is also focusing on improving both primary care and the effectiveness of public health systems. The burden of disease and cost-effectiveness studies that several countries have undertaken reflect their intent to focus scarce resources on the most cost-effective interventions. Developing lists of essential drugs and reforming the procurement, regulation, management, and distribution of pharmaceuticals have also been important objectives. The decentralization of financing and the use of capitation-based transfers from national to local governments is under way in a number of the countries, including Azerbaijan and Uzbekistan.

Nationwide implementation of the health insurance legislation in Kazakhstan and the Kyrgyz Republic had been delayed because of depressed economic conditions and employers' limited abilities to make the requisite contributions, and has only recently begun. Turkmenistan's voluntary insurance program is facing major financial difficulties because of premium collection problems, larger than foreseen pharmaceutical demand, and lack of an actuarially sound contribution base. Uzbekistan is also in the process of developing legislation to establish insurance funds based on employer contributions, is considering other reforms to improve efficiency through provider payment changes, and is establishing basic benefit packages predicated on cost-effectiveness criteria. Several of the countries are also considering explicit privatization of certain services. Azerbaijan and Tajikistan are in somewhat earlier stages of designing their reforms.

In general health policy terms, the reforms being implemented and developed focus on the five major areas of health care financing and delivery: financing (that is, revenue sources), eligibility, benefits, payment of medical care providers, and the delivery system.

### *Financing*

Most of the focus in the current reform debates has been on financing, that is, on raising revenues available for health care. Given the large declines in national income and budget revenues, policymakers

are seeking additional financing through extrabudgetary sources and private contributions. As already noted, they are also tending to decentralize financing responsibilities to local governments. A number of key issues of differing degrees of importance in each country have arisen. These are

- Adequacy of financing from both state and employer sources under the various health insurance approaches
- Ability of regional and local governments to finance their shares
- Administrative costs of such approaches
- Clarity of roles and responsibilities of national and subnational health authorities and insurance funds.

Depressed economic activity in the region has effectively precluded raising additional revenues from both public and private sources. The extensive infrastructures that existed before the economic decline have become unaffordable. Regional and local governments are facing increasing fiscal difficulties and are often unable to afford the increased health care responsibilities being placed upon them. Enterprises are having serious economic problems, cannot afford to pay additional taxes, and are attempting to divest themselves of their social service infrastructures and responsibilities. As the countries of Central Asia struggle with their economic and social priorities, the key question may be learning how to develop more efficient systems that are far less extensive than in the past.

The advantages and costs of establishing and running health insurance funds of the types legislated in Kazakhstan and the Kyrgyz Republic and under consideration elsewhere require consideration. Basing insurance coverage on employment results in individuals losing their coverage when they are unemployed, and either becoming uninsured or being insured at the expense of the state budget. Moreover, establishing and operating such funds entails administrative costs. Multiple funds have higher administrative costs than single funds. Similarly, voluntary insurance approaches, such as the one Turkmenistan has adopted, unless carefully designed can be fiscally unsound because of favorable selection by sick individuals and the lack of a sound actuarial base for setting premiums.

Changing the source of financing does not enhance the efficiency of the delivery system. Countries such as Canada and the United Kingdom have maintained their general revenue funding bases while successfully implementing payment mechanisms to encourage efficiency. Furthermore, general revenue-based approaches tend to pool risks more equitably than social insurance-based models, as evidenced by the difficulties both Germany and Japan have experienced in terms of pooling risks among multiple sickness funds and government programs. All these issues should be carefully weighed along with the effects of increased payroll taxes on labor demand and enterprise viability and competitiveness. Whatever approach policymakers choose, the financing base must be actuarially sound, that is, the revenues from the designated sources must be sufficient to pay for the individuals and benefits covered under the program.

Clarification of the roles of the various levels of government, medical care providers, and health insurance funds (where they exist) is needed. The relationships between and responsibilities of the various agencies involved in health care have been problematic in a number of countries implementing reforms. Policymakers are often preoccupied with financing issues to the detriment of basic public health issues, policy development, and rational management of the system. This has been the case in Russia, for example, where turf battles and confusion between financing and health authorities at all levels have been frequent.

### *Eligibility*

Decisions must be made as to who is eligible for coverage under any financing system. One of the great strengths of the previous system was universal entitlement: all citizens were covered. If the normative tenet used in most Western market countries is followed that all individuals should

have access to care based on need and should pay for care based on ability to pay, then insurance reforms and privatization strategies will need to be carefully designed. This is especially the case if private financing is pursued for certain groups along with employer and state responsibility for others, because policymakers will have to take care to assure that some individuals do not fall through the cracks and lose eligibility. This is particularly relevant for the poor. Moreover, multiple systems are more complicated to administer, have greater difficulties in controlling costs, and may have more difficulty in spreading risks equitably.

### *Benefits*

Deciding what benefits to cover has become increasingly problematic. People in Central Asia are accustomed to a system that, at least in theory, provided all the necessary care to treat an individual's condition free of charge. Costs did not escalate out of control because of budget caps and supply constraints, constraints that may be less effective as these systems become more open-ended and private. In any financing system, whether it is based on general revenues or insurance contributions, establishing a benefit package is essential, so that the contribution levels for employers and the state can be appropriately set to cover the costs of the benefits to be covered. This has not been the case in Russia or in Central Asia. Part of the problem is a political issue: people's perception that the government is taking away their formerly "unlimited" benefits.

The other part of the benefit issue is financial: the payroll taxes on enterprises and the required government contributions for those not in the labor force must be sufficient to pay for the individuals and benefits covered under the system. Most former Soviet governments have refused to face this issue in a direct or transparent manner, despite serious economic difficulties. Authorities do not want to admit that they cannot afford to cover the services that they have promised and that people expect. A rational approach would be for the state to establish realistic expectations on the part of the population and then meet its commitments to finance that level of services. Even for systems that remain based on financing from general public revenues, governments need to consider ways to limit the package of services available free of charge.

Design of the benefit package requires specifying the particular service categories that are to be covered, any limits on such coverage (for instance, 100 days of hospital care), and requisite cost-sharing. In addition to being an issue of benefit package design, patient cost-sharing is also a financing and resource allocation mechanism. Yet cost-sharing must be carefully designed so that appropriate utilization is not deterred, and the poor need to be exempted. Designing appropriate cost-sharing structures in Central Asia will be difficult, because individuals expect all care to be free and large segments of the population are poor.

In contrast to the principle of access to free health care, in practice the situation is quite different. Individuals always made informal payments to providers for preferential treatment, and individuals are now paying for certain services out-of-pocket. For example, survey evidence from the Kyrgyz Republic indicates that under the current situation, ability to pay is a major problem: the total costs of one episode of ill-health exceeded the monthly income of the entire household in 20 percent of cases, while nearly half of all patients reported severe difficulty in finding money to pay for their hospitalization, especially in rural areas. Moreover, as rates of overall health service utilization have fallen in the Kyrgyz Republic, among those who report ill-health, the poorest are least likely to seek medical assistance. In 1994 about two-thirds of households in the top income quintile sought medical help outside the home, compared with only 41 percent of those in the bottom quintile (Abel-Smith and Falkingham 1996). A similar situation was found in South Kazakhstan Oblast (Langenbrunner, O'Dougherty, and Borowitz 1996). The challenge for policymakers in Central Asia is to design formal benefit and cost-sharing structures that capture these largely informal payments in a way that enhances the government's revenue position, while at the same time not impeding access to care, especially for the poor.

A related area of policy concern is to determine which services will be provided to the entire population because they are basic public health services (for example, immunizations, vector control), and which personal health services should be provided through the insurance benefit package and/or private payments. Such decisions can be assisted by burden of disease and cost-effectiveness studies, as is being done in Kazakhstan, the Kyrgyz Republic, Turkmenistan, and Uzbekistan. This enables policymakers to rank health interventions on cost-effectiveness grounds and provides an empirical basis for deciding which services are to be covered for the entire population as basic public health services, which personal health services are to be included in the publicly funded insurance benefit package, and which services will not be covered by public programs because they are not affordable and/or are of low priority (see World Bank 1993b).

### *Payment of Medical Care Providers*

The methods used to pay hospitals, polyclinics, and physicians have important effects on access to care, economic efficiency, clinical effectiveness, quality of care, and consumer satisfaction (see Barnum and others 1995; Jencks and Schieber 1991). The 18-category, normative-based line item budgeting system and salary reimbursement of medical care personnel provide few incentives for efficiency. FSU health systems are over-resourced in terms of the large quantity of generally low-quality inputs that are not efficiently used. A disproportionate amount of budgets and care are devoted to the highest and most costly levels of the system because of (a) budget norms; (b) greater availability of supplies, equipment, and free pharmaceuticals and the presence of the best physicians in higher-level hospitals; (c) high energy and food costs; (d) poor referral and transportation networks; and (e) no penalties for consumers or physicians for bypassing lower levels of the system. Furthermore, the deteriorating economic situation has inhibited health authorities from eliminating redundant personnel because of the fear of exacerbating the unemployment situation.

Virtually all FSU, middle-income Latin American countries, and Western industrial OECD countries are separating provision from financing, making money follow patients in the context of an overall global budget, and adopting incentive-based medical care provider payment mechanisms (Schieber 1995). Experiences from Eastern European countries, Kazakhstan, the Kyrgyz Republic, and Russia suggest that the incentive-based systems initially developed and implemented in the OECD countries can work just as effectively in former socialist economies.

Schieber (see chapter 6 of this volume) describes the conceptual considerations surrounding the reform of provider payment mechanisms in detail, and outlines the Central Asian republics' experiences in this area to date. The reform of payment systems is an essential component of overall reform, regardless of the choice of financing source, as it is critical for breaking free of some of the traditional misincentives and inefficiencies that have characterized health services in the region.

### **Delivery Systems**

Central Asian countries need to restructure service delivery systems, reduce and retrain health staff, adopt modern medical treatment protocols, target public and environmental health programs more effectively, and rationalize the pharmaceutical sector. While they are reducing the number of hospital beds as a matter of economic necessity, they need to develop a strategic approach to hospital rationalization. This would address, among other things, the need to reduce the excessive specialization and duplication in the hospital system; promote outpatient care by developing the necessary diagnostic and treatment capacity, including ambulatory surgery centers; and assuring adequate supplies and pharmaceuticals. With respect to staffing, the countries need to retrain physicians in general and family practice and increase the ratio of nurses to physicians (see chapter 4 by Hensher). Making providers autonomous entities is a first step in this direction. With the help of a World Bank project, the Kyrgyz Republic is actively moving ahead

to restructure its delivery system. Provider payment systems being implemented in Kazakhstan and the Kyrgyz Republic provide the financial incentives to reinforce delivery system changes. Whether governments will be able to take the difficult step of eliminating surplus employees, given the economic climate, remains to be seen.

As concerns basic health services, all the countries have recognized the need to adopt new treatment protocols, which in many cases reflect ambulatory-based treatment regimens and shorter lengths of stay when hospitalization is necessary. The burden of disease and cost-effectiveness studies show that the Central Asian countries have a high disease burden from both pre-epidemiological transition diseases that affect women and children and noncommunicable diseases such as cancer, heart disease, and stroke. A significant part of this disease burden is attributable to environmental risk factors. Better public and environmental health programs, as well as the availability of appropriate equipment and supplies at the primary care and *feldsher* levels targeted at acute respiratory infections and diarrheal diseases, could have a significant impact on improving the health status of mothers and children in a cost-effective manner. Similarly, effective adult prevention programs focused on lifestyles and substance abuse could help reduce both current and future costs associated with treating chronic conditions.

The quality of care could also be significantly improved by adopting modern quality assurance systems based on continuous quality improvement models, as opposed to the current systems that rely on sanctions. Such systems are necessary concomitants of provider payment changes and have accompanied the provider payment reforms currently being developed and implemented in Kazakhstan and the Kyrgyz Republic.

Another important area is developing policymaking and management capacity at the national and local levels and systems for providing the economic and epidemiological data needed for decisionmaking. The management needs of a decentralized health system are complex and interactive. Effective and integrated management structures at the central, regional, local, and individual facility levels are essential. As the health systems undergo reform, assuring that data necessary for managing the systems are collected and transmitted to appropriate decisionmakers at all levels, including consumers, is essential.

The appropriate roles of the different financing and health authorities at all levels of government need to be sorted out. National governments must not abrogate their public health, staff training, environmental health, and quality assurance functions as the transition to insurance-based and decentralized systems pervades the reforms in most countries. The Central Asian countries also need to develop effective national health accounts, so that they can monitor the total level of resources committed to the health sector by source of payment and type of service.

The pharmaceutical sector is also a major area for reform in all six countries. Virtually all aspects of pharmaceutical production, procurement, management and regulation, rational use of drugs, and pricing and coverage policies are being targeted for reform to assure the least costly supply of essential drugs.

With respect to the procurement and distribution of pharmaceuticals, privatization has been an important direction of reforms in Central Asia. Uzbekistan, for example, has made significant progress and has seen encouraging results. In 1994 the state monopoly previously in charge of pharmaceutical procurement and distribution was restructured into a joint stock association, Dori-Darmon. The government still owns 35 percent of Dori-Darmon shares, and the company is still the single largest wholesale supplier and distributor of pharmaceutical products in the country. The vast majority of retail pharmacies in Uzbekistan have also been privatized, either as individual or family owned proprietorships, or as collective enterprises owned by their employees. In addition, prices on all pharmaceuticals were freed, although the government subsequently reintroduced price controls for 20 basic medicines and supplies that all pharmacies, regardless of ownership, are required to have in stock at all times.

Governments in the region are seeking ways to reduce budgetary expenditures on pharmaceuticals. By enabling better-off patients to buy pharmaceuticals privately, privatization of the pharmaceutical sector and the consequent diversification of sources of financing may allow financing responsibility to be shifted from the state budget to households. The resulting savings are likely to be relatively small, however, given most people's currently modest purchasing power. Reduced costs through increased efficiency in the sector will depend on several inter-related reforms that face many governments all over the world, including (a) defining a list of essential drugs; (b) training physicians, pharmacists, and consumers in the rational use of drugs; (c) shifting from brand name to generic drugs; (d) improving procurement methods, for example, through international competitive bidding, and enhancing drug management; and (e) developing sound pharmaceutical pricing policies, for instance, competition policy. Policymakers also need to give more thought to redefining the population groups that receive subsidies for drug purchases.

## Conclusion

The challenge to the Central Asian republics is to improve the health status of their populations at a time of economic decline, while maintaining the strengths of the old system in terms of equity and access. Countries need to maximize the efficiency and effectiveness of their systems, subject to the limited funding available. Since 1990 all the countries have faced large declines in real health spending, and cannot afford the extensive and inefficient systems of the past. Doing more with less is the name of the game in the short run.

Perhaps most important in terms of direct improvements in health status is the need to restructure current public health activities. This includes maternal and child health programs, family planning, school health, occupational health, environmental health, adult health promotion and disease prevention, substance abuse, and road safety. Given serious overall fiscal pressures in the short term, additional resources to foster these efforts can only be realized through making efficiency improvements in the current system and formalizing the current official and unofficial systems of user charges. Efficiency improvements can be achieved by restructuring the over-resourced and inefficient health delivery systems, providing financial incentives for consumers and providers to behave efficiently, and introducing modern management and quality assurance systems. The current system of official and unofficial user charges should be formalized so that the additional revenues flow to responsible health authorities and can be used for appropriate priority health activities. Such formal user charges should be designed to provide incentives for consumers to use services efficiently, while at the same time exempting vulnerable populations, such as the poor, from excessive out-of-pocket payments.

Major reforms are also needed in staff training and medical education. Norms of all kinds—clinical treatment protocols, facility structural characteristics, and staffing—must be eliminated or modernized to improve health outcomes and to give managers the ability to manage their facilities efficiently. Pharmaceutical sectors need to be reformed in terms of procurement, distribution, management, pricing, rational use of drugs, quality, essential drug lists, and generic substitution.

Much of the reform debate in Central Asia has focused on financing, particularly on attempts to bring additional nonbudget revenues into the system. Equally important is the need to focus on basic public health activities and delivery system restructuring. One key question is whether funds can be obtained to make the necessary up-front investments that will lead to future cost reductions and improvements in health status in the face of declining health budgets. This is a difficult challenge, but a planned, efficiency-based transition is likely to lead to better results than randomly reducing budgets or eliminating capacity on an ad hoc basis. Budget reductions tend to take a greater toll on polyclinics and primary care in general, as hospital care is regarded as less discretionary. Moreover, the more prestigious and better trained hospital-based specialists control the system. Eliminating jobs is difficult in the current economic environment. Never-

theless, policymakers will need to address all these difficult issues as the health care systems in Central Asia adjust to changing needs and economic realities. Effective reforms carried out now will provide the basis for improved health status, adjustment to the epidemiological transition, improved quality and consumer satisfaction, and long-run financial sustainability.

## References

- Abel-Smith, B., and J. Falkingham. 1996. *Financing Health Services in Kyrgyzstan: The Extent of Private Payments*. London: London School of Economics and Political Science.
- Anderson, B., and B. Silver. 1995. "Assessing Trends and Levels in Mortality in the Newly Independent States: Cautionary Notes." Research Report no. 95-326. University of Michigan, Population Studies Center, Ann Arbor.
- Barnum, H., and others. 1995. "Incentives and Provider Payment Methods." Human Resources Development and Operations Policy Working Paper no. 51. World Bank, Washington, D.C.
- Chernichovsky, D., and others. 1996. *The Russian Health System in Transition; Coping with Old and New Challenges*. Washington, D.C.: World Bank.
- CIS (Commonwealth of Independent States) Statistical Committee. 1995a. *Demograficheskiy Yezhegodnik 1993* (Demographic Yearbook 1993). Moscow.
- \_\_\_\_\_. 1995b. *Demograficheskiy Yezhegodnik 1994* (Demographic Yearbook 1994). Moscow.
- Church, M., and E. Koutanev. 1995. "Report on Health Trends in Central Asia." Abt Associates, Almaty, Kazakhstan.
- Falkingham, J., J. Klugman, S. Marnie, and J. Micklewright, eds. 1996. *Household Welfare in Central Asia*. London: Macmillan.
- Feachem, R., T. Kjellstrom, C. Murray, M. Over, and M. Phillips, eds. 1992. *The Health of Adults in the Developing World*. Washington, D.C.: World Bank.
- Gomart, E. 1996. "Tajikistan: Pilot Poverty Alleviation Project." World Bank, Washington, D.C.
- Goskomstat SSSR. 1990. *Demograficheskiy Yezhegodnik SSSR 1990* (Demographic Yearbook USSR 1990). Moscow: Finansy i Statistika.
- Ismail, S., and H. Hill. 1996. "Nutritional Status in Kazakhstan." In J. Falkingham, J. Klugman, S. Marnie, and J. Micklewright, eds., *Household Welfare in Central Asia*. London: Macmillan.
- Jamison, D., H. Mosley, A. Measham, and J. L. Bobadilla. 1993. *Disease Control Priorities in Developing Countries*. New York: Oxford University Press.
- Jencks, S., and G. Schieber. 1991. "Containing U.S. Health Care Costs: What Bullet to Bite." *Health Care Financing Review*. Annual supplement.
- Langenbrunner, J., S. O'Dougherty, and M. Borowitz. 1996. "A Review of Selected Financing and Reform Activities in Russia and Central Asian Republics." Paper prepared for the EDI Senior Policy Seminar on Health Reform Implementation in Central Asia, June, Ashgabat, Turkmenistan.
- Marnie, S. 1992. "The Soviet Labor Market." European University Institute, Florence, Italy.
- Schieber, G. 1995. "Preconditions for Health Reform: Experiences from the OECD Countries." *Health Policy* 32.
- Tulchinsky, T. H. 1996. "Health Status Report." Azerbaijan, World Bank and United Nations Children's Fund.
- UNDP (United Nations Development Programme). 1994. *Human Development Report 1994*. New York.
- WHO (World Health Organization). 1993. *Health-For-All Global Indicators Database*. "Hit on Kazakhstan: Profile on Health Care in Transition." Copenhagen: Regional Office for Europe.
- World Bank. 1993a. "Azerbaijan: From Crisis to Sustained Growth." Country Study. World Bank, Washington, D.C.
- \_\_\_\_\_. 1993b. *World Development Report 1993: Investing in Health*. New York: Oxford University Press.

- \_\_\_\_\_. 1995a. "The Kyrgyz Republic: Poverty Assessment and Strategy." Report no. 14380-KG. Washington, D.C.
- \_\_\_\_\_. 1995b. "Republic of Kazakhstan: Social Protection Project." Staff Appraisal Report no. 13690-KZ. Washington, D.C.
- \_\_\_\_\_. 1996a. *Hashemite Kingdom of Jordan, Health Sector Study*. Washington, D.C.
- \_\_\_\_\_. 1996b. "Kazakhstan, Transition of the State." Report no. 15353-KZ. Washington, D.C.
- \_\_\_\_\_. 1996c. *World Development Report 1996: From Plan to Market*. New York: Oxford University Press.



# 3

## *Integrated Cost-Effective Care: The Missing Link between Community, Primary, and Secondary Care*

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During the last 20 years, the changing burden of disease and ever increasing public expectations have shaped the evolution of health service delivery and financing. Many countries underwent the health transition: mortality and fertility decreased dramatically, leading to increased life expectancy and aging of the population, while noncommunicable diseases replaced communicable diseases as the major source of the burden of disease. Other countries became polarized, with increasing inequalities in health status adding the problems of the post-transition period to those of the pretransition era. Some Central Asian republics may be in this situation. In industrial countries, the change in the epidemiological profile, together with increased public expectations created by democratization and the social welfare movement, led to a dramatic increase in the demand for health services and to major changes in the provision and financing of care.

Governments have responded by increasing their responsibilities in the health sector, both in provision and financing. However, they are not able to pay for all the care for all the people at all times. They have to make hard choices and, in one way or another, ration the provision of public health care. In this context, the different parts of the public health system have been forced to compete for scarce resources, rather than cooperate to maximize health gains: public health services have had to compete with clinical services, primary health care services have had to compete with hospitals, and preventive services have had to compete with curative care services. The resource allocation discussion needs to shift from these competitive dichotomies toward more rational criteria.

Debate on the allocation of public health resources should focus on making choices between interventions that (a) deal with important health problems, (b) are cost-effective, (c) are targeted to the poor, and (d) are mostly public goods. In a situation of limited financial resources, it is important to base the allocation of public health funds criteria that promote equity, effectiveness, and efficiency, three tenets that shape most recent health care reforms.

There should be no presupposed preferences as to where and by whom these interventions are delivered. Many cost-effective interventions, which contribute significantly to reducing the burden of disease, require integrated provision of care at both primary and secondary levels, and policymakers should not assume that prevention is always more cost-effective than cure. In addition, they must move from a model of isolated and competitive health care subsystems to one of health care provider networks. For example, sick child programs and safe motherhood programs are both cost-effective interventions for reducing infant and maternal mortality and morbidity that demand good integration between the primary health clinic and the district hospital at the secondary level.

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## Making Choices

In a situation of scarce resources, various criteria might be used to allocate investments in health. Policymakers, health administrators, and practitioners have always rationed limited resources on the basis of one criterion or another. Decisionmakers have had to respond to such difficult questions as

- Should all people benefit equally from public health funds, or should some groups, for example, the sickest or the poorest, benefit more from publicly financed health services?
- On which health interventions should public monies be spent? Should public funds be spent only on those that have a clear public utility, or also on those that have a mainly private utility?
- How should public funds be split between health promotion, prevention, cure, and care?
- How should health budgets be split between secondary and primary health care?
- Who should take allocation decisions? Should it be politicians, who tend to favor interventions that respond to perceived needs; economists, who tend to focus on cost containment and efficiency; public health specialists, who tend to favor aggregate health gains; clinicians, who tend to emphasize individual health improvement; or beneficiaries, who tend to prefer individual well-being, but who generally have incomplete information on health problems, available interventions, relative costs, and quality of care?

Traditionally, rationing has been achieved either by restricting service coverage or by restricting benefits. In the first instance, the public system covers only certain groups of people, normally those who contribute to social insurance, for example, workers in the formal sector. In the second instance, coverage may be universal, but the benefits are limited, for example, only hospital services are covered. Unfortunately, both instances discriminate against the poor. When coverage is limited, the poor are excluded because they are often unemployed or are in the informal system, and hence are not covered by social insurance. When benefits are limited to inpatient care, the poor are excluded because they tend to live in rural areas or periurban slums, far from the public hospitals that are disproportionately used by the middle and upper classes. Finally, when coverage is universal and benefits are generous, rationing is normally achieved through waiting lists. Again, the poor are discriminated against, because upper-income groups are more effective in bypassing waiting lists.

Unfortunately, such rationing criteria are normally not explicit and are often undemocratic: the beneficiaries have no say in the choice of criteria, either directly or indirectly. The World Bank has advocated the adoption of a totally different approach, in which priorities and benefit packages are selected on the basis of their burden of disease and cost-effectiveness, respectively. These criteria are both rational and transparent to public scrutiny. In addition, they promote equity and efficient allocation of health resources.

When selecting which problems should take priority and which interventions should be publicly financed, the World Bank recommends three broad criteria: (a) the dimension of the health problem, (b) the problem's amenability to available health interventions that can be provided at reasonable cost, and (c) the social value of the problem. The World Bank (1993) has operationalized the first two criteria in terms of the burden of disease, measured in disability adjusted life years (DALYs), and the cost-effectiveness of health interventions. As for the third dimension, social value, the discussion about how to best target resources and services to the poor and how to best focus public investments on public goods is still ongoing.

### *Burden of Disease*

The burden of disease is an indicator of the loss of healthy life caused by death and disability. It permits comparing the relative aggregate importance of different health problems. When the

magnitude of a health problem is measured in DALYs lost or saved, as opposed to mortality rates, we can differentiate between deaths that occur among young people from those that occur among the elderly. This allows us to say that the death of an 18-year-old young man caused by injuries is not the same as the death by cancer of a 78-year-old man. In addition, the burden of disease approach adds the number of years of healthy life lost because of premature death to those lost because of morbidity and disability. This means that we can count the number of years of healthy life lost when a four-year-old girl loses a leg by stepping on a land mine. When the burden of disease is measured in DALYs, deaths that affect the young gain relative weight, as do diseases that cause significant disability, but do not lead to death.

### *Cost-Effectiveness*

The World Bank and the World Health Organization (WHO) propose using cost-effectiveness analysis as a tool to select health interventions for public financing, subject to budgetary constraints. Cost-effectiveness analysis is an important source of guidance for achieving value for money in health spending (World Bank 1993). It permits comparing the relative benefits and costs of different health interventions by showing the ratio of costs to health benefits, a form of economic evaluation in which the costs of alternative procedures, programs, or providers are compared with outcomes measured in natural units, for example, cost per life year gained (Robinson 1993).

Most health projects the World Bank has recently financed have included burden of disease studies and cost-effectiveness analysis for an array of different public health and clinical interventions. During the preparation of the Georgia Health Project, Bank staff analyzed alternatives for reducing the burden of disease, and concluded that health promotion and prevention programs to reduce tobacco consumption and to decrease mortality from cardiovascular diseases and injuries would cost less than US\$3 per DALY saved, and that each dollar spent on prevention under the project would save US\$63 in treatment and indirect costs (World Bank 1996a). In Central Asia, the Bank conducted burden of disease studies in Turkmenistan and Uzbekistan, as well as in one region of the Kyrgyz Republic. In Turkmenistan, the World Bank (1996b) analyzed the burden of disease attributed to 21 major causes, and concluded that interventions such as the integrated management of the sick child, family planning, safe motherhood, tobacco and alcohol control programs, simple hypertension treatment, and short-course treatment of tuberculosis (TB) were among the most cost-effective for the country, and would address the health problems causing the highest burden of disease.

Results of burden of disease and cost-effectiveness studies in one country may not be automatically transferable to another, but countries do not have to start from scratch. Regionally, countries can make common use of the relevant know-how and data. The accumulation of evidence about cost-effective interventions provides indications that can be useful for decisionmaking and for designing further analysis.

### *Weighing Public versus Private Goods*

Even in the case of a sizable health problem for which a cost-effective intervention is available, whether that intervention should necessarily be publicly financed is not clear. Public expenditure decisions should attach priority to public goods over those that carry a mostly private utility. For instance, headaches are a significant source of disability and absenteeism, and are generally amenable to treatment with aspirin, an extremely cost-effective intervention, but this does not mean that aspirin should be publicly financed. In most countries of the Organization of Economic Cooperation and Development (OECD) aspirin is sold over the counter at nonsubsidized prices and demand is strong. Demand is strong despite the out-of-pocket cost, because the utility associated with aspirin accrues mostly to the individuals who purchase it, and because the perceived gain to them is larger than the cost. Conversely, the diagnosis and treatment of TB, as well

as the prevention and cure of many other communicable diseases, are primarily public goods, because their utility accrues not only to the patient, but also to the community at large, which benefits from not being infected.

### ***Targeting the Poor***

The World Bank advocates targeting public health resources to the poor as an effective and socially acceptable approach to alleviating poverty (World Bank 1993). The poor are those who need the most health care, and those who receive the least (the inverse care law). They need more because they have poorer health status, and receive the least because they face physical and financial barriers to using health care. The poor either live in rural areas (for example, in some areas of Central Asia), in periurban slums (for instance, in Latin America), or in decayed inner cities (for example, the United Kingdom and the United States), where access to services is limited. In most low-income countries public health care finance and delivery is limited, and most public health care resources are concentrated in a few secondary or tertiary hospitals in the capital. These are disproportionately used by the middle and upper classes, while the poor lack access to basic health services and receive low-quality care (World Bank 1993). The poor have to resort to private providers and pay out-of-pocket for most clinical care, and a single episode of illness can wipe out their savings, and even lead the family to borrowing or the forced sale of essential productive assets.

Targeted health programs reduce inequity and ensure that a higher proportion of public funds are used for the benefit of the poor. The primary health care (PHC) approach and the basic package approach indirectly target services to the poor. PHC leads to outreach into communities and the establishment of health posts and centers in rural areas and periurban slums, where most poor people live. All essential public health and clinical packages include interventions such as immunization and management of the sick child, family planning, and safe motherhood programs, which are disproportionately used by the poor.

### ***Basic Packages of Health Benefits***

Based on a country's burden of disease, measured in DALYs, and cost-effectiveness analysis of health interventions from low- and middle-income countries, the World Bank has proposed a basic package, including public health programs and essential clinical care, that would address the problems causing the highest burden of disease, and that could be provided at low cost (varying from US\$12 to US\$21.5 per capita per year, depending on the country's income level). Basic packages are being adopted around the world. For example, in the former Soviet Union (FSU), Georgia defined an essential package of public health and clinical interventions to be publicly financed. However, in Central Asia, none of the countries has yet genuinely limited the scope of public health benefits to an essential package of public health and clinical services.

The basic package approach tries to match the publicly financed benefits package with the resources available for the sector given the country's overall fiscal situation. The aim is for public health resources to focus on a package of public health and clinical services that would address major causes of the disease burden in a cost-effective way. The scope of the benefits package would vary with the fiscal situation and with the resources allocated to the health sector. This approach protects the sustainability of the public health system, and the allocation of resources is more efficient. In addition, basic packages improve equity, because the poor disproportionately use those interventions that are included in most essential packages.

### ***Providing Integrated Cost-Effective Care***

Almost 20 years ago, WHO (1978) strongly urged countries to develop PHC services as a way to respond to the changing patterns of disease and to ensure more equity within their

health systems. Some countries, such as the FSU, along with Canada, the United Kingdom, and other Western countries, already had national health services that provided universal coverage and an all inclusive benefits package that they financed from general taxes, and that included fairly well-developed PHC services. Most developing countries did not have significant PHC services.

The PHC movement led most countries to shift resources away from hospitals to basic health services and interventions and to reorient services toward health promotion and disease prevention. However, the movement fell short of expectations. Even WHO (1993) recognized that the awaited transformation did not happen, and therefore reassessed the assumption that setting up the right organization will ensure that the right jobs are done in the best possible way. WHO is currently concentrating on models of good practice that lead to measurable improvements in health outcomes in an effort to identify the key functions critical to a good health care system. What matters, according to WHO, is what is done well, not who does it. The same function may be carried out effectively by different people or services in different settings, such as schools, workplaces, or homes.

Heaver (1995) considers that greater variation in disease patterns and client profiles is transforming the classical approach to PHC. The blueprint approach of packages of PHC interventions is giving way to flexible local packages that respond to different local priorities and to clients' perceived needs. Central authorities are asking district teams to define local intervention packages and to respond to a constant demand for quality improvements. The emerging chronic and degenerative diseases, which in general require more intensive treatment and care than, for example, acute infections, have led to a sharp rise in demand for referral systems and hospitals. Finally, the for-profit sector and nongovernmental organizations are becoming important providers of PHC, although governments continue to retain their policy, financing, regulation, evaluation and monitoring, and quality control responsibilities.

The Central Asian countries have fairly well-developed national health services that include substantial PHC services. The political and economic transition led to some deterioration of their health systems, and most countries are now rehabilitating their systems, providing new equipment, modernizing the management of their PHC services, and establishing family practice programs. For example, the Kyrgyz Republic is reorienting its health services toward an upgraded PHC system to strengthen and improve the effectiveness of reproductive health services, to expand acute respiratory infection (ARI) and childhood diarrheal disease programs, and to shift from inpatient to ambulatory care-oriented protocols for treating TB and sexually transmitted diseases (STDs). Uzbekistan is developing its PHC by creating rural medical posts, and a Bank-supported project will contribute to the development of financing mechanisms that will support the system's reorientation toward PHC. Turkmenistan recently initiated a family doctor program.

Community health workers, nurses, or general practitioners can deliver most cost-effective interventions that deal with significant causes of the burden of disease in a community-based setting from such PHC facilities as health posts, health centers, or even mobile clinics or home visits. However, in many other cases cost-effective interventions require referral and access to a secondary care hospital or clinic, and demand a fair amount of integration between different levels of service. For instance, immunization is mostly a community-based PHC intervention, but one of the critical steps in safe motherhood programs that will save mothers and newborns is emergency obstetric care, which should be provided at a secondary care hospital.

Currently, most Central Asian public health systems are organized into competing and isolated subsystems, with poor communications and inefficient referrals. Hospitals compete with general practices and health centers; vertical programs have clinics side by side in the same town. Care for a single client is piecemeal and often inefficient, as different practitioners duplicate diagnostic tests and prescriptions. The clients themselves have to overcome the lack of communication between different subsystems and must often pay for the duplication of services.

## **The Public Health Package**

Most public health intervention benefit packages include health promotion, school health programs, immunization, and STD prevention, which can be delivered in the community or by PHC services. However, this does not mean that hospitals and specialized ambulatory services should not have an important role in the delivery of public health services. On the contrary, health authorities should consider increasing the role of hospitals in primary, secondary, and tertiary prevention of diseases that cause a significant burden of disease.

### *Health Promotion*

Health promotion is the most cost-effective public health instrument available to reduce mortality from chronic and noncommunicable diseases, especially ischemic heart disease. Both mortality statistics and burden of disease analysis indicate that chronic adult diseases and their risk factors are the most important causes of mortality and morbidity in Central Asia. Ischemic heart disease is the main cause of death and DALYs lost in the Central Asian republics, and in some of the countries cerebrovascular diseases are the second most important cause. Therefore, the Central Asian republics should pay special attention to the development of health promotion and to the institutional development of the existing centers of health, which are responsible for health promotion and health education.

Health promotion is an area that requires integrated action, not only of health care services, but also among different sectors, such as education, agriculture, water and sanitation, and finance. In the health sector, health promotion is the business of all professionals at all levels of care, including hospitals. In most OECD countries, health promotion and disease prevention information is available at the community level and at primary and secondary health care services. In the United States hospitals are deeply involved in secondary prevention and offer such healthy lifestyles programs as weight reduction and smoking cessation clinics. However, even in the United States, where about 70 percent of all adults see a physician at least once a year, only about half of all smokers have ever been advised by a physician to stop smoking.

Finland and the United Kingdom are among the countries that are more advanced in using health promotion as an integrated tool for reducing the highest burden of disease, specifically, in reducing ischemic heart disease. Reforms in Sweden and the United Kingdom maintained the regional health authorities' responsibilities for the health of a population in specific geographical areas, and the countries are experimenting with extending contracts to the private sector to provide health promotion and disease prevention activities (Bengoa 1995).

Estonia is the former Soviet republic that is most advanced in using health promotion as an integrated tool to reduce coronary heart disease and injuries and risk factors such as smoking and abortion, and to improve family planning (World Bank 1994). The program includes a health promotion fund and a grant system that finances, on a competitive basis, projects proposed by community-based, nongovernmental, or public organizations.

### *School Health Programs*

Childhood education is the most important determinant of adult practices, for instance, regarding tobacco consumption. However, school health programs and health education are generally underdeveloped, because teachers are not appropriately trained and health services do not pay enough attention to the sector. In the FSU physicians were generally responsible for general health education and school health, although in some cases, for example, in Turkmenistan, the authorities trained teachers as nurses. In Turkmenistan, the ministries of Health and Education are cooperating closely, the health education curriculum was updated, and teachers are being trained. Central Asian republic governments may want to pay special attention to the development of

these programs as a long-term strategy to reduce the burden of disease significantly and to contribute to their countries' development.

School health programs are intersectoral, and call for good cooperation between the health and education sectors. They are mainly community-based programs, which local PHC services can coordinate, and do not require special integration with secondary health care services. School health programs typically have three components: (a) health education, which should be included in the curriculum and in extracurricular activities; (b) annual physical examinations of children for visual screening, micronutrient supplements, selective nutrient supplements, and treatment of parasitic worm infections; and (c) school health clinics, which provide general medical or nursing care to adolescents and young people, including family planning and STD prevention and treatment.

### ***Immunization***

Central Asian governments have been engaged in a remarkable effort to restore immunization levels to optimal levels in cooperation with the United Nations Children's Fund (UNICEF) and WHO, and the transition to the schedule recommended by WHO is nearly complete. Immunization has been responsible for many of the health gains of the past 50 years, and even though the highest burden of disease in Central Asia is not related to diseases that vaccines can prevent, outbreaks of diphtheria and epidemics of previously controlled diseases such as TB can occur if the countries do not sustain their current efforts to achieve optimal levels of immunization.

Immunization programs can be delivered through vertical programs and/or through horizontal programs by integrating vaccination with basic health services routinely provided by PHC services. Although vertical vaccination campaigns achieve higher initial coverage, routine vaccination in PHC services is more cost-effective (World Bank 1993), and health experts have for many years recommended integrating management and transport to facilitate access to services to boost cost-effectiveness (Over 1988). Immunization programs are mainly a community-based, PHC responsibility, but hospitals can and should take responsibility for immunizing (a) pregnant women who attend outpatient obstetric clinics against tetanus, (b) newborns against TB, and (c) people who seek treatment for injuries at emergency units against tetanus. To do this, and to avoid immunizing people twice, information must follow the client. Patients need to carry a vaccination card, or hospitals need to have electronic access to patients' vaccination records.

### **The Essential Clinical Package**

The delivery of essential clinical services requires a well-functioning district health system that consists of health posts and health centers as the first point of contact, and district hospitals as referral facilities, with the two levels linked by adequate communication and transport facilities (World Bank 1993). Most essential clinical benefits packages studied in lower-income countries include the treatment of TB; the integrated management of the sick child; family planning and STD control; safe motherhood programs; and other clinical services, such as assessment and counseling, pain alleviation, and treatment of infections and minor trauma. Middle-income countries have much broader benefits packages that match the level of available resources. The following sections review the provision of these services, highlighting the need for integrating different levels of care.

### ***Treatment of TB***

TB is among the major causes of burden of disease. For example, in Turkmenistan in 1993 it was responsible for 3 percent of the total burden and was the eighth largest cause of DALYs lost. If all or nearly all smear-positive cases of pulmonary TB were diagnosed and rendered noninfectious, the risk of TB infection would immediately start to fall (Murray, Styblo, and Rouillon 1993). TB immunization and short-course chemotherapy are among the most cost-effective interventions,

and treating TB costs only US\$13 per person (WHO 1995), and US\$1 to US\$2 per DALY saved (Murray, Styblo, and Rouillon 1993).

TB control is one problem for which WHO does recommend organizing a vertical program, because it has proven to be more cost-effective than an integrated approach. WHO recommends that governments create national TB control programs to carry out the so-called directly observed treatment, short course. This is a treatment strategy in which health workers watch their patients take their medication every day for at least the first two months of treatment, but ideally for the entire six months of treatment. While ambulatory treatment is normally less expensive than hospitalization, inpatient care may be required when patients live in remote areas, depending on their compliance with treatment protocols. The WHO TB Program is available to help governments establish more effective TB control programs.

### *Integrated Management of the Sick Child*

The integrated management of the sick child normally includes control of ARI and diarrheal diseases, but may also include the control of measles, malaria, and malnutrition. ARI is the most frequent illness globally, and a leading cause of death in the developing world. In Central Asia, ARI is the most important cause of infant mortality, and in Turkmenistan, diarrhea also causes high mortality. WHO and UNICEF are cooperating in launching integrated programs for the management of the sick child in Central Asia, as well as in other parts of the FSU. These programs give quick results, but require good integration both between home-based care and PHC and between primary and secondary health care. For example, in Mexico a diarrheal disease control program reduced diarrheal disease mortality in children under five by 65 percent in three years (WHO 1994).

To improve cost-effectiveness, management of the sick child programs can be integrated with immunization, breastfeeding promotion, and safe motherhood programs, and can be delivered in the home or at the PHC clinic. WHO guidelines for standard case management of the sick child recommend increased fluids and continued feeding to control diarrhea. Both can be delivered at home, and are usually enough to control the situation without referral of the patient to other levels of care. By contrast, the management of dysentery and the treatment of complications of pneumonia in children, which are also cost-effective interventions, often require admission into a district hospital and good integration between providers at both levels of care.

### *Family Planning and STDs*

The Central Asian republics, especially Tajikistan and Turkmenistan, have high maternal and infant mortality rates that are related to excess fertility and other risk factors that family planning can reduce. STDs do not represent a high share of the burden of disease, but could become a problem if control efforts are not fully supported. Health services need to adopt updated STD care protocols, that is, by screening pregnant women for AIDS only once and by treating STD patients on an outpatient basis.

Family planning and STD control programs can be integrated. They can also be provided together with safe motherhood programs, among other reasons because asymptomatic STDs affect women disproportionately. Integrated, cost-effective, reproductive health services aim at preventing unwanted pregnancies, preventing and treating obstetric complications, preventing and treating STDs, preventing HIV, and preventing breast and cervical cancer. These programs include an array of services that cover primary to tertiary prevention, and can be provided in the community, at the PHC facility, or at the district hospital. For example, condoms and other barrier methods (diaphragms, spermicides) can be distributed for free or sold in communities by commercial establishments such as supermarkets or kiosks, as well as by pharmacies; pharmacies or clinics can provide oral contraceptives; insertion of intrauterine devices and abortion by

vacuum aspiration are normally performed in PHC clinics; while surgical contraception and abortion by dilatation and curettage require referral to at least a district hospital.

### ***Safe Motherhood***

Maternal mortality is still extremely high in all the Central Asian countries, varying from around 35 per 100,000 live births in Azerbaijan to more than 70 in Tajikistan. Most Central Asian republics average 50 maternal deaths per 100,000 live births, while the WHO target for Europe for 2000 is less than 15. Perinatal deaths are one of the main causes of infant mortality, and could frequently be prevented with adequate prenatal and obstetric care. Safe motherhood programs can rapidly reduce maternal and infant mortality, but more than any other cost-effective program they require excellent integration of primary and secondary health care services.

Safe motherhood is the best example of a cost-effective intervention that requires (a) home care to promote good nutrition, adequate physical activity, and self-referral for care; (b) community care to provide information and education, namely, on breastfeeding; (c) PHC services, such as family planning and good quality prenatal and postpartum care; and (d) secondary health care, such as prenatal care for high-risk pregnancies and emergency obstetric care. Emergency obstetric care includes (a) surgical procedures such as cesarean section; (b) anesthesia; (c) medical treatment; (d) blood replacement; (e) manual procedures, such as the use of forceps; (f) special care for newborn babies, such as resuscitation, and (g) management of high-risk pregnancies (Walsh and others 1993).

### ***Other Clinical Benefits***

Other cost-effective clinical interventions that can be publicly financed even in low-income countries are assessment, advice, pain alleviation, and treatment of infection and minor trauma. Treatment of more complicated conditions should be publicly provided as resources permit. Some of this care is provided at the PHC level, but the services of district hospitals are often required through outpatient services and emergency units. Nurses and midwives can deliver a significant part of the basic health benefits package, while physicians carry out team supervision, provide essential clinical care, and handle more complicated cases. A district hospital, with about 1 bed per 1,000 population served, is needed to provide inpatient and specialized outpatient care, but the hospital would be able to perform only basic surgery. A higher-level hospital would be required for more complicated care (World Bank 1993).

## **Integrating Cost-Effective Care through Provider Networks**

To move from the present model of disjointed care to one of integrated, cost-effective services focused on client needs, investments are needed in three areas: (a) the organizational and technological development of health networks, that is, a diversification of the array of health services to respond effectively and efficiently to different health needs and the development of modern referral systems; (b) the training of health and health-related professionals, such as general practitioners and teachers, who need to acquire new attitudes and skills; and (c) a reform of the way public funds are allocated and providers are reimbursed to favor more cost-effective interventions, to promote efficient use of resources, and to ensure that a larger share of resources benefits the poor.

### ***Health Care Networks***

To provide cost-effective care in an efficient way, the authorities will need to replace the current division and hierarchy of services with health care networks with modern referral systems, where

information and money follow the client. Health services have traditionally been conceived of as a pyramid of increasing complexity and cost, with PHC at the base, acting as the gatekeeper for the use of secondary and tertiary care. However, at present, most public health systems in the Central Asian republics are organized into competing and isolated subsystems, with poor communications and inefficient referrals. As noted earlier, hospitals compete with general practices and health centers, vertical programs have clinics side by side in the same town, and individual care is piecemeal and often inefficient.

The innovative forms of provision organization and financing that many countries are experimenting with could contribute to improved equity, quality, efficiency, and accessibility of health services. Health networks, such as the National Health Service in the United Kingdom, and health maintenance organizations in the United States, are composed of an array of health and health-related services that cover different health needs and that can include home care, mobile clinics, health centers, referral and emergency services, hospital satellite clinics, outpatient surgery, day and night hospitals, and regular hospitals. As mentioned earlier, providing cost-effective interventions may require different types of organization, such as

- Vertical national programs, as in the case of TB, which may require partial hospitalization
- Integrated PHC services that provide immunization, family planning and STD prevention and treatment, prenatal care of low-risk pregnant women, management of noncomplicated cases of ARI and diarrheal disease, and essential clinical care
- Integrated primary and secondary health services that provide surgical contraception, prenatal and obstetric care of high-risk pregnant women, emergency obstetric care, emergency services, and more complex clinical care.

Some effective interventions, such as cataract surgery, are not cost-effective when compared with others, because they are traditionally carried out in hospitals, where costs are high. If they were provided in an ambulatory setting, for example, day surgery, their cost-effectiveness would increase dramatically. In a Mexican study of 120 health interventions, among the least cost-effective services were inpatient diagnosis, counseling, pain relief and palliative treatment, and hospitalization of patients suffering from psychiatric disorders. In industrial countries such as the United Kingdom and the United States, ambulatory services, supplemented by day or night hospitals when needed, provide most care of this type, and palliative treatment is provided either at home or in special homes that are less costly than hospitals. This is of special interest in the Central Asian republics, where hospitalization is still the rule for many interventions that could be provided safely and more efficiently in an ambulatory setting. For example, STDs do not normally require admission into an hospital, and obstetric deliveries can be safely handled with shorter lengths of stay.

In a modern health network, the community-based general practice or health center can maintain its central role, acting as the main provider of PHC and the system's gatekeeper (both gate opener and gate closer). However, for general practices to play such a role, health professionals must acquire new skills, adequate referral and emergency services must be put in place, and financial mechanisms must provide incentives for clients and professionals to use cost-effective care.

### *Referral and Emergency Services*

The provision of integrated, cost-effective care through health care networks requires well-developed referral routines and emergency medical services. Effective referral systems are underdeveloped in many countries, including the Central Asian republics. In a tight economic situation, people tend to solve their health problems locally, because communication systems and transportation either do not function or are unreliable. Experts advocate public investments in modern referral and emergency services, because they can help save many lives. For example, to reduce fatalities and disabilities caused by injuries, they recommend upgrading PHC and integrating it with emergency units in

hospitals. This is because effective preventive strategies can avoid the loss of more than 45 percent of the expected DALYs resulting from injuries, while emergency medical services can reduce fatalities and disabilities caused by injuries by 50 percent.

Referral systems require communication skills, equipment, transportation, operational guidelines concerning the flow of information and patients, and care protocols of emergency aid in different settings. Information about patients and reasons for referral can be stored and transmitted in several ways, some of which are patient friendly, while others keep patients as passive, noninformed subjects of health processes. Information can be stored in traditional paper records or in electronic records, and both can be kept either by health professionals or carried by patients themselves in the form of patient cards. For example, patients normally keep their immunization records, but health professionals keep most other health and medical information that would be relevant in a self-referral, professional referral, or an emergency situation in the clinic or hospital. In most countries, patients transmit medical information orally or it is provided by means of a letter or telephone call from a health professional, while in high-income countries health services may be electronically linked to each other and information may be transmitted electronically. Some OECD countries are testing so-called smart cards as a way to make information follow the patient.

Traditionally, the communication equipment needed for referrals and emergency situations includes telephones and radios, with the latter used mostly in remote locations where telephones are not available or do not function properly. In higher-income countries the communication equipment includes a number of electronic devices that can facilitate communications and improve the efficiency of networks, including (a) pagers that allow patients to contact physicians no matter where they are; (b) phones, including cellular phones; (c) facsimiles; and (d) computerized information systems. Health information systems may link, for instance, an emergency service run by a nongovernmental organization, the police, or firefighters to emergency medical services. The sophistication of these systems has increased steadily during the last ten years, allowing for electronic transmission of oral and written information, as well as images, and, for example, permitting a general practitioner working in a remote area to transmit an X-ray or electrocardiogram to be interpreted by a specialist in a more technologically advanced medical center. Sometimes expert systems, which can assist a nurse in diagnosis and treatment when the doctor is not available or help a general practitioner handle a situation that would normally require a specialist, supplement this communication technology.

Referral and emergency services need different types of transportation, including (a) regular cars or vans assigned to transport patients and health professionals between the community and health services and between health services; (b) ambulances equipped with more or less sophisticated equipment for transporting women in delivery and newborns, patients with injuries, and patients in cardiac arrest; and (c) helicopters or planes, which are extremely expensive to maintain, and should therefore only be used for transportation from remote locations when other alternatives are not available.

### *New Skills and Practices*

The provision of cost-effective interventions through health networks requires new attitudes, skills, and practices, which can be achieved by training new health and health-related professionals, retraining existing health professionals, and adopting updated care protocols and guidelines for service provision.

The Central Asian republics have been developing the new specialty of family medical practice, but they need to train and retrain other health and health-related professionals, such as health promoters and health educators, general practitioners, paramedics, health service managers, and information specialists. Existing professionals, such as *feldshers*, midwives, and nurses, need to be trained to practice more independently to provide, for example, family planning and

essential obstetric care at the community level. Teachers need training in health education, as opposed to nursing. Health educators need training in behavioral change, that is, in methods to increase knowledge and change attitudes and practices related to health. General practitioners need training in such areas as adolescent health, family planning, and STD and HIV prevention and treatment, as well as in communication skills. Health service management is a new career in the Central Asian republics that requires training in such skills as organizational behavior, financing and allocation methods, and negotiation skills.

Care protocols and guidelines for health services are being updated throughout the Central Asian republics, but the authorities need to put more effort into this area. The Central Asian republics adopted the WHO schedule for immunization and are adopting modern protocols of care for the management of the sick child. However, they may also want to consider adopting modern care protocols for treating TB and STDs, for providing family planning and safe motherhood programs, and for providing other clinical care. Guidelines for health services that define the functions each kind of service is to perform and protocols of care need to be disseminated more effectively, and health professionals need to be trained in the updated protocols.

The training of health and health-related professionals can be accomplished in a variety of ways. Investments should concentrate on (a) training trainers; (b) retraining existing professionals based on a decentralized (local, district, or regional) approach; (c) launching new training programs, such as training paramedics, health service managers, and health information specialists; and (d) reviewing curricula and the organization of training for existing professionals and institutions. For example, the curricula of pedagogical institutes may need to be revised to integrate modern health promotion and health education into teacher training, and these institutes could be called upon to cooperate in training other health educators, as Estonia already does. Nursing and medical school curricula may need to be updated to reflect the concept of cost-effectiveness in the reduction of the burden of disease and to introduce new care protocols. For example, new and existing *feldshers*, midwives, nurses, and general practitioners need to be trained in immunization, management of the sick child, family planning, safe motherhood care, and prevention and treatment of TB and STDs.

### ***New Financing Incentives***

The way in which providers are reimbursed can be used as an incentive to promote cost-effective interventions, to increase the number of choices available to beneficiaries, and to stimulate the creation and sustainability of health care networks capable of providing integrated care. Prospective global budgets for regions or hospitals are now the rule in OECD countries, but they are calculated in different ways. Regional authorities and/or hospitals receive a fixed budget that they are free to manage, but are also responsible for the accompanying financial risk. If they spend more, they have to borrow; if they are efficient, they may keep the savings. The main objective of global budgets is to control public expenditures and to force providers to be more efficient. The United Kingdom is currently testing global budgets for both hospitals and PHC.

Global budgets, based on capitation and linked to performance contracts, are a way to ensure that the predefined package of essential public health and clinical services is delivered to a defined population at an agreed standard of quality. In most countries where general practice is well developed, for instance, Holland, Portugal, Spain, the United Kingdom, general practitioners are paid a certain amount per year per patient enrolled in their list, and their contracts specify the type of services they have to provide, and sometimes the minimum standards of care.

Global budgets can also be used to promote the integration of a wide range of services that every patient requires. In the United Kingdom the government is giving selected general practice fundholders not only the money to pay for the ambulatory care the practice provides, but also the funds to purchase hospital and other ancillary care on behalf of the beneficiaries. In this

way the general practitioner becomes an administrator of the public funds available for the care of each beneficiary enrolled. In the United States health maintenance organizations contract with health care providers from a global budget for each of their enrollees. With that money they provide all necessary care, mostly directly, but sometimes through subcontracts.

Reimbursement systems in which the money follows the client, for example, via vouchers, allow beneficiaries to choose their providers, thereby introducing competition among providers on the basis of quality, price, or both, and may be used to target the poorest groups. Colombia and the United Kingdom allow patients to shop around between general practitioners and between public hospitals. In the city of São Paulo, Brazil, the municipality granted its health services to seven professional cooperatives, and gives all citizens US\$100 per year to purchase care from the cooperative of their choice.

## Conclusion

This chapter reviewed the criteria that decisionmakers usually follow to allocate scarce health resources, namely, the scale of health problems, their vulnerability to known interventions, and their social value, as well as the criteria that the World Bank has been recommending for making rational choices about health, that is, burden of disease, cost-effectiveness, targeting of the poor, and public utility. The chapter also described some aspects of the provision of the most cost-effective health interventions, focusing on the need for integrating primary and secondary health care. Most cost-effective interventions that deal with major health problems can be provided in the community in a PHC setting, but in many cases, such interventions are best provided in district hospitals and other secondary health care services, which calls for good integration of services. To move toward more integrated provision of cost-effective care, investments are required in training professionals, such as general practitioners and teachers, who need to acquire new skills in such areas as communication and health education; developing health networks, including efficient referral and emergency systems; and creating financial incentives to promote more integrated provision of cost-effective care to the poorest groups.

## References

- Bengoa, R. 1995. *Experiencias innovadoras en los sistemas de salud de Europa Occidental: Situación actual y perspectivas*. Mexico City: Editorial Medica Panamericana.
- Heaver, R. 1995. "Managing Primary Health Care. Implications of the Health Transition." Discussion Papers. World Bank, Washington, D.C.
- Murray, C., K. Styblo, and A. Rouillon. 1993. "Tuberculosis." In D. T. Jamison, H. D. Mosley, A. Meashem, and J. L. Bobadilla, eds., *Disease Control Priorities in Developing Countries*. New York: Oxford Medical Publications.
- Over, M. 1988. *Cost-Effective Integration of Immunization and Basic Health Services in Developing Countries: The Problem of Joint Costs*. Washington, D.C.: World Bank.
- Robinson, R. 1993. "Cost-Effectiveness Analysis." *British Medical Journal* 307: 793-95.
- Walsh, J. A., C. N. Feifer, A. Measham, and P. J. Gertler. 1993. "Maternal and Perinatal Health." In D. T. Jamison, H. D. Mosley, A. Meashem, and J. L. Bobadilla, eds., *Disease Control Priorities in Developing Countries*. New York: Oxford Medical Publications.
- WHO (World Health Organization). 1978. "Primary Health Care." Report of the International Conference on Primary Health Care held in Alma Ata. Geneva.
- \_\_\_\_\_. 1993. *WHO in a New Europe*. European Series no. 50. Copenhagen.
- \_\_\_\_\_. 1994. "Interim Report." Division of Diarrhoeal and Acute Respiratory Disease Control, Geneva.
- \_\_\_\_\_. 1995. "Stop TB at the Source." Report on the TB epidemic. Geneva.

World Bank. 1993. *World Development Report 1993: Investing in Health*. New York: Oxford University Press.

\_\_\_\_\_. 1994. "Estonia Health Project." Staff Appraisal Report. Washington, D.C.

\_\_\_\_\_. 1996a. "Georgia Health Project." Staff Appraisal Report. Washington, D.C.

\_\_\_\_\_. 1996b. "Kyrgyz Republic Health Sector Reform Project." Staff Appraisal Report. Washington, D.C.

# 4

## *The Rationalization and Management of Hospitals*

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In common with the other countries of the former Soviet Union and Central and Eastern Europe, the Central Asian republics possess excessive hospitals and hospital bed stocks, but significant inefficiencies exist in the way in which they use their hospital sector resources. This chapter outlines how the Central Asian republics might improve the efficiency of their hospital sectors in the near future, both at the level of efficient operation within hospitals and more efficient configuration of hospital systems as a whole. The chapter seeks to provide an overview of contemporary approaches to and problems inherent in strategic management of hospital systems, efficiency improvement, hospital reconfiguration and system rationalization, with reference to the experiences of countries within and outside the region. It does not focus in detail on the effects of different payment mechanisms on hospital efficiency, but on the management techniques that must be employed to effect actual change under any provider payment system.

### **Current Trends in Hospital Provision**

The hospital sector has been undergoing a process of change and evolution in most countries in recent years. This section outlines the scale of these changes and considers the forces that continue to drive such evolution.

#### *Trends in Countries of the Organization for Economic Cooperation and Development*

The key trend in the hospital sectors of most Organization for Economic Cooperation (OECD) countries in recent years has been a significant reduction in the number of beds, both in terms of beds per 1,000 population and, in most countries, in the absolute number of hospital beds. In all cases, this reduction in beds has been facilitated by substantial reductions in length of stay (box 4.1). Table 4.1 summarizes changes in bed provision in selected OECD countries between 1980 and 1990. While length of stay and bed numbers fell in almost all OECD countries, the rate of admission to hospital moved in different directions in different countries, for example, the rate of admission per 1,000 population rose in Denmark, Germany, Turkey, and the United Kingdom, but fell in Canada, Ireland, the Netherlands, and the United States.

#### *Trends in Central Asian Republics*

The hospital sectors of the Central Asian republics are generally characterized as having a high ratio of beds to population, long lengths of stay, and high rates of admission when compared

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**Box 4.1. The Hospital Bed Stock in England**

The public hospital service in England has substantially reduced the size of its bed stock over the last two decades, while achieving continuous improvements in efficiency and productivity. Between 1980 and 1990 the number of National Health Service hospitals in England declined by more than 20 percent, and between 1982 and 1995 the total number of National Health Service beds fell by 39 percent. During this latter period the number of acute beds fell by 25 percent, the number of mental illness beds fell by 50 percent, and the number of mental handicap beds by 72 percent.

While the reduction in the number of mental health beds reflected the implementation of a policy of community-based care that actively sought to reduce the number of patients requiring hospitalization, in the acute hospital sector the workload rose continuously despite the falling bed stock. Inpatient admissions rose by 32 percent between 1982 and 1995, while the number of day cases expanded by 256 percent (or 21 percent per year). Overall, the number of patients admitted to hospital during this period rose by 60 percent.

The rapid expansion of day surgery and day case procedures and the dramatic reductions in length of stay were clearly responsible for the significant increase in hospital productivity. In 1982 the mean length of stay in acute specialties was 8.6 days, but by 1993/94 this had fallen to 5.4 days, a reduction of 37 percent. The number of acute beds had therefore fallen at a lower rate than had length of stay, allowing a real increase in the number of cases treated.

Thus if length of stay can be reduced at a faster rate than the rate of closure of beds, a smaller absolute number of beds can effectively be converted into increased inpatient capacity. However, if beds are closed faster than length of stay can be reduced, fewer patients can be treated overall.

**Table 4.1. Beds per 1,000 Population, Selected OECD Countries, 1980 and 1990**

Country	All specialties		Acute beds	
	1980	1990	1980	1990
Canada <sup>a</sup>	6.9	7.2 <sup>a</sup>	5.4	5.0 <sup>a</sup>
Denmark	8.3	5.7	5.7	4.7
Germany	11.5	10.4	7.7	7.5
Ireland <sup>a</sup>	9.6	6.1 <sup>a</sup>	5.6	3.5 <sup>a</sup>
Netherlands	12.3	11.5	5.2	4.3
Turkey	2.2	2.1	1.5	1.8
United Kingdom <sup>a</sup>	8.1	7.6 <sup>a</sup>	2.9	2.4 <sup>a</sup>
United States	5.8	4.7	4.2	3.6

a. 1989 data.

Source: OECD (1993).

with OECD countries. Table 4.2 displays recent World Health Organization data on hospital provision and use in the five Central Asian republics. As can be seen from a comparison with table 4.1, bed provision was significantly higher in the Central Asian republics in 1994 than in the selected OECD countries in 1990. In 1990 admission rates per 1,000 population in the same OECD countries ranged from 124 per 1,000 population in the United States to 187 per 1,000 population in Germany, compared with a low of 170 per 1,000 population in Turkmenistan in 1994 and a high of 213 per 1,000 in Tajikistan in 1993. Such a comparison tends to confirm the perception of substantially higher bed provision and hospitalization in Central Asia, although bed provision and length of stay are relatively higher than admission rates.

However, this static comparison disguises the fact that trends in bed provision in Central Asia during the last ten years have been similar to those in the established market economies. In all

**Table 4.2.** Hospital Statistics, Central Asian Republics, 1994

Country	Beds (per 1,000 population)	Admissions (per 1,000 population)	Average length of stay (days)
Kazakhstan	12.1	182	16.8
Kyrgyz Republic	9.6	177	15.4
Tajikistan	9.1	213 <sup>a</sup>	14.3 <sup>a</sup>
Turkmenistan	11.5	170	15.1
Uzbekistan	8.8	193	14.3

a. 1990 data.

Source: WHO (1995).

the countries of the region except Tajikistan, the ratio of hospitals to population has been falling since 1980. The ratio of hospital beds to population has fallen in each republic except Turkmenistan, and admission rates have fallen in all of them. The length of stay, while dropping slightly, has generally fallen at a much slower rate than the reduction of the bed stock.

Clearly, the impact of economic transition has provided the main impetus for change to date, with fiscal constraints forcing a reduction in capacity and activity. Since 1990 infrastructure reductions have been accompanied by reductions in medical staffing in each of the five countries. The more limited changes in length of stay during this period are of interest, as they suggest that clinical practice has not necessarily changed to keep pace with economic realities.

#### *Factors Driving Continued Change*

A number of long-term trends working in parallel have driven the changes in inpatient bed provision and length of stay seen in the OECD countries, namely:

- Technological advances in drugs and therapeutic methods have allowed shorter stays in hospital because of faster recovery times.
- More procedures can be performed as day surgery or day attendance for clinical investigation, thereby expanding dramatically the number of procedures for which overnight admission is no longer necessary.
- Therapeutic technologies have increasingly allowed more conditions to be managed on an ambulatory or primary care basis, thereby allowing sufferers from many chronic diseases to avoid many visits to hospital for the routine management of their conditions.
- Deliberate cost containment policies have attempted to reinforce and accelerate the pace of the trends in health care technology, with most health care financing organizations actively seeking to avoid hospitalization and reduce lengths of stay.

These trends are as relevant to clinical practice in the Central Asian republics as they are anywhere else in the world. In many cases, however, the continued use of norm-based resource allocation systems has impeded their uptake. Clinicians and managers who, for example, attempt to implement such changes as reducing lengths of stay can find themselves penalized for failing to meet bed use targets, and risk losing resources as a result. Practitioners therefore face powerful incentives not to change established patterns of treatment, hospitalization, and bed use. As a result, resources are used inefficiently and patients are denied the opportunity to benefit from lower-intensity treatments and shorter periods of hospitalization.

To date, a far more powerful pressure that has been forcing change in provision and activity in Central Asia has been affordability. The period of economic transition has seen substantial reductions in public revenues, and hence in public expenditure. This serious and persistent

shortfall between the revenues available to finance health care and the cost of operating the existing health infrastructure at "acceptable" levels of quality has led to the growth of a substantial financing gap. In Kazakhstan in 1994, for example, the real per capita value of budgetary health expenditure had fallen to only 40 percent of its 1990 level. In all the countries, part of the burden of closing this financing gap has fallen upon the shoulders of individual patients in the form of increasing responsibility for the purchase of drugs, supplies, and other essentials and unofficial payments to providers. At the same time, policy interventions have been designed to mobilize greater financial resources for the health sector by expanding user charges in the public sector, developing compulsory health insurance schemes, and experimenting with the promotion of private health insurance.

Clearly, however, the mobilization of extra financing closes the financing gap from only one side. The scale of the mismatch between available financing and operating costs can, of course, also be reduced if the total cost of health care provision can be pushed down. Whether the reduction in bed provision in the region detailed in table 4.3 is the unintended result of the shortfall of resources, represents a deliberate attempt to reduce costs to move closer in line with available funds, or is a combination of the two, the trend it reveals will clearly continue for the foreseeable future. The need to run the health sector at an affordable and efficient scale of operation is already inescapable for all the governments in the region. The vital question to be answered is whether the reductions in cost and infrastructure that are the logical sequel of the financing shortfall will be directed and shaped by rational policy, or whether they will be dictated by events and institutional failures.

### Models of Strategic Change

A range of different approaches to bringing about change in the hospital system are available. Arguably, all such policy options seek, via differing mechanisms, to achieve one or more of the following objectives:

- To reduce the use of hospital services by reducing admissions, bed utilization, or both
- To improve the technical efficiency of resource use within hospitals, that is, to achieve the same output for less input
- To change the size, shape, and configuration both of individual hospitals and of the hospital system overall.

One could view the first two objectives as microlevel aspects of efficiency, in that they take place essentially at the level of the individual hospital or facility, and the third objective as macrolevel dimension of hospital efficiency, in that it is concerned primarily with the system as a whole and the interaction of individual hospitals to make up a complete service. While certainly

**Table 4.3.** *Changes in Provision, Central Asian Republics, 1985–94*  
(percentage change)

<i>Country</i>	<i>Beds</i> (per 1,000 population)	<i>Admissions</i> (per 1,000 population)	<i>Length of stay (days)</i>
Kazakhstan	-11	-25	-1
Kyrgyz Republic	-20	-28	-7
Tajikistan	-14	—	—
Turkmenistan	+18	-14	-7
Uzbekistan	-26	-22	-10

— Not available.

Source: WHO (1995).

not a hard and fast distinction, the chapter will use this differentiation as a convenient distinguishing feature in the ensuing discussion of policies and approaches to improving hospital efficiency. Clearly, however, a vital link exists between the microlevel and the macrolevel, in that an ideal policy would ensure that microlevel efficiency improvements could be fully translated into macrolevel gains.

Different countries have employed differing combinations of market-based or planning mechanisms to pursue these objectives. Indeed, most of the microlevel management techniques can be used within the hospital sector regardless of the particular payment system or of the public-private mix in the health system as a whole. Distinctions between market and planning approaches are more important when macrolevel changes are to be effected. Overall, a range of general policy approaches whose aim is to effect change in the hospital system can be identified that operate on both the demand and supply sides of the equation. Such approaches range from short-term measures at the operational level to long-term strategic responses at the national level. Table 4.4 summarizes the key approaches.

### Reimbursement and Payment Systems

As noted earlier, undertaking a detailed examination of the incentive effects of the many different payment and reimbursement options open to policymakers in the hospital sector is outside

**Table 4.4.** *Typology of Policy Approaches*

<i>Supply side approaches</i>	<i>Demand side approaches</i>
<i>Indirect mechanisms</i>	<i>Indirect mechanisms</i>
Changing behavior via reimbursement systems	Employing payment incentives to encourage treatment of patients in primary or ambulatory care
Changing market structure and behavior by changing ownership (e.g., privatization of hospitals and facilities)	Introducing user charges and copayments
Using global budgets, possibly in combination with other efficiency targets (e.g., staffing)	
<i>Changing care delivery</i>	<i>Demand management</i>
Adopting treatment protocols	Initiating an appropriateness and utilization review
Introducing performance management (e.g., setting targets for length of stay, promoting day surgery)	Introducing "evidence-based purchasing," specifying explicit rationing of treatments, specifying a basic package of interventions
Implementing business process reengineering	Developing primary care substitutes
Adopting cost reduction and efficiency targets	Promoting social and domiciliary care
	Strengthening disease prevention activities
	Adopting managed care or disease management
<i>Planning approaches</i>	
Implementing hospital closure and reconfiguration programs	

Source: Author's research.

the scope of this chapter. Rather, it focuses on identifying mechanisms that operational staff may employ to implement and achieve the objectives that such incentives are trying to signal. Note, however, that different payment regimes and structures can have different and powerful incentive effects, both intended and unintended. Whether funds are transferred via complex reimbursement systems or via simple global budgets, policymakers must always remember that payment incentives rely for their success entirely on individual clinicians and managers responding in the way the system's designers had intended. Thus certain conditions are necessary for any payment system to be likely to achieve its aim, namely:

- It must send unambiguous messages about the response required and include unambiguous penalties for failure to respond appropriately.
- It should anticipate, and as far as possible neutralize, gaming responses, but policymakers should understand that providers will find ways of circumventing and gaming under almost any conceivable system.
- It should make clear the consequences of financial failure on the part of providers when a market or quasi-market approach is adopted, that is, it should stipulate whether they will or will not be rescued from bankruptcy if things go wrong.
- Its mechanisms should contain positive incentives for institutions and individuals to improve their performance, rather than the minimal (but often rational) response of simply reducing their workloads.

Sometimes using simple global budgeting combined with explicit targets for reducing length of stay and other performance measures to ensure that the correct response is achieved may be an easier approach. Complex case-mix-based systems may unintentionally prove less able to drive home unambiguous messages to local managers and clinicians, because of their very sophistication or because of unanticipated perverse incentives.

### **Preventing Admission**

One important approach to reducing hospitalization is, of course, to try to prevent admission to hospital in the first place. Four main groups of techniques to prevent admission can be identified, and these are discussed in the following paragraphs.

#### *Expanding Ambulatory and Day Surgery in Hospitals*

In Ireland, the United Kingdom, and the United States the use of day case procedures has expanded dramatically during the last decade, and is now growing elsewhere in Europe (Abel-Smith and Mosialos 1994). Ambulatory surgery and investigation have represented important means of avoiding hospitalization for a range of procedures that would previously have required admission, including inguinal hernia repair, breast biopsy, varicose vein stripping, cystoscopy, arthroscopy, myringectomy, laparoscopy, and termination of pregnancy. However, not all day case activity is necessarily a direct substitute for admission. The introduction of new technologies like endoscopy may mean that some day case work represents new demand. The following three factors are important when considering the introduction of ambulatory surgery on a large scale:

- Day surgery and investigation is usually best carried out in a self-contained, dedicated day care facility within a hospital, and should not use the main operating theaters and bed space on inpatient wards. It is important to insulate day care activity from inpatient activity to reduce disruption and to limit the impact of unexpected peaks in emergency demand on scheduled workload.

- Some of the efficiency benefits of day surgery may be lost if inpatient capacity is not closed when day surgery capacity opens. If beds do not close, day surgery may simply facilitate extra admissions (that is, through supplier-induced demand).
- Day surgery may sometimes lead to an apparent increase in mean length of stay in surgical inpatients (depending on the data collection conventions used), because day surgery tends to select less acutely ill patients, leaving the more severely ill patients in inpatient beds.

### *Using Primary Care to Avoid Admission*

Developments in pharmaceutical technology have permitted the safe and effective management of a growing range of conditions without recourse to hospitalization. In many countries, primary care increasingly plays the lead role in the day-to-day management of such varied conditions as asthma, chronic obstructive airways disease, angina, broncho-pneumonia, hypertension, peptic ulcers, skin ulcers, and diabetes. However, the ability of primary care to substitute effectively for hospitalization depends entirely on the existence of a safe, cost-effective, and readily available drug or intervention.

Primary care clearly has a vital role to play in disease prevention, and hence can have a long-term impact on hospitalization if it can reduce the incidence or severity of a particular condition. The evidence that investment in primary care infrastructure or personnel can of itself directly reduce hospitalization is much more ambiguous. In the United States a number of studies suggest that low levels of insurance coverage (and hence low access to primary care) may be linked to higher rates of admission to hospital (see, for example, Bindman and others 1995; Blumberg 1994). Only limited evidence exists from other countries that possess more comprehensive access to primary health care, such as Norway or the United Kingdom (Fylesnes 1993). Guaranteeing universal access to reasonable quality primary care probably does avoid some inappropriate hospital admissions, and a clearly defined gatekeeper role for primary care likely does prevent some cases from unnecessarily entering hospital. However, once policymakers have achieved comprehensive access to basic primary care, current research cannot show that further development of primary care will yield continued reductions in hospitalization.

### *Raising Admission Thresholds*

Raising the threshold level of severity of illness at which a patient is admitted to hospital is a possibility. In particular, the use of assessment units to hold patients for observation, rather than admitting them straight to a bed, can screen out borderline cases who do not actually require admission. A key example here is using an assessment unit to rule out acute myocardial infarction when patients arrive at a hospital with chest pain (Gaspoz and others 1994). Targeted training of admitting staff can also improve their confidence in diagnosis decisions, and hence reduce admission rates, for example, in children's asthma (Connett and others 1993). The general importance of high standards of training among junior admitting doctors and early access to routine diagnostic facilities, for example, 24-hour availability of basic pathology laboratories, in reducing inappropriate admissions to hospital cannot be overemphasized.

Similarly, specialist technology and deliberate changes in operating methods can be used to maintain patients who require specialist care outside hospital. Some approaches shown to have achieved a reduction in admission rates include the following:

- Developing a domiciliary management scheme using telephonic fetal heart rate monitoring for high-risk pregnancies (Dawson and others 1989)
- Introducing community clinics and domiciliary visits by a team of specialist physicians and nurses (Swift and others 1993)

- Having physicians make weekly visits to elderly patients with severe congestive heart failure, which in Israel appeared to more than halve annual admission rates (Kornowski and others 1995).

Such approaches do not guarantee successful results, however. Annual comprehensive home health checks by specialist geriatric nurses in both California (Stuck and others 1995) and south Wales (Pathy and others 1992) failed to reduce admission rates in those older than 75. Delivering specialist care in the community may also be resource intensive, and may not necessarily be cheaper or more cost-effective than standard inpatient care.

### *Implementing User Charges*

Where user charges are levied for inpatient care, they will likely exercise some deterrent effect on admission rates. However, effective user fees should be able to distinguish between appropriate admission, that is, user charges should not deter patients from going into hospital when they genuinely require treatment, and inappropriate admission, that is, user charges should only deter patients from entering hospital when they do not actually need to be there. Unfortunately, few data are available for examining this relationship except one American study (Siu and others 1986), which found that increasing levels of cost-sharing by patients had the effect of reducing both inappropriate and appropriate admissions indiscriminately. The study therefore concluded that cost-sharing alone is too blunt an instrument to prevent unnecessary admissions successfully without adversely affecting patients who genuinely required hospitalization.

### **Reducing Length of Stay**

Indirect measures to reduce length of stay include the development of case-mix or diagnosis-related group payment systems based on target lengths of stay and the specification of explicit length of stay targets by planning authorities. Such approaches are intended to provide clear incentives to avoid excessive lengths of stay. However, if set too high, length of stay targets may unintentionally have the effect of confirming suboptimal practices and reducing incentives to press for continual length of stay improvements. Diagnosis-related group-based payment systems can also be vulnerable to manipulation by providers, or may require sophisticated audit and enforcement systems. Direct measures aimed at reducing length of stay can be broadly grouped into two categories: (a) changing the organizational and clinical management of patient care, and (b) using utilization review techniques to identify and expedite early discharge.

### *Management of Care*

A variety of countries has used various new models of care delivery to try to achieve earlier and more predictable discharge of patients from hospital. One approach involves the use of integrated care pathways (or anticipated recovery pathways). Integrated care pathways specify in advance the detailed plan of care to be executed for a particular condition, including the timing of different investigations, procedures, and key events such as discharge. Health system staff can then monitor the progress of care against the plan, note variances from the plan, and make suggestions for continuous efficiency and quality improvements. This approach is particularly useful in assisting the efficient programming of multiple investigations in parallel, and can help reduce inefficiencies caused by undertaking investigations one after the other, which can prolong hospital stays unnecessarily.

A variety of other approaches to achieving early discharge revolve around the establishment of new care delivery systems that can pick up patients being discharged from hospital at a relatively early stage. Intensive home nursing care or specialist "hospital at home" has been used in

the United Kingdom (Hensher and others 1996; Hollingworth and others 1993) and other countries for some time. Nurses provide care in the home that a patient's family does not have the skills to provide, but that does not require the use of a hospital bed. The development of nursing homes, the redesignation of former acute hospital beds to lower-intensity nursing home status, and the conversion of smaller hospitals into nursing homes can provide a destination for early discharge from hospital in which cheaper, lower-intensity care can be provided for older patients. Development of the nursing home sector appears linked to reduced hospitalization rates in Ireland and the Netherlands, and is being actively pursued by the Hungarian government as one solution to that country's problem of excess bed provision. For such a process of redesignation to be more than mere sleight of hand, however, the staffing patterns of nursing homes must be dramatically different from those of former hospitals and should need little or no direct employment of physicians. The payment system must also reward nursing homes for accepting patients and hospitals for achieving earlier discharge.

### **Utilization Review**

Utilization review is a clinical and managerial audit technique developed in the United States. It seeks to answer two questions in relation to inpatient episodes: first, was the admission necessary, and second, could the patient now be cared for outside hospital? The technique was rapidly adopted in the United States as a means of improving efficiency in bed use (Payne 1987), and recent years have seen considerable effort to unify approaches and develop more robust and reliable methodological tools for utilization review (Inglis and others 1995). Researchers have undertaken a number of studies in relation to applying utilization review in the United Kingdom that have indicated that on any given day, some 10 to 20 percent of all patients occupying hospital beds could be better cared for elsewhere ((Namdaran, Burnet, and Munroe 1992; Seymour and Pringle 1992; Victor and others 1993), and that inappropriate bed utilization is particularly prevalent among older patients. A technique that appears to be achieving some success in U.K. hospitals is to appoint a discharge coordinator, whose full-time job is to undertake utilization review, identify individual patients who could be discharged, and help coordinate the discharge arrangements to ensure that the patient leaves the hospital promptly.

### **Staffing Skill Mix**

An important longer-term measure in increasing hospital efficiency in many countries has been the substitution of cheaper staff to undertake duties previously carried out by more expensive, more intensively trained staff. For example, in U.S. hospitals, nurse practitioners (nurses with higher levels of training and the ability to perform minor procedures and prescribe basic drugs) are employed in place of medical staff in ambulatory care settings. In the United Kingdom, health care assistants (staff with a basic one-year of training) now carry out much routine, ward-based inpatient care, thereby permitting a reduction in the number of more highly paid and skilled professional nurses required to supervise and run wards. The current high levels of medical staff relative to nursing staff found in Central Asia could, over a period of years, be shifted through enhanced training and status for nurses to a more cost-effective mix of skills. Admittedly, much smaller differentials in medical and nursing pay mean that the potential gains from such a policy would be relatively limited in Central Asia at present.

### **Efficiency in Hospital Purchasing and Procurement**

One strategy many countries, including the Central Asian countries, have pursued as a potential means of making efficiency savings has been to increase the use of competitive tendering and

purchasing in the procurement of supplies to ensure that health systems secure the best prices. Public hospitals in many European countries have also increasingly adopted the practice of contracting out for the provision of support services. Key services that appear to lend themselves to provision by the private sector include catering, cleaning, laundry, security services, and, increasingly, diagnostic laboratory and pathology services. If a central or municipal authority responsible for a number of hospitals lets out contracts, contracting out can allow economies of scale through the centralization of support services.

While offering real potential for savings, contracting out can lead to problems in ensuring quality control, particularly when few competitors exist for the firm operating the contract. Another risk is that focusing management attention on contracting out support services can divert attention from the core functions of the hospital system. While the United Kingdom has achieved real, and in many cases substantial, financial savings from employing this approach, it clearly does not achieve any significant change in the nature or organization of care delivery, and could thus be accused of diverting managerial attention to areas that are marginal to the successful improvement of health care delivery. Note that little compelling evidence exists to support the superior efficiency of internal contracting models, in which departments within a hospital contract with each other to supply services to one another.

### **Performance Management System**

Attempting to enhance the hospital sector's microlevel efficiency and performance across the board is clearly an ambitious and complex task. Unless efficiency questions are to be left entirely to the market to resolve (where one exists), strategic authorities (central and local government, health insurance agencies, and so on) are likely to spend a considerable amount of their time pondering questions of efficiency enhancement. Whether or not the payment system is also being used to provide efficiency incentives, policymakers must consider the underlying targets to be achieved and whether they will be transmitted implicitly via payment mechanisms or explicitly in the form of performance targets for public agencies.

Table 4.5 presents classic hospital performance targets employed around the world that might be of particular relevance to the Central Asian republics. The development of targets is a complex undertaking that demands high-level analytical and conceptual skills if it is to succeed. Planners should therefore consider the appropriate level at which such target setting should take place. For example, they might decide that national ministries of health should develop a framework of targets and guidance and indicate a common direction, but allow local agencies to set the precise levels local hospitals are to achieve. Clearly, for any target-setting exercise to succeed it must be accompanied by a series of positive incentives (be they at the institutional or personal level) and penalties for failure, penalties that participants believe will be invoked.

### **Achieving Systemwide Change and Rationalization**

Improving the efficiency of resource use at the level of the individual hospital may not necessarily lead by itself to significant savings or changes in resource use for the hospital system as a whole. Certain common features of hospitals as clinical and economic units may limit the scope for cost reductions at the microlevel. The internal organization of hospitals under all organizational frameworks—public or private sector, global budgets or health insurance reimbursement systems, and so on—tends to revolve around units of fixed cost. For example, if 5 beds are closed on a ward of 30 beds, the hospital may ultimately realize only limited savings, because the complement of nursing and medical staff required to maintain 24-hour cover will remain unchanged. Even the closure of a whole department may have little impact on overhead costs, such as administration or energy, if the rest of the hospital remains functioning. Under certain capital accounting regimes, empty building space released by

Table 4.5. Classic Hospital Targets

Target	Issues for consideration
Day surgery cases as a proportion of all surgical cases, e.g., "In 1997, 25 percent of all surgical cases will be day cases."	Requires precise definition of what constitutes a day case and how day cases will be counted. Are some day cases new work?
Mean length of stay, e.g., "In 1997, mean length of stay for surgical patients between 15 and 65 years old will be 4 days."	Must be specific to age groups and specialties. What should the target be for hospitals that have already achieved such a length of stay? Will people be discharged too early simply to meet the target?
Throughput per bed, e.g., "In medical wards, throughput per bed will be 45 patients per year."	Are inpatient beds actually being used for day cases? A high throughput might appear to be generated by using beds for day cases, but beds may still lie empty much of the time.
Bed occupancy, e.g., "In 1997, average bed occupancy in all inpatient wards will be 85 percent."	What is the right target? Low bed occupancy is inefficient, but high bed occupancy (more than 90 percent) risks periodic bed shortages when throughput is high. Bed occupancy targets might interfere with length of stay targets as patients are kept in hospital to maintain occupancy.

Source: Author's research.

capacity closures will be counted as an overhead cost on the remaining departments. Much of the cost of hospital care is, of course, composed of staff costs, so that marginal reductions in beds or activity may yield little saving if jobs are not shed. The use of hospitals as training facilities for medical and nursing staff may lead to a reluctance to close down or reduce particular functions or departments without which that institution may no longer be able to offer a full training program.

Given these features, measures to improve the efficiency of hospital operation should simultaneously tackle the structure of the hospital system as a whole. The only viable means of eliminating fixed costs in a way that will maximize resource savings to the system as a whole is likely to involve closing entire hospitals or facilities and diverting their workload to those hospitals that remain open. Given the acute budgetary constraints and health financing gaps currently experienced in Central Asia, rationalization at the whole facility level seems likely to be the course of action that will maximize the reduction of total system costs.

### *Special Features of Hospital Systems in Central Asia*

The historical evolution of hospital systems in Central Asia has given rise to a number of characteristics that any discussion of system-level restructuring should consider. These features are particularly pertinent to any consideration of the scope for savings in the hospital sector.

Specialist hospitals are common throughout the region, and each *oblast* will generally have a complement of specialist hospitals for oncology, narcology, dermatology, and sexually transmitted diseases. Many other countries would not have such hospitals at an equivalent administrative or geographic level. Policymakers in many countries are now questioning the cost-effectiveness of specialist hospitals, even at the level of national tertiary referral centers.

While tuberculosis (TB) is clearly a high-priority health problem, the continued existence of large TB hospitals or sanatoriums, again usually down to *oblast* level, ties up resources for the care and treatment of this disease in a mode of care that cost-effective and readily available pharmaceutical and therapeutic technologies have rendered obsolete.

The existence of the national tier of institutions also tends to lead to duplication and distortion. Many national-level hospitals increasingly do not serve as tertiary, super-specialist national resources, but overlap excessively with local secondary care hospitals. Anecdotal evidence from Bishkek, for example, suggests that residents of that city account for 35 to 50 percent of the workload of the national hospital sector in the Kyrgyz Republic, while constituting only 15 percent of the national population. This indicates either that national facilities are failing to provide satisfactory access to super-specialist care to the rest of the population, or that they are simply supplementing the city's secondary care system.

The continued provision of hospital services by public sector bodies outside the health sector can also lead to ineffective use of health care resources and duplication of services.

In common with virtually every country in the world, the Central Asian republics display a bias toward hospital provision in larger cities, and much more limited access to health facilities in rural areas. They also display the common trend of excessive concentration of facilities in capital cities (box 4.2).

### *Future Directions*

Thus given the evidence, one can make a relatively compelling case that hospital systems in Central Asia should undertake a significant and far-reaching process of rationalization. The benefits of rationalization around a reduced number of hospitals can be summarized as follows:

- It would allow financial savings to maximize the affordability of the hospital system in the short run.
- It would take advantage of economies of scale arising from such indivisible costs as site maintenance and facilities costs.
- It would improve clinical outcomes by concentrating specialist services in centers of excellence (which may not necessarily be single specialty hospitals).

#### **Box 4.2. *A Tale of Three Cities—Specialist Services in the Capital***

Capital cities frequently have relatively greater numbers of hospitals and beds than the rest of the country. In London, for example, a recent analysis (Raftery and Edwards 1994) found that London residents use 4 percent more beds and bed days per capita than the rest of England (17 percent more when only Inner London was considered), even following adjustment for differing age structures. Similarly, Budapest is home to nearly 30 percent of all hospital beds in Hungary, but only 19 percent of the population. Capital cities also tend to be the home of a large number of specialist facilities. The table below compares the provision of key specialist services in three cities, London, Budapest, and Bishkek in 1994–95.

<i>Category</i>	<i>London</i>	<i>Budapest</i>	<i>Bishkek</i>
Population (millions)	7.0	2.0	0.5
Number of cardiac centers	14.0	10.0	7.0
Number of neuroscience centers	13.0	21.0	8.0
Number of cancer centers	13.0	5.0	1.0

The evolution of such patterns of care often owes more to historical accident than rational design. Increasingly, analysts and policymakers are becoming concerned that specialist treatment and diagnostic centers are often wastefully duplicated, leading to lost economies of scale, a damaging dispersion of research and teaching effort, and, most important, potentially poorer clinical treatment outcomes (see, for example, Black and Johnston 1990 and Sheldon, Ferguson, and Posnett 1997 for examples of different perspectives in the debate on the relationship between workload and quality of outcomes).

- It would achieve a shift away from intensive hospital-based care where cost-effective alternatives exist, for example, in the treatment of TB.
- It would achieve a more equitable distribution of hospital services between urban and rural populations and capital cities versus other regions.

Key issues arising from the current structure of hospital services in the region that policymakers will need to discuss relatively soon include some of the following:

- An appropriate model for general and emergency care hospitals, for example, multispecialty general hospitals with emergency departments that serve a specific catchment district, specialist regional trauma centers that serve larger regions
- The duplication of services between *oblasts* and local administrations and a clearer delineation between secondary and tertiary care services
- The future provision of tertiary services, whether by means of single specialty hospitals or multispecialty tertiary centers
- Appropriate models of maternity care for the future and the value of separate institutions for the provision of maternity care.

In particular, policymakers should take care to avoid adverse decisions that could result from current pressures to reduce capacity and costs. For example, anecdotal evidence from Kazakhstan suggests that in response to recent instructions from the central government to begin closing entire hospitals, at least one *oblast* closed a number of rural *raion*-level facilities. While this may have been politically and administratively easier than closing urban specialist facilities, such responses could have negative effects on the rural population's access to care, while failing to attack the real problem of excess provision and duplication in cities. Of course, discussing what could or should be done is easy, but actually making it happen is quite a different matter.

### Bringing about Strategic Change at the System Level

Little has been written about the process of bringing about strategic rationalization and restructuring of hospital systems in any country, successful or otherwise. This section is therefore unashamedly more subjective and anecdotal in approach and content. It attempts to highlight the key factors governments or authorities must consider when embarking on a program of hospital rationalization, the likely obstacles to change, and the possible strategies to overcome them.

#### *Evolutionary or Planned Change?*

The concentration of hospital services, reductions in beds, and continuous improvement in hospital productivity visible in countries such as the United Kingdom are the outcome of long-term trends in medical technology and provision that have been operating in recent decades. In the United Kingdom a continuous reduction in hospital length of stay can be traced back to the late 1940s. Bed and hospital stock reductions began in earnest in the 1950s as communicable and infectious diseases such as TB were controlled and treatment technologies changed. A deliberate policy of attempting to shift psychiatric care out of long-term hospitals and into a community-based service began in the 1960s and continues to evolve today. Fully ascribing long-term changes in hospital provision, especially in the area of general hospital services, to particular acts of deliberate policy is frequently hard, if not impossible.

A key question for policymakers in Central Asia, particularly in those republics that have introduced or are considering introducing a quasi-market-style, case-based reimbursement system is the extent to which market-based financing systems can achieve change in patterns of provision in a manner that maximizes economies of scale in an acceptable time frame. The theoretical model underpinning the market and quasi-market model suggests that over time

the purchasers of health care (health insurance funds, health departments, general practice fundholders, and so on) will identify those hospitals that offer lower costs and/or more cost-effective outcomes, and shift patient flows away from higher cost providers to these more competitive hospitals. Thus the more expensive hospitals will tend to lose their workloads, and hence their source of revenue. They will therefore begin to close and leave the market, leaving a reduced number of cheaper, more efficient hospitals treating the same total workload at a lower cost. Such a market-led approach, by definition, does not require deliberate rationalization planning by government. Experience from around the world suggests that in practice, markets and quasi-markets may not necessarily be capable of achieving such a desired solution because of a number of common features of financing and provision systems. A number of factors may interfere with the smooth progress of markets toward capacity-reducing solutions to excess provision, of which the following are the most important:

- The introduction of competition between hospitals may have the perverse effect of leading to more duplication of services between providers, rather than less. Culyer and Posnett (1990) identify U.S. evidence that suggests that hospitals may well compete for patients by providing extra facilities, equipment, and specialist services.
- Traditional referral patterns and habits may prove hard to change, especially when they are the result of self-referral by patients. If hospital reimbursement takes place retrospectively, failure to deliberately change referral patterns will simply lead to a static continuation of provision. Prospective reimbursement systems are better able to move “chunks” of workload away from one hospital to another, but may be resisted by referring physicians or individual patients. Conflict between health purchasing authorities and local family practitioners over attempts to restrict referral rights to preferred providers was an important feature of the first two to three years of the U.K. National Health Service’s “internal market.”
- Even when faced with workload flowing away to competing providers, hospitals may prove to be remarkably resilient to declining revenues. After four to five years, a significant number of U.K. hospital trusts are in serious financial difficulties after losing workload and failing to reduce their costs, but no acute hospitals have been closed to date because of market conditions. Hospitals have shown tremendous resilience and survivability during the last few years of financial crisis in Central Asia as their revenues have declined drastically below the levels required to fund operations fully. Poorly performing hospitals may be remarkably hard to finish off by financial means alone. In particular, much tighter restrictions on hospitals’ ability to run and maintain deficits and to delay payments to creditors will be required to provide market discipline.
- The destabilization and reductions in quality that occur as too many hospitals compete for limited resources may become increasingly unacceptable to the public, clinicians, and government alike. A quick *coup de grace* may be preferable to a lingering death.
- Finally, the political costs and difficulties of allowing hospitals to fail cannot be stressed enough. Local communities perceive hospitals as symbolically significant, thus communities and voters may punish administrations who allow “their” hospital to die. Avoiding pressures to intervene to save a dying hospital, no matter how technically desirable its exit from the market may be, could therefore be difficult.

In the United Kingdom the large-scale reconfiguration of hospital services following the 1991 National Health Service reforms have required significant planning intervention by strategic authorities to bring about the change needed. This is also likely to be the case in Central Asia, especially given the urgency of achieving rationalization in hospital services. The scale of service duplication and the gravity of the resource situation in the region make a wait and see policy a risky course of action.

### ***Obstacles to Planned Rationalization***

Adopting a planning approach to bringing about strategic rationalization of hospital services is not a straightforward process. Many of the significant obstacles to change clearly relate to the fact that making a rationalization plan a technical and nonpolitical process is virtually impossible. Important group interests are at stake, and public opinion may resent perceived attempts to reduce their access to care. Political factors will therefore inevitably influence technical considerations and debates, and marrying up technical expertise with senior political commitment is essential (see box 4.3 for a case study). From international experience, some of the key obstacles and challenges that the authorities should anticipate and overcome will include the following:

- Resistance to proposed changes by the medical profession, motivated by fear of unemployment and loss of power. Rationalizing hospitals can imply a strategy of divide and conquer, and powerful medical professions may respond to such an approach by becoming more determined to present a united front.
- Local communities may be resistant to rationalization and the loss of facilities, and political considerations may cloud technical issues, particularly when elections are imminent.
- Organized business interests and local enterprises may also prove resistant to the loss of a perceived benefit to their workers.
- Achievement of consensus on the appropriate technical basis for defining service requirements and the criteria that will govern which hospitals will be considered for closure may prove surprisingly difficult.
- Tensions may develop between different authorities and the agencies responsible for implementing rationalization and restructuring. Local and central government and different ministries may develop their own individual preferences, which could interfere with implementation.
- Incorporation of training and professional education requirements into a viable plan for service delivery may be complex, and past regulations on training accreditation requirements may not be compatible with the service configuration that best meets the needs of health care delivery.
- Rationalization will almost certainly require additional resources in the short term to provide bridging financing and to finance the investments needed to upgrade those facilities onto which services are to be centralized.

#### ***Box 4.3. The Tomlinson Review of London's Hospital System***

In 1991–92, the U.K. government undertook a major review of London's hospital provision, prompted by a general acceptance that London was overprovided with beds in comparison with the rest of the country. A review body was established under the chairmanship of Sir Bernard Tomlinson, a leading academic, whose mandate was to focus on the scale of bed provision and its appropriate level, the appropriate configuration of specialist services, and the appropriate role of primary health care.

A series of subcommittees undertook detailed reviews of specialist services in a number of key areas, including children's, cancer, cardiac, renal, and accident and emergency services. These specialist reviews compared London specialists with other national leaders in their fields to review evidence on best practice worldwide and relate it to the pattern of services in London.

The recommendations of the specialty reviews were then combined to develop an action plan that identified services to be centralized and those hospitals that would find services removed from their sites. Ministers then took responsibility for the detailed implementation of this plan. One major teaching hospital had most of its acute and specialist services removed and was converted to a primarily geriatric care role. Another teaching hospital was merged organizationally with a neighboring National Health Service Trust, and most tertiary services were transferred. The closure of a number of small, single specialty hospitals was also planned following the review, although some of these changes have yet to take place. In addition, the review resulted in the investment of substantial additional resources in London's primary health care services, in the hope that improved primary care standards would reduce the use of hospital services by London's population.

### ***Moving Forward***

The need to begin a detailed discussion of restructuring options in the hospital sector in all the Central Asian republics is urgent. The government of the Kyrgyz Republic has taken a lead in establishing a review body that will develop a rationalization and reorganization plan for health facilities in Bishkek. Other governments need to develop their own strategies in this area, both to deal with the particular needs of their capital cities and the wider national picture. The essential elements of such an exercise will include the following:

- Determining the appropriate level at which different elements of rationalization will be undertaken—national, regional, local—and the lead agencies that will take responsibility for guiding the process and ensuring that responsibilities are consistent with current responsibilities for management and financing (those who develop the plan must be those who have the means to implement it)
- Delivering a firm commitment to the process of restructuring and the implementation of rationalization measures at the highest ministerial level
- Developing a structure to undertake analysis, identification, and evaluation of options and identification of a preferred approach that from the outset includes key medical leaders in the fields being examined, and that has access to personnel trained in the appropriate analytical and planning techniques
- Ensuring that ministers are kept closely involved and committed to the technical process
- Having in place a concerted public information strategy to ensure that, from an early stage, the public and the health care professions understand the reasons for and the benefits of eventual service restructuring
- Identifying in advance and engaging appropriately the interest groups likely to be affected by rationalization or likely to exert influence over its implementation
- Making provision for one-time financing needs for bridging finance, necessary investment, and rehabilitation
- Making financial provision for the impacts of restructuring on health care employment, for example, early retirement of senior staff, retraining for redeployment in primary care, retraining for the pursuit of new careers in other sectors
- Taking into account the changes that may need to be made in primary care services, in resources to support large-scale hospital rationalization, and in primary care.

As noted earlier, any systemwide restructuring program must actively incorporate a variety of approaches to improving microlevel efficiency. Countries can only gain the maximum returns to restructuring when they combine microlevel and macrolevel solutions in a consistent form. Given the urgency of rationalization because of resource constraints, a phased approach may be the most appropriate. An early phase, for rapid implementation in a time span of months (rather than years) should involve eliminating some of the obvious examples of service duplication visible throughout the region, for instance, city and *oblast* maternity hospitals operating alongside each other. A second phase could involve reconfiguring services where immediate solutions are less over a somewhat longer time span. However, the authorities should resist the temptation to pick easy targets, such as rural hospitals. Even a rapid rationalization program should be based on a conscious and considered policy, and not simply follow the line of least resistance.

### **References**

- Abel-Smith, B., and E. Mosialos. 1994. "Cost Containment and Health Care Reform: A Study of the European Union." *Health Policy* 28(2): 89–132.
- Bindman, A., K. Grumbach, D. Osmond, M. Komaromy, K. Vranizan, N. Lurie, J. Billings, and A. Stewart. 1995. "Preventable Hospitalizations and Access to Health Care." *Journal of the American Medical Association* 274: 305–311.

- Black, N., and A. Johnston. 1990. "Volume and Outcome in Hospital Care: Evidence, Explanations, and Implications." *Health Service Management Research* 3(2): 108-114.
- Blumberg, M. 1994. "Impact of Extending Health Care Coverage to the Uninsured." *Health Affairs* 13: 181-92.
- Connett, G., C. Warde, E. Wooler, and W. Lenney. 1993. "Audit Strategies to Reduce Hospital Admissions for Acute Asthma." *Archives of Diseases in Childhood* 5: 127-29.
- Culyer, A., and J. Posnett. 1990. "Hospital Behaviour and Competition." In A. Culyer, A. Maynard, and J. Posnett, eds., *Competition in Health Care: Reforming the NHS*. London: Macmillan Publishers.
- Dawson, A., C. Middlemiss, E. Coles, N. Gough, and M. Jones. 1989. "A Randomized Study of a Domiciliary Antenatal Care Scheme: The Effect on Hospital Admissions." *British Journal of Obstetrics and Gynecology* 96: 1319-22.
- Fylesnes, K. 1993. "Determinants of Health Care Utilization: Visits and Referrals." *Scandinavian Journal of Social Medicine* 21: 40-50.
- Gaspoz, J., T. Lee, M. Weinstein, E. Cook, P. Goldman, A. Komaroff, and L. Goldman. 1994. "Cost-Effectiveness of a New Short-Stay Unit to 'Rule Out' Acute Myocardial Infarction in Low Risk Patients." *Journal of the American College of Cardiology* 24: 1249-59.
- Hensher, M., N. Fulop, S. Hood, and S. Ujah. 1996. "Does Hospital at Home Make Economic Sense? Early Discharge versus Standard Care for Orthopedic Patients." *Journal of the Royal Society of Medicine* 89: 548-51.
- Hollingworth, W., C. Todd, M. Parker, J. Roberts, and R. Williams. 1993. "Cost Analysis of Early Discharge after Hip Fracture." *British Medical Journal* 306: 903-906.
- Inglis, A., J. Coast, S. Gray, T. Peters, and S. Frankel. 1995. "Appropriateness of Hospital Utilization." *Medical Care* 33: 952-57.
- Kornowski, R., D. Zeeli, M. Averbuch, and others. 1995. "Intensive Home Care Surveillance Prevents Hospitalization and Improves Morbidity Rates among Elderly Patients with Severe Congestive Heart Failure." *American Heart Journal* 129: 762-66.
- Namdarán, F., C. Burnet, and S. Munroe. 1992. "Bed Blocking in Edinburgh Hospitals." *Health Bulletin* 50: 223-27.
- OECD (Organization for Economic Cooperation and Development). 1993. *OECD Health Systems Facts and Trends 1960-1991*. Paris.
- Pathy, M., A. Bayer, K. Harding, and A. Dibble. 1992. "Randomised Trial of Case Finding and Surveillance of Elderly People at Home." *The Lancet* 340: 890-93.
- Payne, S. 1987. "Identifying and Managing Inappropriate Hospitalization." *Health Services Research* 22: 709-769.
- Raftery, J., and N. Edwards. 1994. "Beds and Bed Usage in London." London: London Health Economics Consortium.
- Seymour, D., and R. Pringle. 1992. "Elderly Patients in a General Surgical Unit: Do They Block Beds?" *British Medical Journal* 284: 1921-23.
- Sheldon, T., B. Ferguson, and J. Posnett. 1997. "Concentration and Choice in the Provision of Hospital Services." York, U.K.: University of York, Centre for Reviews and Dissemination.
- Siu, A., F. Sonnenberg, W. Manning, and others. 1986. "Inappropriate Use of Hospitals in a Randomized Trial of Health Insurance Plans." *New England Journal of Medicine* 315: 1259-66.
- Stuck, A., H. Aronow, A. Steiner, and others. 1995. "A Trial of Annual In-Home Comprehensive Geriatric Assessments for Elderly People Living in the Community." *New England Journal of Medicine* 333: 1184-89.
- Swift, P., J. Hearnshaw, J. Botha, G. Wright, N. Raymond, and K. Jamieson. 1993. "A Decade of Diabetes: Keeping Children out of Hospital." *British Medical Journal* 307: 96-98.
- Victor, C., B. Nazareth, M. Hudson, and N. Fulop. 1993. "The Inappropriate Use of Acute Hospital Beds in an Inner London District Health Authority." *Health Trends* 25: 94-97.
- WHO (World Health Organization). 1995. *Health-For-All Global Indicators Database*. Copenhagen, Denmark: Regional Office for Europe.



# 5

## *Financing Health Care*

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Many countries throughout the world are reforming their health care systems. Government dominated systems, which are historically based on a combination of state financing and state provision, are experimenting with making greater use of private financing and market or quasi-market delivery systems. Market-based systems, which rely basically on private financing and private provision, are attracting government attention and, in some cases, increased government intervention. Nowhere is this reform process more intense than in the countries of the former Soviet Union. Emerging from an entirely state dominated system with inherited problems associated with central planning, they have been searching for viable alternatives to both the old system of health care financing and the old system of health care delivery.

This chapter concentrates on issues concerning the financing of health care, and only addresses health service delivery issues where they are relevant to financial issues. Specifically, the chapter attempts to summarize some of the principal advantages and disadvantages of alternative forms of financing for health care systems in the context of Central Asia.

### **Assessment Criteria**

Any discussion of the merits and demerits of alternative proposals for health care reform, including the reform of health care financing, has to have some criteria against which proposals need to be judged. Such criteria may be grouped under the headings of efficiency, equity, and feasibility.

#### *Efficiency*

Any discussion of an efficient system of health care financing has to begin with the fundamental issue of quality. Few would disagree with the proposition that a health care system should deliver good quality health care, and hence that in evaluating different methods of financing, policymakers must take their potential impact on quality into account. The difficulties arise in defining what is meant by quality. An obvious dimension of quality is what might be termed the output of the system, that is, its impact on the health of the individuals that it treats and, through them, its impact on the health of the nation as a whole. However, such impact is notoriously difficult to measure, and in practice, quality indicators often tend to focus either on throughput measures, such as the number of patients treated, or input indicators, such as the number of physicians or of hospital beds per 1,000 people. Although relatively easy to measure, these kind of indicators often seem to bear little relationship to output, as demonstrated by those countries with high values for inputs or throughputs whose populations suffer from poor health, for example, many countries of the former Soviet Union.

Quality, however measured, would not be the only criterion by which to judge a health care system. An extremely high-quality system might also be an extremely expensive system. It

might also be wasteful in terms of resources. Ideally, what is needed is a system that delivers health care of maximum quality at minimum cost in terms of the resources devoted to it, that is, an efficient system.

In this connection the distinction between macro-efficiency and micro-efficiency is useful. Macro-efficiency refers to the proportion of the nation's gross national product (GNP) devoted to health care. Table 5.1 provides some estimates of the proportion of gross domestic product (GDP) spent on health care in the countries of Central Asia. The levels of spending appear to be quite high compared with other countries with similar national incomes; however, they vary significantly between the countries and over time, and in the case of the total spending estimates at least, what data they are based on is not clear. The figures are also quite old, but trends since 1990 have been downward, so expenditure today as a proportion of GDP is almost certainly lower than that reported here.

Micro-efficiency refers to the health system's ability to use whatever resources it has to maximum effect. A micro-efficient system would be one that used only those clinical procedures that had been demonstrated to be cost-effective, that reduced excessive lengths of stay in hospitals, that economized on drug prescribing, and so on. A micro-efficient system would also be one that was technologically innovative, whose participants were always seeking ways to reduce costs without reducing quality, or to improve quality while keeping costs constant, through technological advance or through new management techniques.

Of course, in practice no health care system anywhere is perfectly micro-efficient. Smith (1991) argues that only 15 percent of the clinical procedures commonly used in Western countries are of proven cost-effectiveness (see Bunker and others 1994 and Ellis and others 1995 for opposing views); lengths of stay in hospital vary dramatically between countries for no obvious clinical reason; and drug prescribing habits also differ sharply, again with no apparent clinical justification (OECD 1993). However, the key to attaining micro-efficiency probably does not lie in endlessly trying to measure resource use, but in setting up proper incentive structures, so that those responsible for allocating resources have incentives to be efficient.

### *Equity*

Equity, or social justice, is a contested term, and we cannot explore its interpretation in detail here. However, distinguishing between equity considerations arising on the financing side of health care and those on the delivery side is useful. On the financing side, two basic principles of equity commonly figure in the debates about the concept: the benefit principle and the ability to pay principle. The benefit principle requires that those who benefit from the service should pay for it, and that the amount of payment should in some way be related to the benefit received. In

**Table 5.1.** *Health Care Expenditures as a Proportion of GDP, 1990 and 1993*  
(percent)

<i>Country</i>	<i>Total (public and private)</i>	<i>Public 1990</i>	<i>Public 1993</i>
	<i>1990</i>		
Kazakhstan	4.4	2.8	2.4
Kyrgyz Republic	5.0	3.3	2.8
Tajikistan	6.0	4.4	—
Turkmenistan	5.0	3.3	—
Uzbekistan	5.9	4.3	4.7

— Not available.

Source: World Bank (1993a,b; 1994b).

contrast, the ability to pay principle requires payment to be organized not according to the benefit received, but in such a way that individuals pay according to their means. The application of one principle may conflict with the other. For instance, if poor people use the service more than richer ones, then applying the benefit principle would require that the poor pay more, while applying the ability to pay principle would require that they pay less.

On the delivery side, again two principles appear in most discussions of the issue: equal treatment for equal need and equality of access. Equal treatment for equal need requires that all those with a similar need for treatment should receive similar treatment, and that the amount of treatment they receive should not depend on any factor irrelevant to that need, for instance, their income, gender, ethnic origin, religion, or place of residence. A common interpretation of equality of access is that everyone should face similar personal costs of accessing health care, that is, no one should have to travel too far, wait too long, or pay too much for access to medical facilities. Although the principles are similar, they are not identical. A system that offered equality of access might not provide equal treatment for equal need, because some of the people in need might, for reasons of their own, choose not to access medical facilities.

### *Feasibility*

However appealing grand principles of efficiency and equity might be for guiding reforms of health care systems, reforms are only as good as the institutional and administrative structures needed to implement them. Good management and administrative skills are scarce and, in consequence, proper implementation and administration can be costly. It does not matter who advocates a particular health care reform—an outside expert, a minister, or a ministry official—if the institutional and administrative apparatus required to implement it is not in place or if it would be prohibitively expensive to introduce. Hence, when trying to evaluate different kinds of reforms, examining the institutional and administrative requirements for putting them in place and comparing them with the system's ability to meet those demands is essential.

Another important feasibility consideration concerns political and social acceptability. Again, conceiving grand reforms is of little use if they contain elements that are diametrically opposed to the culture and traditions of the country concerned. In that case their implementation may encounter severe political resistance; and even if that is successfully overcome, their implementation is likely to be subverted in various ways by the professions, by officials responsible for implementation further down the line, and/or by patients themselves.

## **Systems of Health Care Financing**

We now turn to the assessment of alternative systems of health care financing. As a benchmark, before examining other systems, we begin with an analysis of a fully privatized system with voluntary private insurance.

### *Voluntary Private Insurance*

The possibility of fully privatizing Central Asia's health systems has not been discussed as a serious option for reform. Nonetheless, analyzing the characteristics of privatized systems is useful as a means of comparison with other systems that involve some form of public intervention. Moreover, some have suggested the use of voluntary private insurance for Central Asia as a way to supplement public health systems, thus for this purpose too some understanding of the way such a system might work is helpful.

A privatized health system would have the following features: hospitals would charge their patients a price that varied according to the type and length of their treatment; family doctors would operate similarly, charging for consultations and treatment; and patients in need of

medical care could go to the doctor or hospital of their choice, provided only that they could pay the appropriate charge out of their own income or were covered by a health insurance policy that could pay the fee. To provide health insurance, private insurance companies would compete with one another to attract customers; people would pay the insurance premiums either out of their own income or as a fringe benefit from their employer; and the insurance company would determine the amount of the premium for each individual based on its assessment of the probability or risk of a claim by the individual concerned.

The principal arguments in favor of this system relate to the criteria of quality and efficiency. As people would be free to choose their providers, doctors and hospitals that provided low-quality treatment for high prices would lose customers to those who provided better and/or cheaper services. For instance, a doctor who acquired a reputation for making wrong diagnoses, holding half-hearted consultations, or keeping patients waiting a long time would lose patients to other doctors who were known for their medical successes and ease of access. Similarly, a hospital that did not use cost-saving technology would have to charge higher prices than its more efficient competitors, and would eventually be driven out of business. Thus medical practitioners of all kinds would have a strong incentive to improve their standards of service and reduce their costs.

Furthermore, patients would have freedom of choice. People could choose the doctor, the hospital, and the treatment that suited them best. Doctors and hospital staff would be attentive to their patients' desires and preferences, knowing that their incomes depended on it. The result would be a system of health care financing and delivery that delivered high-quality care at the least possible cost: a system that was both macro-efficient and micro-efficient. Moreover, this private model would have advantages relating to some of the other criteria; namely, it would accord with the benefit principle of equity, because those who benefited would be those who paid, and it would not involve any administrative costs for the government, because the government would not be involved.

With so many advantages (most of which are similar to the advantages of market allocation for any commodity), it may seem curious at first sight that almost no country in the world has adopted this model in its entirety. Even the United States, which in some respects comes closest to this model, has not left the market in health care to operate on its own. There is a high level of public involvement in the financing of medical care at both the state and the federal levels of government.

However, on closer inspection the worldwide rejection of this model is not so surprising, because it possesses some severe problems. Most obvious, it does not accord with equity on the financing side according to the ability to pay principle, nor does it promote equity on the delivery side, either in terms of equal treatment for equal need or equality of access. Under such a system the poor would have to pay a larger proportion of their incomes for any course of treatment, thereby violating the principle of equality of access. Thus treatment would be linked with income, violating the principle of equal treatment for equal need.

The model's quality and efficiency claims are also suspect. For a health care market to work in the way posited, consumers would have to have sufficient medical knowledge to assess quality, otherwise they would not be able to decide who was offering good treatment and who was offering poor treatment. In practice, for consumers to have the necessary information would be almost impossible. In consequence, they would be in no position to reward good providers and to penalize bad ones by shifting their custom from one to the other. Thus the engine of competition driving quality improvements would have broken down. Insofar as providers will compete with one another, competition will not be based on the quality of medical care as such, but on factors that are easily observable to consumers, such as the quality of "hotel" facilities in hospitals and well-publicized pieces of high-technology equipment.

Moreover, the presence of poorly informed consumers gives doctors an incentive to increase their incomes by overtreatment. This incentive is increased if patients are insured, because the doctor knows the insurance company will be paying, not the patient. This is the so-called moral

hazard problem of insurance markets. Moral hazard is the phenomenon that once people are insured against an eventuality, their actions make it more likely to occur. It arises in the case of private health care, because neither doctors nor patients have any incentive to economize on treatment. The insured may visit the doctor for frivolous ailments; the doctor, secure in the knowledge that the patient does not have to pay, may recommend highly expensive treatment. Both these factors may raise utilization and costs well beyond the efficient level.

Health care insurance markets also face another problem: adverse selection. This arises when insurance companies find distinguishing between good and bad risk individuals difficult. The bad risk individuals are more likely, at a given price, to demand insurance than the good risks. With no way of telling a good risk from a bad one, insurance companies will set their premiums to reflect the average risk of all those insured. As a consequence, some of the good risks will not buy insurance, because the premium is too high to make it worth their while. Thus the ratio of bad risks to good risks among the insured will rise, claims will increase, and the cost of insurance (and premiums) will go up. Yet more good risks will not buy insurance. The end result will be a possibly quite large group of people without insurance coverage.

Finally, although administrative costs do not impinge on the government, they are likely to be high for the economy as a whole. Private systems involve extensive billing procedures that are expensive, and both insurance companies and medical providers are likely to spend large sums on marketing. Administrative costs in the United States are routinely estimated to amount to 20 to 25 percent of the total costs of health care spending (see, for instance, Woolhandler and others 1993).

Private systems of health care are therefore likely (a) to provide quality care in terms of easily observable factors, such as hotel facilities in hospitals, but not necessarily in terms of the quality of medical care; (b) to engage in overtreatment, thus causing both macro-inefficiency and micro-inefficiency; and (c) to have large groups of uninsured people, thereby creating inequity. They are also likely to have high administrative costs and, especially for countries with a history of free care, to be politically difficult to implement. By contrast, private systems are likely to be technologically innovative and highly sensitive to consumers' desires and wants.

The country with the most developed system of private care in the world, the United States, displays all these phenomena—hardly a coincidence. Health care expenditures are high, equivalent to some 14 percent of GNP; more than 35 million people are without insurance coverage of any kind; administrative costs are high; and health outcomes, relative to those in other industrial countries, are poor. However, the pace of medical advance is without parallel, the inputs to medical care are the best in the world, and patients generally appear to exhibit a high degree of satisfaction with the system as a whole.

### *Compulsory Private Savings or Insurance*

Overcoming adverse selection and some of the equity problems of the full privatization model is possible by compelling people either to save or to take out insurance. Compulsory savings involves placing funds in personal savings accounts from which individuals can draw to meet their medical expenses up to the amount in the account. Sometimes individuals have the right to use any balance in the account for other, strictly defined, purposes, such as providing an inheritance for their heirs. Compulsory insurance involves the compulsory payment of insurance premiums into a collective pool on which individuals can draw for all their medical expenses. No limit is placed on how much may be drawn (or if a limit does exist, it is not related to the amount that individuals have contributed). However, individuals do not have the right to use the insurance fund for any other purpose. The compulsory savings model is similar to that in Singapore, where individuals must place a certain proportion (6 to 8 percent) of their wages in a personal Medisave account, on which they draw if they need to pay for medical treatment. Several countries in Africa, in the Caribbean, and in the Pacific Islands have also experimented with compulsory savings plans. These have usually been for forms of social protection other than health care,

such as old age pensions; however, in principle there is no reason why the same idea cannot be applied to health care financing, as the Singapore model illustrates. Compulsory private insurance operates in Chile and has been proposed in the Netherlands.

This model seems to have similar advantages to the full privatization model and to suffer from the same problems, except for adverse selection. However, it also has two additional problems of its own, both relating to feasibility. First, it requires a strong regulatory apparatus to ensure that people actually make the savings or insurance payments. This is particularly difficult if a large proportion of the population is outside the formal employment sector. The second problem concerns the investment of the fund generated by the compulsory savings or the insurance premiums. The governments of countries employing this system for financing social protection have found resisting the temptation to plunder the fund if it is in surplus difficult, either directly or by forcing the fund managers to invest in low-yield government securities (World Bank 1994a). In consequence, in many countries that have experimented with such schemes the rates of return have been low or negative, prompting widespread dissatisfaction with the schemes, and in many cases their abandonment. Even in Singapore, real returns have averaged around 2 percent per year, significantly below the return on privately invested portfolios in most countries of the Organization for Economic Cooperation and Development, raising serious questions about the fund's ability to meet its long-term commitments. In short, if used for health care financing, the system may lead to underfunding of health care, and hence to macro-inefficiency.

Allowing private investment or insurance companies to manage the fund might overcome this problem. They could either bid to manage the fund for, say, five years, with competitive bidding at the end of each five-year period. Alternatively, the system could consist of separate funds, with different investment or insurance companies managing the different parts. This is the pattern Chile uses for compulsory health insurance, and it has been reasonably successful. It is also somewhat similar to the recent proposals for health care reform in the Netherlands.

However, once again the institutional and administrative requirements are high. In particular, either private investment or insurance companies must exist in the country concerned, or, if not, creating them or bringing them in from outside must be possible. Furthermore, if several funds are permitted and they are allowed to compete with one another for custom, marketing costs will need to be added to the overall costs.

### *Social Insurance*

Social insurance is the model of health care finance many Western European countries follow, and some Central Asian countries, such as the Kyrgyz Republic, have actively explored its use. It has some similarities to compulsory private insurance, although the similarities should not be overemphasized. As Appleby (1992, p. 116) has pointed out, in some respects calling it insurance at all is misleading, because it has little to do with the actuarial concept of insurance. The term insurance is being used here not as a technical description of a system based on risk assessment, but in a more colloquial fashion simply to suggest protection.

Under a social insurance scheme, both employers and employees contribute to a social insurance fund, out of which payments are made to providers, usually on a fee for service basis. Sometimes the fund is national; sometimes a country has many funds based on industry, occupation, or region. Sometimes a central government agency runs the fund or funds, and sometimes independent nonprofit organizations do so. In the latter case, the scheme resembles the compulsory private insurance schemes, except that the premiums are based on individuals' incomes, not on the risks of their making a claim. Also, people are not usually offered a choice of fund manager. Contributions are assessed as a percentage of income or of wages. Under some schemes, a record of the contributions made is kept for each individual, and those whose record is such that they do not meet certain minimum conditions concerning contributions are not eligible to receive treatment.

Social insurance systems tend to deliver high-quality health care. Because they are generally coupled with fee for service systems of payment, as in the privatized system, doctors have incentives to recommend more treatment than may be strictly necessary, and hence they create pressures for overtreatment. Put another way, social insurance systems suffer from the problem of moral hazard. Therefore politicians are often under pressure to raise contribution levels to pay for this extra treatment. There is usually less political resistance to raising social insurance contributions than to raising other forms of taxation, and therefore the upward pressure often succeeds. In consequence, social insurance schemes often tend to be macro-inefficient relative to other taxation-based systems, taking up larger proportions of GNP and with higher spending overall.

Another potential source of macro-inefficiency concerns the wider effects on the economy. Social insurance, being effectively a tax on the payroll, can increase the cost to employers, and hence raise overall production costs. This may not be desirable for the countries of Central Asia, given their process of transition to a market economy and the possible inappropriateness of raising labor costs at this time. However, social insurance does not necessarily raise labor costs. If employers have monopoly power in the labor market (as will be the case if, for instance, the state is the major employer), then the tax, including even the employer's contribution, may be partially, or even wholly, offset by lower wages. Moreover other systems of health care financing may suffer from this problem to a greater or lesser extent. Indeed, whatever system of health care financing a country employs, the burden of paying for health care will always fall on the economy somewhere, and often that will be on the employer. In the United States, for instance, employers bear most of the cost of private health care by having to offer elaborate health care packages to their employees—a burden that is so great that on occasion it has led to major corporations lending support to proposals to introduce national insurance.

This macro-inefficiency results partly from the relatively low political resistance to raising contributions. However, it also results from the system of paying providers through fee for service, which one could argue is not a necessary feature of social insurance. If the system were, for instance, one of capitation payments, then this element of the pressure for more spending would be reduced.

So far as equity on the financing side is concerned, as social insurance payments are usually related to income, they tend to be equitable according to the ability to pay principle. However, they are not related to treatment actually received, so they violate the benefit principle. With respect to equity on the delivery side, social insurance systems remove financial barriers to attaining equal treatment for equal need and equality of access for those in the system. However, if particular groups who are excluded, for instance, those whose contribution records do not meet the necessary minimum levels, then serious equity problems may arise. Such groups may have access to some other publicly funded system of health care, but this would have to be of lower quality than that provided under the social insurance system, otherwise people would have no incentive to contribute to social insurance. Inevitably, therefore, inequality of access is present so far as quality of treatment is concerned, and hence the system provides unequal treatment for equal need.

The funding mechanism under social insurance systems is transparent and clear, and perhaps for that reason they tend to be quite acceptable politically. They are also relatively simple to administer in countries where a high proportion of people work in the formal sector, as has been the case in some of the Central Asian countries, where state and collective farm employees make up a large proportion of the working population. However, this situation is changing as the economies of Central Asia move toward a more market-oriented structure, with a consequent increase in private sector employment, self-employment, and unemployment. In general, special arrangements will have to be made for the self-employed to ensure that they contribute as much as the combined total of employer and employee contributions for their equivalents in formal employment. The unemployed also present difficulties. One solution is for the state to make contributions on their behalf, as is the case in Kazakhstan, and has been proposed for the Kyrgyz Republic. Moreover, whatever special arrangements are made for groups such as the unemployed,

some people will always slip through the safety net, such as those who have made inadequate contributions, recent immigrants, and so on. For these, some backup system will have to be set up, and the costs of setting up and administering this system will have to be included in the overall administrative costs of the social insurance framework.

Finally, many countries with systems of social insurance that are industry or occupation based have encountered mobility problems as workers try to move from one occupation to another. For this reason, if the countries of Central Asia are to follow the social insurance route, we recommend that they follow the single fund, national insurance model. To encourage efficiency in administration, they could contract the running of the scheme to a private agency for a fixed term, with the contract subject to a competitive bidding process.

### *Hypothecated Taxation*

Hypothecated taxes are taxes whose revenue is reserved for a particular purpose, in this case, the financing of health services. Some forms of social insurance can be viewed as a form of hypothecated tax, because they generally involve a payroll tax whose revenue is used for a sole purpose. More generally hypothecated taxes are of two kinds: those based on income and those based on expenditure or consumption. Australia, for instance, uses a hypothecated income tax of 1.25 percent, while hypothecated taxes of both kinds have been proposed for the United Kingdom (Jones and Duncan 1995).

Hypothecated taxes levied on income have similar advantages and disadvantages as social insurance. This is not surprising, given that, as noted, social insurance can itself be viewed as a form of hypothecated tax on income. Hypothecated taxes levied on consumption also have some of the same advantages, for instance, they are transparent, and therefore less subject to political manipulation than general taxation. They also have some advantages of their own. If they are levied on health-damaging activities, such as taxes on alcohol or tobacco, for example, they discourage those activities and can improve health directly without calling on the curative health services. This can increase their political acceptability. They can also be relatively easy to administer, especially if they are levied on goods with controlled outlets. Taxes on health-damaging activities can also be viewed as equitable according to the benefit principle of equity.

However, hypothecated taxes on consumption also have their disadvantages. First, the poor tend to indulge in some of the more prominent health-damaging activities, such as drinking and smoking, more than rich people. Hence taxes on these activities tend to be regressive, taking a greater proportion of the income of the poor than of the rich, and thus violating the ability to pay principle of equity. Moreover, these taxes may lead to the poor having less income available for other expenditures. Thus they may reduce those expenditures, perhaps by cutting back on health-promoting consumption, such as nutritious food, and thereby damaging their health. However, this regressiveness argument has to be treated with care. Some evidence from the United Kingdom indicates that despite taxes on tobacco being regressive on average, an increase in the tax may be progressive (Townsend 1995). This apparent paradox arises because the increase leads to a greater reduction in the taxed activity (that is, smoking) by the poor than by the rich, and so their tax bill goes up by a much smaller amount than that of the rich.

A second problem with hypothecated taxes of all kinds is that if they are operating in combination with other sources of financing, such as general taxation, the ministry of finance may use them simply to replace revenue from these other sources, with no net increase in the funds available for health care. A third problem is that they are unlikely to be macro-efficient, because the revenue they raise will vary according to fluctuations in their tax base, and not according to the nation's health care needs. So, for example, a successful campaign to reduce smoking would reduce the revenues from a tax levied on cigarettes, while at the same time increasing the demand for health care services because of people living longer.

However, despite these problems, the use of hypothecated taxes on consumption has some potential in Central Asia. Estimates indicate that a 15 percent tax on cigarettes in Turkmenistan, for instance, could generate revenue equivalent to 10 percent of the health budget. Equivalent to a hypothecated tax on alcohol would be reducing the subsidy on vodka consumption and using the revenue thus saved for health expenditure. Estimates suggest that in Turkmenistan, if the subsidy were removed completely and vodka was sold at the market price, the savings would be enough to pay for the entire health budget.

### *General Taxation*

Health services can be funded directly out of the revenues of general taxation. This is familiar to the countries of Central Asia, and is also the system Denmark, Italy, and the United Kingdom have adopted, among others. The most notable consequence of funding health services out of general taxation is that it restricts the overall level of health care funding to one below the levels generated by the principal alternatives (such as social or private insurance). This is for two reasons. First, taxpayers seem to be more resistant to raising general taxes than to raising hypothecated ones or social insurance contributions. Second, in the governmental meetings that determine the allocation of revenues raised by general taxation between competing demands, the health care sector is only one of many, often equally pressing, concerns, and in the battle between competing priorities, it does not always win. This has a number of consequences. Most notably, it affects macro-efficiency and leads to possible underfunding of health services. By contrast, if cost containment is a priority, it is probably the most effective mechanism for attaining that end.

So far as equity on the financing side is concerned, funding health care services this way can be equitable according to the principle of ability to pay, but this will depend on the progressivity of the overall taxation system. Except in the unlikely event that use of the health system exactly matches overall tax payments, it will not be consistent with the benefit principle. As with other forms of taxation funding, it does not involve any financial barriers to the use of the health system, and therefore might be thought to contribute to equity on the delivery side by promoting both equality of access and equal treatment for equal need. However, here again the restrictiveness of the funding regime and the consequent necessity to ration the service may cause difficulties, because whatever rationing procedures are used might also discriminate against poor people. For instance, if funding restrictions mean that only one hospital can be built and that is located in the capital city, then those who live outside the city and are too poor to travel will be effectively excluded.

Feasibility depends in part on the administrative costs of the various taxes that contribute to general revenues. Political acceptability also depends on the acceptability of those taxes; however, it also depends on the extent to which the restrictions on funding lead to unacceptable restrictions on the availability of services. If services are restricted in such a way as to lead to long waiting lists, this may lead to a drive to find other ways of funding to relieve the pressure.

### *User Charges*

User charges can be levied on a variety of different health services: for consultations with doctors, for drugs, for medical treatment in hospitals, for the accommodation provided by hospitals (food, heating), and so on. They are a feature of most health systems, including those of Central Asia; however, they are rarely used as the only source of financing, or even a major one. Most commonly they are used to supplement other sources of financing, such as general taxation.

User charges tend to discourage the use of services, and as such may have a number of consequences. If the service discouraged is frivolous or of low value, then charging for it will promote both macro- and micro-efficiency, but for this to occur, patients must be in a position to judge whether treatment is necessary or not, which is rarely the case. If the service is one that is crucial to health, charging could be damaging to people's health and socially inefficient. The potentially

serious nature of this problem is illustrated by a study that looked at the introduction of charges in Swaziland, which found a drop in use of valuable programs such as immunization, not a drop in frivolous use (Yoder 1989, quoted in Abel-Smith 1994, p. 167).

Selective, service-specific charging may be a partial answer here, charging for some frivolous services, but not for other, more valuable ones. However, this depends on being able to distinguish properly between frivolous services and valuable ones, which is not always easy, because the distinction as to what is frivolous and what is valuable may vary from patient to patient. In some cases, selective charging could be used to encourage greater efficiency in patients' use of services. For instance, some systems require patients to attend primary health care facilities to assess whether or not they should be referred on to a hospital. However, patients often prefer to bypass these referral systems, going straight to the hospital when they feel they need treatment, instead of going to the primary facility first. Such behavior could be discouraged by levying a charge on such patients, a charge from which patients who are referred in the proper way would be exempt.

Similarly, incentive considerations can be built into prescription charges (the most common form of charging). If the charge is a proportion of the cost, patients have an incentive to purchase too few drugs, and hence not complete their course of treatment (a particularly dangerous outcome in the case of antibiotics). This incentive can be eliminated by having a flat rate per prescription. Charging per item prescribed is also important rather than charging per prescription form, because this gives prescribers an incentive to consider precisely what items patients really need.

Equity issues are, of course, extremely important with respect to charges. Charging for services accords with the benefit principle of equity, but not with that of ability to pay. Charges constitute a barrier to access to the service concerned that is greater as a proportion of income for the poor than for the rich, and hence contribute to inequality of access and to unequal treatment for equal need. In a survey of private payments for health care in the Kyrgyz Republic, Abel-Smith and Falkingham (1995) found that nearly two-thirds of those reporting ill-health in the richest fifth of the population used medical services, compared with only two-fifths of those in the poorest fifth of the population. Some of this inequality was due to charging, with, for instance, nearly half of all inpatients reporting severe difficulties in finding the money to pay for their inpatient stay. The difficulties were greater in rural areas, where incomes were lower.

Charges can be administratively costly to collect, especially if debt collection services are required, and if they are levied on a service that was previously free, they are often unpopular, and hence can create acceptability problems. This last may be less of a problem in the Central Asian countries, where some form of charging seems increasingly prevalent, both officially and unofficially. For instance, Abel-Smith and Falkingham (1995) found that 69 percent of those surveyed in the Kyrgyz Republic had made some payment for outpatient care and 86 percent had made some payment for inpatient care. Also, the unpopularity of charges can be reduced if those who have to pay them understand that the revenue generated is being used to improve services, for instance, to increase the availability of drugs (Abel-Smith and Rawal 1992).

Some of these difficulties can be overcome if they are accompanied by an exemption system for the poor. However, as Abel-Smith (1994, p. 170) has noted, "Those who claim that is practical in a [poor] country to target charges only on those who are not poor need to be able to point to an example where such a system works with tolerable accuracy." Informal methods, such as relying on the local knowledge and discretion of the people running the health facility, for instance, are subject to bias and corruption. More formal systems of means testing can be both expensive and problematic. For instance, assessing the incomes of people who work in agriculture or in the informal sector is formidably difficult. However, these problems may be overcome (or at least shared) if a system of means testing is already in place for another purpose, say, for determining eligibility for some other form of social protection. Eligibility for one could automatically confer eligibility for the other.

## Conclusion

Of the systems of health care finance surveyed, perhaps only full privatization appears quite unsuitable for the countries of Central Asia. All the others have potential, and it will be up to those countries to consider which of them, or which combination, is best for their situation. However, they should remember that any system for financing health care will have its problems, and that the search is not for the perfect system, but for the least problematic.

## References

- Abel-Smith, B. 1994. *An Introduction to Health Policy, Planning, and Financing*. London: Longmans.
- Abel-Smith, B., and J. Falkingham. 1995. *Financing Health Services in Kyrgyzstan: The Extent of Private Payments*. London: London School of Economics.
- Abel-Smith, B., and P. Rawal. 1992. "Can the Poor Afford 'Free' Health Services? A Case Study of Tanzania." *Health Policy and Planning* 7: 329-41.
- Appleby, John. 1992. *Financing Health Care in the 1990s*. Buckingham, U.K.: Open University Press.
- Bunker, J., and others. 1994. "Improving Health: Measuring Effects of Medical Care." *Milbank Quarterly* 72: 225-58.
- Ellis, J., and others. 1995. "Inpatient General Medicine Is Evidence-Based." *The Lancet* 346: 407-410.
- Jones, A., and A. Duncan. 1995. *Hypothecated Health Taxes*. London: Office of Health Economics.
- OECD (Organization for Economic Cooperation and Development). 1993. *OECD Health Systems: Facts and Trends 1960-1991*, vol. 1. Paris.
- Smith, R. 1991. "Where Is the Wisdom? The Poverty of Medical Evidence." *British Medical Journal* 303: 798-99.
- Townsend, J. 1995. "The Burden of Smoking." In M. Benzeval, K. Judge, and M. Whitehead, eds., *Tackling Inequalities in Health*. London: Kings Fund.
- Woolhandler, S., and others. 1993. "Administrative Costs in U.S. Hospitals." *New England Journal of Medicine* 329: 400-403.
- World Bank. 1993a. *Kyrgyzstan: Social Protection in a Reforming Economy*. Washington, D.C.
- \_\_\_\_\_. 1993b. *World Development Report 1993: Investing in Health*. New York: Oxford University Press.
- \_\_\_\_\_. 1994a. *Averting the Old Age Crisis*. London: Oxford University Press.
- \_\_\_\_\_. 1994b. *Uzbekistan: Adjusting Social Protection*. Washington, D.C.
- Yoder, R. 1989. "Are People Willing and Able to Pay for Health Services?" *Social Science and Medicine* 29: 35-42.



# 6

## *Reforming Medical Care Provider Payment Systems in Central Asia*

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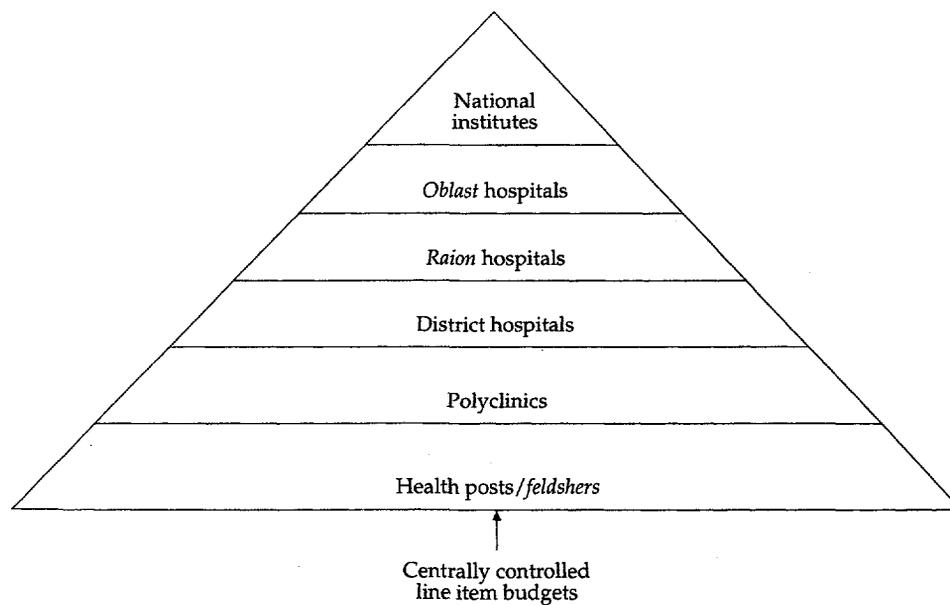
This chapter discusses the need, underlying options, and relevant experiences for reforming medical care provider payment systems in the Central Asian countries. The analysis builds on the information presented in chapter 2 of this volume.

### **The Former Soviet System**

Under the centrally planned Soviet national health service system, which forms the common inherited legacy for all the Central Asian countries, the Ministry of Health allocated money to all facilities on the basis of 18-category line item budgets. Physicians and all other health personnel were salaried employees of the state. Personnel and capital were allocated to facilities on the basis of planning norms, and the Ministry of Labor set salaries. Aggregate expenditures were effectively controlled through this top-down budgeting process.

The health system was vertically integrated (figure 6.1), and health outcomes were relatively good for the amounts spent. The system also performed well on both equity and access grounds, because the state was responsible for providing all necessary care to treat an individual's condition.

*Figure 6.1. The Vertically Integrated Soviet Health System*



Source: Author's research.

Despite these advantages, the system suffered from a number of serious problems and inefficiencies. First, planning norms resulted in large numbers of often low-quality inputs. Second, as an unproductive social sector, the system was given low priority in terms of funding for both capital and recurrent expenditures. Third, facility managers, physicians, and other personnel had few financial incentives for efficient behavior, because the state owned all facilities and all personnel were salaried state employees. Thus low levels of spending that might have been considered as evidence of macro-efficiency were accompanied by inefficiency at the micro level, as norms that were based neither on need nor on efficient resource use led, in practice, to inefficiency and waste. In particular:

- Norms resulted in too many polyclinics, hospitals, and personnel, and were not responsive to local needs.
- Few financial incentives for efficiency were in place.
- All health personnel were salaried state employees, and their salaries were low.
- Utilization rates were high for a variety of reasons, including the lack of an effective referral system and the lack of both the diagnostic capacity and the incentives to treat people on an outpatient basis. Moreover, poor transportation networks and the high costs of food and fuel provided incentives for people to be hospitalized.
- Facility managers had little flexibility to manage.
- The best physicians practiced at the highest levels of the system.
- Patients bypassed lower levels of the system without penalty.

Prior to the breakup of the Soviet Union, health sector funding was already barely adequate to support the system: diagnostic capacity and technology were limited, amenities were few, and salaries for health care personnel were low. With the breakup of the Soviet Union in 1991, all the Central Asian countries suffered severe declines in their gross domestic product (GDP) and health spending, as well as the loss of substantial budgetary transfers from Russia. By 1994 real GDP had fallen by at least 33 percent, and in most countries by 50 percent or more. Real health spending fell between 33 and 80 percent. Moreover, adjustments in health infrastructure and reductions in utilization did not keep pace with falling funds. Yet virtually every measure of health service capacity or use—for example, number of beds, number of admissions, average length of stay, physicians' availability, and utilization of services—still significantly exceeds the levels observed in the countries of the Organization for Economic Cooperation and Development (OECD) (see chapter 2 in this volume). Given the health systems' still extensive infrastructure and the lack of incentives for efficiency on the part of both providers and consumers, the efficiency gains from provider payment reforms are a critical component of their future financial sustainability.

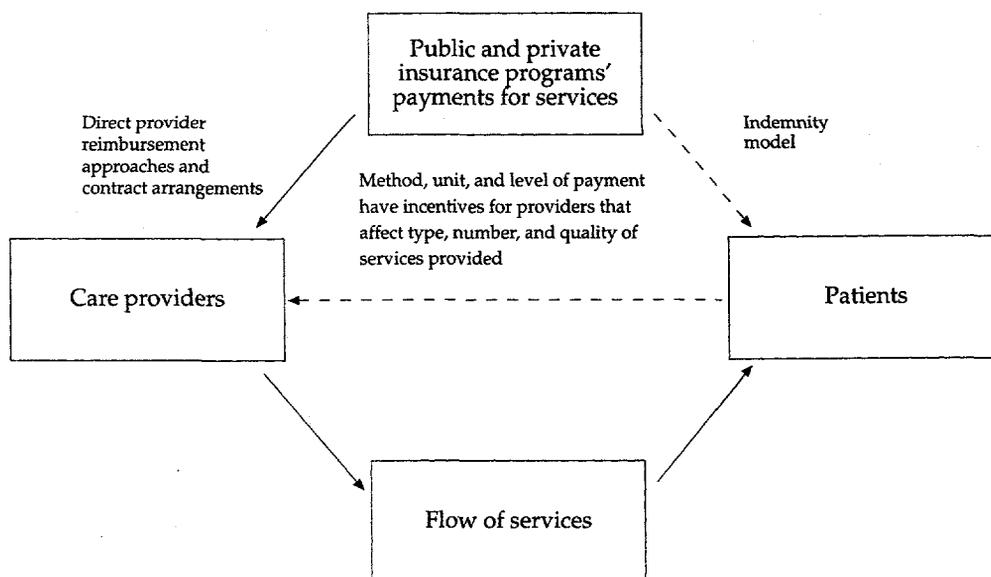
### **Basic Issues in Provider Payment Reform**

The basic approach all countries use when pursuing provider payment reforms is to

- Separate finance from provision
- Have money follow patients in the context of an overall budget
- Use incentive-based provider payment mechanisms to encourage efficiency, clinical effectiveness, quality, and consumer satisfaction.

Figure 6.2 illustrates the flows of funds in most health systems where financing and provision have been separated. It shows the various types of approaches an insurer can use to compensate providers for care rendered. Payments can be made directly to the provider or facility, or the patient can pay the provider or facility and be reimbursed by the insurer. The method, unit of payment, and level of payment all have important effects on providers' behavior (and in some cases on consumers' behavior as well), in terms of types and number of services provided (Barnum

Figure 6.2. Flows of Funds to Medical Care Providers



Source: Author's research.

and others 1995). Methods of payment may be retrospective or prospective, and can be based on different units of payment and various methods for establishing the level of payment.

Table 6.1 contains a nonexhaustive list of the most frequently employed units of payment and methods for establishing the levels of payment. The units of payment are arranged in ascending order from the least comprehensive (individual fee for service) to the most comprehensive (a fixed payment per year for all services, or full capitation).

Provider payment incentives are quite powerful and can have major effects on the type, quantity, and quality of services rendered. Therefore, for any reimbursement system it is important to monitor costs; quality; access; impacts across all provider types; and the impacts across all public and private payers, including those paying out-of-pocket. One other important aspect of medical care provider payments is that achieving efficiencies across the entire health system is difficult in the absence of a single payer or a single set of rules that apply to the entire system.

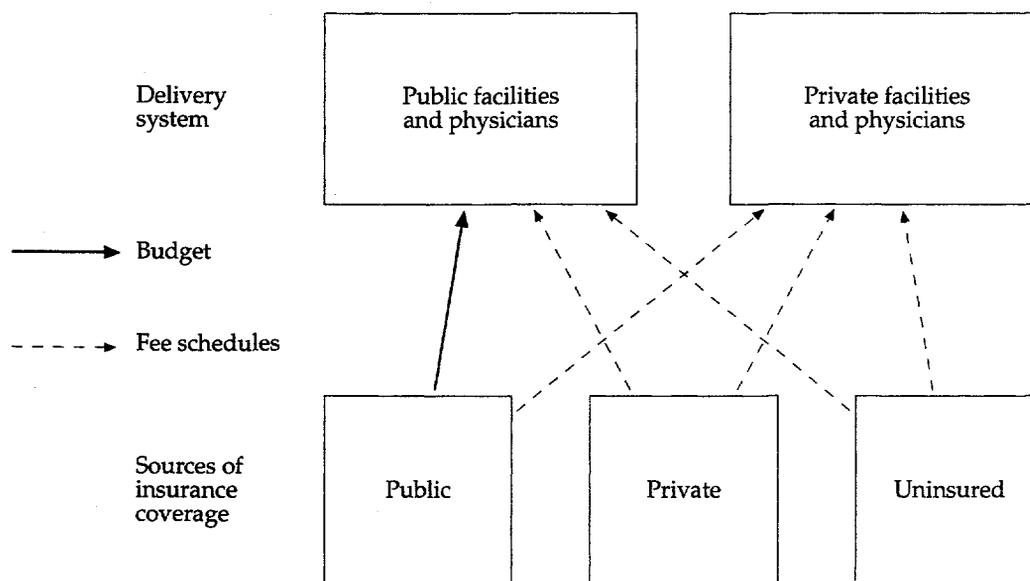
Figure 6.3 illustrates the difficulty of assuring efficiency in a system in which different payers use different rules to pay medical care providers. In such systems, providers generally "cost shift" by providing more services for those payers with higher rates. This frequently results in access problems for certain segments of the population and cost escalation, especially when providers can influence the quantities of services provided.

Table 6.1. Most Common Units and Levels of Payments to Providers

Unit of payment	Level of payment
Individual service	Providers' costs
Per visit or encounter	Providers' charges
Per day	Administratively set by payor
Per admission	Negotiated
Per episode of illness	Competitive bidding
All services supplied by that provider for some fixed period of time (i.e., budget, salary)	
All or a defined set of services for an individual for a fixed period of time (i.e., full or partial capitation)	

Source: Author's research.

**Figure 6.3.** *Why Controlling Spending without a Single Set of Payment Rules Is Difficult*



One of the most difficult aspects of developing a payment system, both conceptually and practically, is setting payment rates that reflect the costs of producing the service efficiently (Jencks and Schieber 1991). Failure to set payment rates correctly will result in access problems and diminished quality, or windfall profits and cost escalation. Those designing the system must always keep in mind the cost, quality, and access tradeoffs. The steps necessary to develop and implement a system are as follows:

- Define services covered, that is, the benefit package.
- Obtain unit service cost information.
- Define an efficient level of service provision costs.
- Evaluate the administrative costs of options, including costs to payers, providers, and consumers.
- Choose payment method(s). These may vary by provider type.
- Set payment levels to cover the costs of efficient provision.
- Develop contracts among payers, providers, and consumers.
- Develop management information and quality monitoring systems at payer and provider levels.
- Provide appropriate training for payer and facility personnel and disseminate information to consumers.
- Develop the necessary regulatory structure, including an appeals process.
- Demonstrate and evaluate the system in sample facilities, practice settings, and geographic areas.
- Modify the system as necessary and implement countrywide.
- Undertake the complementary delivery system restructuring and manpower training reforms required to make the system work.
- Monitor cost, quality, and access and revise the system periodically as needed.

### **Lessons and Experiences from Former Socialist and OECD Countries**

Virtually all former socialist economies; middle-income Latin American countries; and Western, industrial, OECD countries are separating provision from financing, trying to make money follow

patients in the context of an overall global budget, and adopting incentive-based payment mechanisms for medical care providers. The important lessons learned from the diverse payment systems in OECD countries are of great relevance to the Central Asian countries and illustrate the powerful effects that provider payment systems can have on the overall health system (Schieber 1995). These lessons include the following:

- Designers of payment systems have found that expanding access and developing system infrastructure is easier than reducing capacity and controlling costs.
- Overall cost containment strategies have often not resulted in micro-efficiency, and vice versa.
- Empowering consumers and having money follow patients within the context of an overall budget appear to be the preferred strategies for controlling costs.
- Specific strategies for paying medical care providers, such as certain types of managed care, diagnostic-related groups, and various full and partial risk-sharing approaches, if appropriately implemented, appear to control costs without compromising quality and access.
- When payment reforms are imposed in one part of the health sector, expenditures and access in other substitute and complementary parts of the health sector must be monitored.
- The payment mechanisms used in OECD countries require sophisticated administrative and information structures.
- New types of managed care arrangements, as well as vertical integration of services, have blurred the distinction between financing, provision, and reimbursement. Little hard evidence concerning the managed care “revolution” is available.
- Fragmented fee for service systems like in the United States, without a single payer or set of rules applying to the whole system, have been the least successful in controlling expenditures and guaranteeing access.
- Most countries face a surplus of physicians, especially specialists, and of hospital beds, and have had limited success in controlling either.
- Low levels of spending are not indicative of efficiency. Rich and poor countries alike get poor value for money spent.

A substantial body of experience is also available from the former socialist economies and Central Asia. Experiences from Eastern European countries, Kazakhstan, the Kyrgyz Republic, and Russia suggest that the incentive-based systems initially developed and implemented in the OECD countries can work just as effectively in the former socialist economies. While many different approaches have been tried, the basic economic incentives embodied in these approaches clearly work. Obtaining valid cost information has been an important component of these efforts. Moreover, unintended negative consequences have resulted from design flaws in the systems as opposed to the economic incentives not operating as expected.

The former Soviet Union has experimented with many new and innovative provider systems since the late 1980s, when certain Russian *oblasts*—Kemerovo, Samara, and St. Petersburg—and Kazakhstan and the Kyrgyz Republic were given the authority to experiment with innovative systems under the new economic mechanisms being put in place at that time. The focus was on three areas: restructuring financing, reforming organization and management, and improving the delivery system’s internal efficiency. Further experiments with provider payment reforms have taken place in recent years through the U.S. Agency for International Development’s ZDRAV reform program in four Siberian *oblasts* (Altai Krai, Kemerovo, Novosibirsk, and Tomsk) and Kaluga, Tula, and Tver in central Russia. Both sets of experiments have focused on various risk-sharing approaches, case payments, and managed care, and indicate the viability of implementing such approaches in Russia and Central Asia, as long as the up-front development work is done carefully and the systems are designed to deal effectively with the inherent tradeoffs among costs,

quality, and access. For example, the general practitioner capitation and fundholding experiments in Siberia resulted in large reductions in inpatient spending, decreases in hospital days, and significant increases in outpatient visits (Langenbrunner and others 1996; Rice 1996).

In Central Asia, the most extensive demonstrations of new provider payment systems are evident in Kazakhstan, while the Kyrgyz Republic is undertaking a major demonstration project in general practitioner fundholding in Issyk-Kul (Langenbrunner and others 1996). The experiments to date in Kazakhstan have taken place in the *oblasts* of Dzheskasgan, Kokchetau, and South Kazakhstan (including Chimkent). The most detailed evaluation took place in Dzheskasgan, where a territorial medical organization that represents local providers and facilities restructured the financing, organization, and payment of health care, including implementing a new financing system (health insurance fund) for the employed through a payroll tax and capitation payments from the state budget for those not working. It also included establishing primary care groups as fundholders who received capitated budgets for their services, which included bonus payments to adjust salaries based on economic performance. Hospitals were paid on a case-mix-adjusted flat payment per diem based on historical cost. Contracts were developed between all facilities and the territorial medical organization, and the organization signed a contract with the health insurance fund.

The results of the experiment were generally consistent with expectations: primary care visits increased, the ratio of general practice physicians to specialists in polyclinics increased, hospital admissions fell by more than 25 percent, and the number of hospital beds decreased from 14.7 to 10.7 per 1,000 population. Other less positive results included a significant number of inappropriate inpatient admissions, continued high referral rates from polyclinics to hospitals, little increase in hospital efficiency, and no increase in the use of preventive services.

Unintended negative effects from health care reforms in other former socialist economies have included nonprovision of services, large patient volume increases, and rising shares of inpatient expenditures. These problems occurred because the new payment systems contained design flaws, including no global budgets in physician fee for service and hospital case-based payment systems; open-ended payments for hospitals, coupled with reduced budgets and payments to lower levels of the system, which resulted in increased inpatient hospital shares; no monitoring of necessary referrals and quality in capitation-based systems; and inadequate training and/or involvement of relevant stakeholders in the design and implementation phases.

A number of issues are of particular importance in Central Asia because of policymakers' interest in general practitioner fundholding, capitation, and case-based payments for hospitals. First, defining the package of services that will be covered under either a general practitioner fundholding or full capitation approach is essential. Second, setting the average payment at a level that covers the costs of providing that set of services efficiently is important. Third, this capitation rate should be risk-adjusted, so that medical care providers will accept sicker patients. The difficulties of doing this should not be underestimated, as ample evidence is available from the United States of providers accepting only healthier patients, leaving the sicker and more costly cases to the public sector (Hadley and Langwell 1991; Miller and Luft 1994). Fourth, access, quality, costs, and referrals to other provider levels must be carefully monitored. Moreover, for these systems to work as planned, major system restructuring and retraining and reorganization of physicians will be necessary, so that cases can be appropriately treated at lower, less costly, ambulatory levels of the system, which currently lack the diagnostic capacity, supplies, and equipment to function in this manner.

## Conclusion

The design of provider payment systems is one of the keys to efficiency and long-run financial sustainability. It is also one of the most complex areas of reform in Central Asia, because appropriate management information and quality assurance systems, as well as appropriate training

of managers at all levels of the system, must accompany provider payment reform. However, even simple changes, such as providing facility managers with global instead of line item budgets and eliminating outmoded staffing norms, would result in efficiency improvements. Delaying reforms in this area because of a lack of financing is a shortsighted response. Without reform, both rich and poor countries will continue to get poor value for the significant amounts of money they spend on health care.

## References

- Barnum, H., and others. 1995. "Incentives and Provider Payment Methods, Human Resources Development, and Operations." Policy Paper no. 51. World Bank, Washington, D.C.
- Hadley, J., and K. Langwell. 1991. "Managed Care in the United States: Promises, Evidence to Date, and Future Directions." *Health Policy* (19): 91-118.
- Jencks, S., and G. Schieber. 1991. "Containing U.S. Health Care Costs: What Bullet to Bite." *Health Care Financing Review* (annual supplement): 1-12.
- Langenbrunner, J., and others. 1996. "A Review of Selected Financing Reforms in Russia and Central Asian Republics." Paper prepared for the EDI Senior Health Policy Seminar on Health Reform Implementation in Central Asia. Abt Associates, Bethesda, Maryland.
- Miller, R., and H. Luft. 1994. "Managed Care Plan Performance Since 1980." *Journal of the American Medical Association* 271 (19).
- Rice, J., ed. 1996. "Provider Payment Reforms in Russia: The Economic Lever for Health Sector Performance Improvement." *Journal of Health Administration Education* special issue 14 (2).
- Schieber, G. 1995. "Preconditions for Health Reform: Experiences from the OECD Countries." *Health Policy* (32): 279-93.



# 7

## *The Political and Administrative Environment in Central Asia: Implications for Health Sector Reform*

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Independence and the dissolution of the Soviet Union in 1991 posed each of the five Central Asian republics (CARs) with a set of challenges that would have taxed any society. Arguably, independence was thrust upon the Central Asians with little or no notice by the decision of Belarus, Russia, and Ukraine to terminate the Union, and was not initiated by the CARs themselves, far less by popular movements within those countries. Certainly they did not experience any pre-independence preparatory period, as might have been expected among former colonies of the Western imperial powers. In 1991 the leaders of the CARs (the same leaders who still govern today in all the republics except Tajikistan) each faced the task of transforming their Soviet republics into sovereign states, effectively from a standing start. This included building the institutions of state, ensuring stability in a potentially volatile region under the nose of a hegemonic power, and defining a viable sense of nationhood in ethnically complex societies. Indeed, the serious attention paid to health sector reform in each of the CARs is something of an achievement, given the competing demands for the time and consideration of governments in the region.

This chapter seeks to outline the key features of political change in the CARs since independence, the evolution and development of post-Soviet institutional structures, and the impact on health policy and reform that these developments have had or might be expected to have in the near future. A focus purely on the technical content of health sector reform is, at best, likely to invite polite indifference from many of the key actors and groups whose active participation is essential to achieving real change. An overview and understanding of some of the preoccupations of those who wield power in Central Asia is therefore important to place the prospects for successful health sector reform across the region in a wider perspective. The analysis and discussion in this chapter focuses mainly on the four republics that have remained essentially stable since independence: Kazakhstan, the Kyrgyz Republic, Turkmenistan, and Uzbekistan. While Tajikistan is beginning to recover from its explosive civil war during much of the early 1990s, it is too early to assert that the country has achieved any kind of stability that is not fundamentally reliant on external intervention and support.

### **Analyzing Political Developments since Independence**

The political science literature on Central Asia since independence has tended to focus on two key themes: first, the region's geopolitical significance and the relationships between Central

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Asian states and their neighbors, and second, the extent to which postindependence Central Asia has moved toward Western concepts of pluralism and democracy. Given this chapter's concern—the relevance of political and institutional change to health reform—it is primarily the latter, more domestically-oriented theme that will be discussed here.

The tendency to judge the formerly communist world in terms of progress toward ideal types of pluralism and democratic governance is hardly surprising, and is a theme that observers of the Soviet Union had taken up some time before its eventual demise and, inevitably, many Western observers, just like the leaders they observe, themselves span the pre- and postindependence period. White (1978) defined evolution from communism towards pluralism in the following terms: "The diffusion and dispersal of power in a political system from central authorities to more or less autonomous groups, organizations and individuals, typically expressed in the establishment of 'bargaining' rather than 'command' relationships between them."

Writing more recently about the former Soviet Union, White (1994, pp. 17–19) suggests that a number of conditions need to be met before formerly communist societies can plausibly be regarded as demonstrating pluralist, democratic politics, namely:

- A firmly based rule of law
- An identification by the people with democratic institutions as such, and not simply for any material benefits they may bring
- The existence of a civil society ("a realm of citizen self-activity that was beyond the reach of government").

While few would deny that each CAR has made significant progress toward upholding the rule of law relative to Soviet times, most commentators have agreed that they have made rather less movement toward the latter two preconditions. Certainly, establishing a valid and consistent rule of law is an essential criterion for successful economic transformation (see, for example, World Bank 1996), but economic reform does not of itself require the other two conditions to be met, however associated they might be with economic liberalism in the established market economies. A consensus has emerged among Western commentators to the effect that certain regional characteristics and problems have intervened to set different priorities for Central Asian leaders and societies, leading these countries and their peoples along a path that does not run directly toward the kind of democratic, pluralist model described earlier.

## **Key Regional Features**

The following sections describe some of these regional characteristics and problems and their effects on the CARs' priorities.

### *Ethnicity and Nationalism*

The CARs all contain significant ethnic minorities. Various peoples indigenous to the region are spread widely across each of the republics, while many minority populations (including Armenians, Germans, Koreans, Russians, and Ukrainians, to name but a few) were moved more or less forcibly into the region during the imperial Russian and Soviet eras. Overall, of Central Asia's total population of some 50 million people, some 12 million are of European descent, and 9 million of these are ethnic Russians (Clements 1994). The issue of ethnicity is perhaps at its most acute in Kazakhstan, where in 1995 ethnic Kazakhs made up 44 percent of the population and ethnic Russians made up fully 36 percent (Olcott 1996).

Analysis of the role of ethnicity before and after the breakup of the Soviet Union is complex and fraught with dangers. At one level, the indigenous Central Asian peoples were subject to a colonial relationship with Moscow, with the ethnic Russian peoples, their colonial masters (in a

very overt sense before 1917, and in more subtle, but still real ways during Soviet times). At another level, the Soviet social experiment had explicitly attempted to transcend race, really only tolerating the expression of nationality in terms of artistic and cultural media, and in comparison to Western versions of colonialism, it had offered significantly greater and more concrete opportunities for members of the "subject" nationalities to advance themselves. In Central Asia, the Soviet Union had showed an increasing degree of tolerance of national identity and of the development of indigenous elites from the Brezhnev era onward, and while the Soviet authorities certainly did not condone nationalism, nationalistic concepts had begun to take root in certain subsections of the population throughout the 1980s. When independence brought the need to define the CARs as nation states in the geopolitical sense, nationalism among the titular peoples quite naturally became an important social and political force. Assertions of national identity included designating official languages to replace Russian, resisting the granting of dual nationality to nonindigenous citizens, and attempting to increase the representation of the titular nationalities in government.

The growth of nationalism was of significant concern to the region's minorities, none more so than the ethnic Russian population. They were concerned about discrimination and loss of opportunities; alarmed by the turning of tables from their former positions of relative power; and ultimately concerned about the prospect, however distant, of ethnic violence. Indeed, the experience of other former Soviet republics and of Yugoslavia hardly gave cause for optimism. The response of many members of minority populations was migration to Russia or other "European" parts of the former Soviet Union (from all the CARs) or to Kazakhstan (from the other CARs).

Ethnic divisions posed three potential problems for the governments of the newly independent CARs. In the short term, the problem was one of public order. Prior to independence, the Kyrgyz Republic and, especially, Uzbekistan experienced incidents of interethnic violence.<sup>1</sup> In the longer term, the problems were the hemorrhage of economically essential personnel (many would-be emigrants were professionals and managers with skills in short supply), and the risk of angering Moscow if governments appeared to maltreat ethnic Russians in the "near abroad." These two latter issues were of critical importance in Kazakhstan, with its large Russian proportion, many of whom lived along its lengthy border with Russia. The loss of key personnel, the absolute vulnerability of Kazakhstan to Russian intervention, and the geographical possibility of secession by its border *oblasts* has tended to make the issue of the Russian minority overshadow and color virtually all others in Kazakh politics since independence.

### *Social Structures in Central Asia*

Beyond the "simple" differentiation between ethnic groups, further social subdivisions exist in Central Asia, often with profound impacts. Clan loyalties are vital influences on the distribution of political power in several CARs (Hyman 1996), for example, lineage and membership of one of the three *zhussii* (hordes) and their subclans in Kazakhstan. Official policy stands against the promotion of clan loyalties at public expense, and excessively overt displays of clan-based favoritism will be punished, but its existence is a central fact of doing business. As Lubin (1984, p.164) says: "Nepotism is not a crime in Central Asia. It is not favoritism for one's kinsmen; it is the natural order of things in a kinship-based society."

Significant regional differences exist in all the republics, both between different geographical regions and between urban and rural populations. For example, urban Kazakhs tend to be significantly

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1. In the Kyrgyz Republic in 1990 between ethnic Uzbeks and Kyrgyz, and in Uzbekistan in 1989 between Uzbeks and Meshket Turks.

more "russified" than their rural counterparts. Considerable disparities in economic status, wealth, and social development indicators differentiate regions in all the republics, and all provide potential grounds for political rivalry and social fissure. Indeed, the power play between opposing regional elites was a key factor in the outbreak of civil war in Tajikistan.

### *Regional Security Issues*

Central Asia has always stood at a global crossroads, from the days of the Silk Road, the "Great Game," and ever since. Today it retains its strategic importance, albeit in the changed post-Cold War world. To the north lies Russia, which however weakened remains indisputably the dominant regional power. To Kazakhstan's and the Kyrgyz Republic's east lies China, while the region's southwest flank abuts Afghanistan and Iran. As important as the relationship between the CARs themselves and their southern and eastern neighbors may be, they must deal with the deeply held Russian view that the borders of Central Asia represent the actual outer frontiers of Russia.

The conflict in Tajikistan was a specter that haunted all the other Central Asian leaders—and their peoples—as their nightmare scenario. Uzbekistan and, critically, Russia, intervened with substantial military force, and remain heavily involved to this day. Kazakhstan and the Kyrgyz Republic, while horrified by the disaster to their south, provided only token forces, while Turkmenistan has distanced itself from involvement in the regional security operation.

While the possibility of a Chinese threat to the east places pressure on the Russian psyche rather more than it concerns the Central Asian leaders, for whom China is an increasingly valuable trading partner, all have been concerned by the particular variety of militant Islam that resides to their south. Islamic fundamentalism was one element of the lethal cocktail that destabilized Tajikistan (although by no means the only culprit), while the other states, especially Uzbekistan, were braced for a rise in politically manifested Islam following independence. While Islam has been resurgent spiritually in much of Central Asia, the rise of a fundamentalist opposition that takes exception to the basic nature of the state as, for example, in Algeria or Egypt, seems not to have occurred, if indeed it was ever a real possibility. Iran seems increasingly interested in the economic benefits of cordial relations with its northern neighbors. Battlefield successes by the Taliban in Afghanistan raised blood pressures throughout Central Asia, with leaders meeting to guarantee mutual security, and Uzbekistan does not hesitate to play a more active, albeit covert, role in defending its interests in that country's conflict. Beyond the meltdown in Tajikistan, however, an acceptance of the popularity of Islam seems thus far to have been rewarded with a broad delineation between religion and politics in the behavior of the religious public.

The west of the region in particular contains vast natural resource deposits that may promise prosperity for the CARs, but their geography makes the transport of these resources, especially oil and gas, strategically problematic. Traditional transportation routes involve passage through Russia and other parts of the former Soviet Union, and Russia takes an overtly proprietorial stance toward much of Central Asia's mineral worth. Alternative strategies might include pipelines south through Iran (not acceptable to the Western powers) or Afghanistan (less than safe), across the Caspian via Azerbaijan and Armenia to Turkey (potentially risky and not favored by Russia), or even eastward through China (enormously costly). Thus to date, Russia has managed to maintain a significant amount of leverage over the exploitation of Central Asia's natural resource base.

The Central Asians are therefore unable to break many of their links with Russia, and in an uncertain world, they may not wish to do so anyway. With some notable and important exceptions, economic links to and through Russia remain important, given the time and investment required to reorientate the Soviet-era transport, processing, and production infrastructure, and Russia will inevitably remain a key market under any future scenario. Russia also remains as the CARs' strategic guarantor and as the regional hegemon whose approval or disapproval cannot be ignored lightly.

## Priorities for the Central Asian Leaders

Given the various factors and sensitivities, several commentators (for instance, Clements 1994; Olcott 1996) argue that each of the Central Asian leaders has, with the possible exception of Askar Akaev in the Kyrgyz Republic, been preoccupied with establishing control in the postindependence period. Clements (1994) identified two primary tasks that have underpinned all the other actions of Central Asia's rulers: establishing their own legitimacy in power and creating strong post-Soviet government institutions. As a result, political control and stability have carried a premium above and beyond the perceived benefits of a rapid move toward Western-style pluralism. Each of the countries differs, and could be placed on a sliding scale from more democratic (the Kyrgyz Republic) to overtly authoritarian (Turkmenistan). Nevertheless, both Akaev in the Kyrgyz Republic and Nursultan Nazarbaev in Kazakhstan, generally regarded as the two most democratic republics in the region, have not hesitated to dissolve an "awkward" parliament and to rule by decree.

In pursuit of the two central objectives, three themes are common across the CARs, albeit with differing degrees and consequences from country to country, namely:

- The centralization of presidential control
- The strong presidential control over all aspects of the executive branch of government
- The emergence of a relatively weak role for the legislature, political parties, and elected opposition groups.

For example, in Kazakhstan, following two dissolutions of parliament in less than three years, Nazarbaev has assumed responsibility for the promulgation of all legislation, while having been confirmed in office until 2000 by a referendum—what Dixon (1996) refers to as a process of recentralization. In addition, the Kazakh president's ability to determine appointments at all levels of the executive, national and local, and his active exercise of this ability leads Olcott (1995, p. 179) to go so far as to say that "this power effectively makes the entire government of the republic an extension of the President." Essentially, all the Central Asian presidents enjoy this power of appointment, both at the level of ministerial appointments and tight control of the cabinet of ministers, and at the important level of appointing *hakims*, or regional governors. The phenomenon of pervasive presidential power is at its strongest in Turkmenistan, where it has been accompanied by the growth of what some commentators have identified as a personality cult (see, for example, Anderson 1995). Subsequent paragraphs of this chapter will argue that the common theme of strong executive and presidential power across the region is of key significance to the development and implementation of health sector reform.

Even if the growth of multiparty politics and democratic opposition has been limited or openly prohibited by the consolidation of executive power, observers should not assume that the Central Asian leaders have been working against the wishes of their peoples. Public opinion surveys conducted by Lubin (1995) in Kazakhstan and Uzbekistan in 1993 suggested that substantial majorities of those interviewed were far more concerned with issues of assuring stability, maintaining law and order, and reducing economic hardship than with establishing any particular patterns of "democratic" government. With respondents stressing order above freedom and consistently backing their presidents as individuals (albeit rather less keen on other politicians and government officials), the attachment of Central Asian citizens to democratic institutions and behavior appears to remain strictly limited at present.

## Administrative and Policy Implications for the Health Sector

The general political context tends to manifest itself in health policy terms through the following interlinked mechanisms and tendencies:

- The tendency to govern by decree
- The lack of a strong and experienced national policymaking elite in the postindependence years
- The lack of a clear delineation of responsibilities for policy between ministries, agencies, and levels of government
- The problem of corruption
- The limited modernization of the medical profession
- The public perceptions of health.

### *Centralization and Government by Decree*

The trend toward increasing centralization of power by the presidency brings with it a tendency toward what might be described as government by decree: policy is formulated primarily in terms of specific decisions, which are passed down for implementation in the form of decrees, orders, or administrative instructions. Critically, the main drivers of policy may increasingly be a fairly limited group of ministers and presidential advisers, while the economic ministries (finance and economy) tend to formulate quite detailed instructions on the management of public services, such as health and education, that often override longer-term policy formulation within relevant specialist ministries. Such centralized decisionmaking does potentially offer two advantages: the ability to get rapid results and the ability to coordinate policy between sectors. However, experience in Central Asia suggests many possible pitfalls and drawbacks. For example, excessive centralization of power means that whole areas of policy may simply be overlooked or end up as backwaters if they are not high on the agenda, with the result that only crisis areas receive the attention of top policymakers.

Thus change tends to come because of crisis, and hence takes the form of crisis management. Such an environment is likely to be inimical to the development of systematic and consistent policy for long-run development and progress, and can all too easily breed flawed, poorly thought out measures that are implemented on too rapid a timetable.

A frequent problem observed in Central Asian decisionmaking is difficulty in undertaking rational prioritization, both in terms of assessing which issues require attention and in terms of setting policy priorities to guide subsequent decisions. Policymakers all too frequently see their role as making a decision and issuing an instruction to implement that decision as rapidly as possible to avoid incurring the wrath of their superiors. Policymakers sometimes appear quite reluctant to think through a policy problem from first principles, defining objectives before framing possible options for action.

### *Policymaking Capacity*

Three issues dominate consideration of the current and future health policy and bureaucratic capacity in the CARs:

- The need to graft a national policymaking tier onto the existing purely regional apparatus
- The need to develop new skills among policymakers and managers appropriate to the reform environment
- The serious problem of trying to motivate and retain good staff given the chronic problems of public sector pay and remuneration.

Savas and Ustunel consider all these issues in greater detail in chapter 14 of this volume, and focus on practical approaches to dealing with them. I will therefore discuss only one consequence (or symptom) of these problems: the tendency toward rapid staff turnover at the senior policy level.

A complaint both local policymakers and foreign partners make is that frequent changes of personnel at ministerial and senior levels make the development of consistent, long-term policy

difficult. Much anecdotal evidence supports the assertion that key personnel rotate rapidly through top positions, although quantitative data to verify this assertion are not available. However, rapid turnover seems highly plausible, given that in each country small bureaucratic cadres are struggling to furnish sufficient personnel to meet an ever expanding need for trained, capable staff.

Many reform initiatives will tend to increase the demand for good managerial and policy personnel. For example, compulsory health insurance schemes add an additional layer to health systems, while the establishment of project coordinating units and the like will divert senior staff from line management jobs, which do not disappear. These posts must be filled, creating knock-on effects as replacements that are found further down the line. The still tiny cadre of staff who have received modern training, for example, who have studied overseas, itself faces considerable demand for its services, and staff who do well in these posts will often be rapidly transferred to the next new initiative that requires their valuable skills.

The operation of patronage networks and the balancing of interests between different groups can also lead to frequent movements at the ministerial level. Ministers who have successfully started a reform process in one area may find themselves moved on to another high-priority area at short notice, and as a result may not be able to see through longer-term implementation. Finally, substantial financial incentives exist for high-caliber personnel to leave the public sector precisely because of those new skills that make them vital to the public sector: knowledge of modern management techniques, foreign language skills, and so on. No easy solutions to this problem are available, but the risks that high turnover entails must be spelled out.

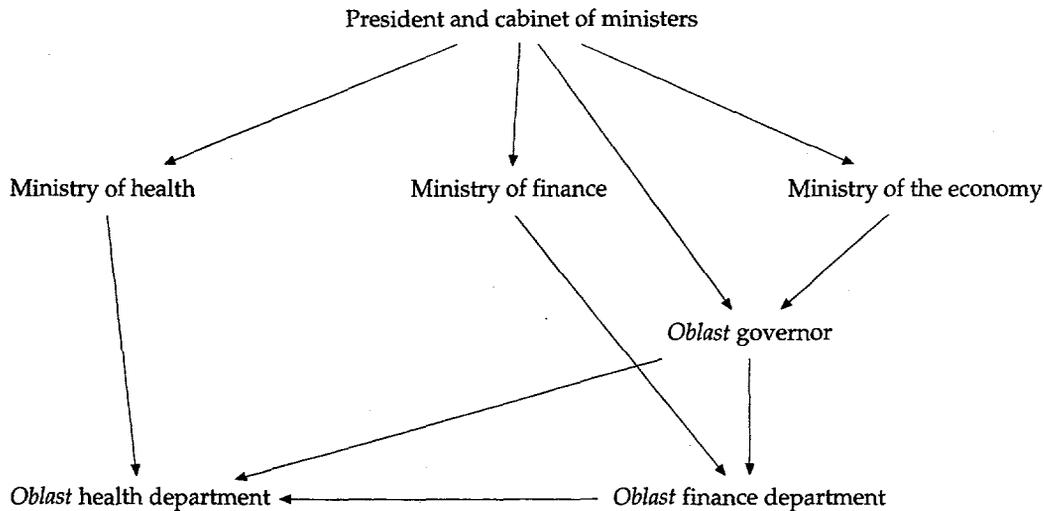
Above all, excessively rapid turnover can lead to a short-term culture. If government officials know that they will no longer be in post to see the long-term consequences of their actions, they may tend to do what reflects best upon their own situation in the short term, rather than taking the optimal long-term course of action. Long-term relationships, essential to developing an atmosphere of trust and partnership, become difficult to establish and sustain if personnel change too frequently. Excessive turnover, especially if able individuals are leaving the health sector or public service, may also lead increasingly to the appointment of staff who may not be sufficiently prepared, or, indeed capable, of taking on senior-level tasks. If this tendency exists alongside other pressures toward taking the short-term view, successful long-term policy development and implementation can come under threat.

### *Delineation of Responsibilities*

Despite its image as a cohesive, centralized, chain of command structure, the post-Soviet managerial structure for health care in Central Asia is less clear-cut than it appears at first sight. Dixon (1996, p. 94), in discussing government in Kazakhstan, suggests that a certain "vagueness on questions of competence" is apparent throughout that country's political and administrative system, an observation that also seems valid in the other CARs. In health policy, such a lack of clarity can stem from a number of sources. The broadly similar pattern of central-regional government relations in each CAR creates competing transmission routes from the center to local providers for health policy, which figure 7.1 attempts to illustrate in diagrammatic terms.

Typically, the ministry of health cannot be said to be responsible for allocating and distributing more than a minority of health care resources. The ministry of finance generally distributes a significant portion of health resources directly to *oblast* administration finance departments, who raise further resources from local taxes. This arrangement clearly raises the possibility of conflict over priorities between health and finance ministries, and suggests that technical health policies, formulated in ministries of health, could fall foul of those who hold the purse strings. *Oblast* governors possess significant financial autonomy over the allocation of their budget between sectors at the local level, and their actions may undermine national policy initiatives developed in ministries of health. They are also responsible to the president

Figure 7.1. Health Policy Transmission Routes



Source: Author's research.

directly, and subject to direction from key reform ministries, such as the ministry of the economy, which again may cut across specific health policies, for instance, if pressure is being exerted to privatize or dispose of public sector assets.

The strength of policy coordination at the cabinet of ministers level will dictate the extent to which this institutional fragmentation becomes a problem. The existence of policy coordination mechanisms (such as project coordination units) cannot guarantee clarity of action and consistency of response. Both a genuine spirit of cooperation and, wherever possible, the simplification of policy mechanisms, are also required. Nevertheless, given the relative complexity of the system, unforeseen responses to policy initiatives, or even simple evasion, will inevitably occur sometimes. For example, a key problem in the first year of operation of Kazakhstan's Compulsory Health Insurance Fund arose simply because *oblast* governors chose to transfer substantially less money from their *oblast* budgets to their local insurance fund branches than had originally been agreed, and neither the fund nor the Ministry of Health could force them to increase their contributions. Significant clarification by staff at presidential and Ministry of Finance levels was required to rectify the situation, leaving the fund dramatically short of revenues for several months.

Different ministries may have different priorities for the health sector. While ministries of health might be concerned with technical and managerial reform, others might see the overriding priority of health policy in more generalized terms. For example, the ministry of the economy may see privatization and cost-sharing through user charges as overriding themes in all sectors, just as the finance ministry might see reducing public expenditures or shifting health expenditure off public balances as overriding all other considerations.

Ambiguity concerning responsibilities and powers can lead to a further problem that involves the culture of decisionmaking. An environment of uncertainty about responsibility and authority to decide and act can lead to inertia. A pervasive problem of the Soviet administrative structure was its tendency to stifle initiative and innovation at local levels. Efforts to change the mentality of managers and workers began in the *perestroika* era, with efforts to inculcate the value that "everything which is not prohibited by law is permitted" (White 1994). Continuing fragmentation of institutional responsibilities can only undermine efforts to encourage innovation, and will perpetuate a culture in which managers are prone to say "it's not our place to decide," as indeed might excessive central dominance of policy implementation.

### ***The Impact of Corruption***

Corruption is a charged and awkward issue, but one that any discussion of public administration in the former Soviet Union cannot avoid. Both the public and governments in Central Asia perceive corruption as pervasive and problematic. The potential for corruption to affect the health sector is large (albeit it is less fundamental a problem than in other sectors of the economy), ranging from the generalized phenomenon of under-the-counter payments, to kick-backs from privatization and procurement, to the potential of the growing illegal drugs trade in the region to damage health.

Unofficial payments to health providers have long been the norm in Central Asia, and are virtually universal. Gleason (1995) highlights the extent to which one might question whether such side payments even constitute corruption rather than a rational economic exchange. Certainly, few would realistically expect many public health care workers to survive solely on their official salaries. Furthermore, if the governments' aim is to eliminate such payments, policy mechanisms exist that can achieve this objective more or less effectively. Most important, the authorities can combine improved remuneration of professionals sufficient to compensate them for the loss of unofficial income with more effective punitive measures, but success, inevitably, depends on finding sufficient resources within public finances to provide adequate remuneration. Given the current state of public sector resources, even when additional revenues from sources such as compulsory health insurance are included, the phenomenon of additional payments seems unlikely to disappear in the near future.

In those CARs in which widespread privatization of state industrial enterprises has occurred, the transfer of firms and assets from public to private ownership has provided myriad opportunities for the misappropriation of wealth. As yet, the privatization of health facilities has occurred only on a minor scale. If any of the CARs do adopt privatization strategies, one can only hope that they have learned lessons as to how to reduce the incentives and opportunities for self-enrichment at the public's expense. Indeed, some segments of the public virtually expect those involved in reform to be "in it for the money." The introduction of compulsory health insurance in Kazakhstan, for example, has been surrounded by grumbling about corruption and rake-offs. No evidence has ever been produced, but many people assume that the simple concentration of money in such quantities can only lead to criminality. Such an atmosphere generates significant problems for the motivation and reward of those honest public servants whose functions bring them into contact with large sums of money.

More pessimistically, the growing illegal drug trade in Central Asia may have significant long-term implications for the health sector, while not involving corruption within the actual health sector. Experience from around the world, for instance, Colombia, suggests that both drug use and drug-related violence can become important sources of ill-health and death. If violent crime grows, it will add yet another pressure to the list of avoidable drains on health care resources in the region.

### ***The Medical Profession***

A critical actor in the health policy field is, of course, the medical profession. They more than any other single group can facilitate or block the reform process, as it is they who must deliver change at the point it affects individual patients. A core difficulty in Central Asia has been the extent to which the medical profession remains locked into obsolete Soviet models of practice and organization. Methods and protocols of treatment have often remained essentially unchanged for 20 years or more, entrenched and amplified in unchanged patterns of medical education and training. These protocols of care, however, provide the building blocks of the health care system, and if they remain static, then macrolevel progress becomes effectively impossible. The lack of a culture of free exchange of information on the one hand, and the

abrupt sundering of the traditional upward links to Soviet research institutes and centers of excellence in Moscow on the other hand, each made the likelihood of modernizing clinical practice even more remote. However, a growing enthusiasm for change and learning can now be detected among some doctors in the region, where previously they had distrusted foreign methods and resented the reduced status of post-Soviet medicine.

### *Health as a Public Issue*

Little can be said about the importance of health issues in terms of public political participation or expression, as this is an area in which evidence and analysis are largely absent. The sort of opinion poll results cited earlier seem to suggest that the public does not necessarily regard health as a key priority, and hence it does not tend to become an issue of "high" politics. Perhaps because health reform has resulted in less drastic change than reform in many other areas of economic and social policy, it has been eclipsed as a critical political issue by other, more immediate social needs, such as employment, income, housing, and prices.

### **The Outlook for the Future**

Observers have argued that the leaders of the CARs that have remained fundamentally peaceful and stable since independence have worked to ensure stability through firm central (presidential) control of the institutions of government and politics. They have, thus far, succeeded, but their success may bring with it certain side-effects with implications for the long term. The paradox of the coexistence of strongly centralized decisionmaking with a fragmented implementation apparatus runs the risk of stifling initiative and breeding "short termism" among policymakers and managers. In particular, the tendency to make policy decisions at a high level will need to be relaxed somewhat in the case of health care. An ability to discuss and frame long-term priorities (rather than decisions), while allowing greater leeway in technical implementation is essential in health policy. However, the wholesale decentralization of policy and decisionmaking power is unlikely in the CARs in the near future.

Looking further ahead, however, certain commentators see another, perhaps far more profound, wave of change for Central Asia as inevitable. Olcott (1996) argues that "All the current regimes represent a pro-Soviet past more than they do a post-Soviet future; as such, they all face a high likelihood of being pushed aside." Her thesis is that a process of elite transformation is already under way, which within a decade or so will replace the current transition leaders with a far more nationally-oriented group of younger leaders and policymakers. At one level, this is undeniable; the passage of time will bring to prominence a new generation with little or no direct experience of Soviet-era politics and administration. The speed with which they supplant current elites and regimes is, however, more open to question, if current leaders have achieved a good deal of success in establishing their political legitimacy and control. Significant elite transformation may, paradoxically, have only a limited impact on health reform, given the relatively low ranking of health and health care on the agenda of both politicians and the public. If the region's leaders—whatever their stripe—do not see fit to address the problems of centralization and fragmentation that currently restrict the development of sound, consistent health policy for long-run development, the path toward improved health and health care may remain long and arduous.

### **References**

- Anderson, J. 1995. "Authoritarian Political Development in Central Asia: The Case of Turkmenistan." *Central Asian Survey* 14 (4): 509–527.
- Clements, P. 1994. "Prospects for Political Pluralism in Central Asia." In C. R. Saivetz and A. Jones, eds., *In Search of Pluralism: Soviet and Post-Soviet Politics*. Boulder, Colorado: Westview Press.

- Dixon, A. 1996. Kazakhstan: "Political Reform and Economic Development." In R. Allison, ed., *Challenges for the Former Soviet South*. Washington, D.C.: Brookings Institution Press.
- Gleason, G. 1995. "Corruption, Decolonisation, and Development in Central Asia." *European Journal on Criminal Policy and Research* 3 (2): 38-47.
- Hyman, A. 1996. "Post-Soviet Central Asia." In R. Allison, ed., *Challenges for the Former Soviet South*. Washington, D.C.: Brookings Institution Press.
- Lubin, N. 1984. *Labor and Nationality in Soviet Asia*. Princeton, New Jersey: Princeton University Press.
- \_\_\_\_\_. 1995. "Leadership in Uzbekistan and Kazakhstan: The Views of the Led." In T. J. Colton and R. C. Tucker, eds., *Patterns in Post-Soviet Leadership*. Boulder, Colorado: Westview Press.
- Olcott, M. 1995. "Nursultan Nazarbaev and the Balancing Act of State Building in Kazakhstan." In T. J. Colton and R. C. Tucker, eds., *Patterns in Post-Soviet Leadership*. Boulder, Colorado: Westview Press.
- \_\_\_\_\_. 1996. *Central Asia's New States*. Washington, D.C.: United States Institute of Peace Press.
- White, S. 1978. "Communist Systems and the 'Iron Law of Pluralism'." *British Journal of Political Science* 8 (1): 104.
- \_\_\_\_\_. 1994. "Pluralism, Civil Society, and Post-Soviet Politics." In C. R. Saivetz and A. Jones, eds., *In Search of Pluralism: Soviet and Post-Soviet Politics*. Boulder, Colorado: Westview Press.
- World Bank. 1996. *World Development Report: From Plan to Market*. Washington, D.C.



**Part III**  
**Experience of Implementing**  
**Health Sector Reform**



# 8

## *Trends in Health Reform in Kazakhstan*

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The worsening position of the health sector has necessitated reform of health services and financing. The aim has been to develop an evidence-based strategy that reflects the new economic conditions in Kazakhstan, while avoiding excessively radical "pseudo-market" changes. Policymakers believe that building upon the many positive aspects of the health system developed during the Soviet era is particularly important. Health sector reform is an extremely complicated task that should be evolutionary in nature and that will inevitably depend heavily on the outcome of the current economic transformation.

### **Health Care Infrastructure in Transition**

As in the other Central Asian republics, in Kazakhstan the Ministry of Health and other ministries and agencies deliver health care through a provision system organized in tiers as shown in table 8.1. Table 8.2 shows the types and numbers of different types of institutions involved in care provision.

**Table 8.1.** *Levels of Health Care Provision*

<i>Level</i>	<i>Services</i>
I	<i>Feldsher</i> posts (doctors' assistants and obstetric centers)
II	Rural doctors' division, including rural outpatient clinics and rural district hospitals
III	Central <i>raion</i> (district) hospitals
IV	Urban and <i>oblast</i> hospitals
V	National centers and scientific and research institutes

**Table 8.2.** *Institutions Delivering Care as of January 1, 1996*

<i>Type of institution</i>	<i>Number</i>
<i>Inpatient facilities</i>	
Research institute	10
<i>Oblast</i> hospital	36
Maternity hospital	44
Emergency centers	47
Specialist dispensary	199
Central <i>raion</i> hospital	219
Emergency aid post	279
Rural district hospital	684
<i>Outpatient facilities</i>	
Rural outpatient clinic	1,365
<i>Feldsher</i> post	6,161

Source: Author's research

In addition, the Ministry of Health provides 1,518 hospitals with a total of 187,600 beds and other ministries and sectors provide 131 hospitals with a total of 17,200 beds.

The profound macroeconomic difficulties that Kazakhstan has faced since its independence dominate the operation of the country's health care infrastructure. Until the end of 1995, health care financing continued to be based on traditional norm-based mechanisms, but in the last three or four years, the available financing has represented only about one-third of the level needed according to such norms.

During this period, the structure of health expenditures has changed dramatically. Salaries and wages decreased from 50 to 55 percent of total costs to only 25 percent by 1995, while expenditures on utilities (power, heating, and so on) increased from 7 to 8 percent of total expenditure to 45 to 50 percent. The acute funding shortage has not only halted all development work, but has increasingly resulted in rapid deterioration of the physical condition of health infrastructure. Buildings are unsuitable, neglected, and frequently dilapidated, while preventive maintenance and repairs have effectively ceased.

In parallel to these problems, the impacts of socioeconomic transition on the population's health have been profound and negative. Population growth has slowed sharply in all *oblasts*, while average life expectancy has fallen significantly for both men and women, reversing 35 years of improvement. In 1995 average life expectancy was 60.7 years for men and 71.1 for women, a decrease of 3.1 years for men and 2.0 years for women since 1990. Fortunately, infant mortality rates have continued to fall, but still remain high at 26.1 per 1,000 live births. Meanwhile, various surveys have indicated increasing morbidity and a rising incidence of chronic disease and disability.

#### ***Reform of the Health Sector: Key Issues***

In August 1994 the Ministry of Health identified strategic directions for health reform over the next five to ten years. Policymakers developed concrete measures to implement reform during 1996–98 as part of the medium-term Government Program on Deepening Reforms and identified the following key areas of reform:

- Improving the management and organization of health care and human resources
- Reforming health financing and economic relationships within the health sector
- Improving the quality of health care
- Developing the medical supply and pharmaceutical industries
- Developing biomedical science.

#### ***Improving the Management and Organization of Health Care and Human Resources***

Transforming the management system is one of the most important components of successful health sector reform. The main reforms in Kazakhstan are intended to achieve a sensible degree of decentralization, to delegate key decisionmaking powers to the local management level, to enhance local managerial responsibility, and to grant legal and economic autonomy to provider organizations. Shifting managerial relationships from a system of vertical subordination to one of economic relationships between equals will be accomplished by contracts between market units, for instance, providers, health departments, compulsory medical insurance funds, and employers. The tiered structure of health provision will remain the same, but management relationships within and between levels will undergo radical changes. The Ministry of Health will play an increasing role in assuring health care quality; accrediting and licensing providers; and developing a framework for economic relationships between actors, regardless of ownership. Changes in health care employment policy are also required, both in terms of remuneration and incentive mechanisms and of the system of medical education and training, which does not meet the needs of a market economy.

The objectives of health management and employment reform are therefore as follows:

- To transform the education and training system to a more economic basis and to reorient it toward international standards
- To limit the number of staff employed in the health care system and to increase the efficiency of resource use
- To reorganize the mechanisms for managing health care personnel.

### *Reforming Health Financing and Economic Relationships*

As Kazakhstan moves further away from comprehensive state control of the economy, centralized financing of the health sector will be less consistent with economic conditions. The goal of financing reform must be to provide for the stable functioning and development of the health sector. This requires introducing compulsory medical insurance and encouraging mixed sources of financing, introducing economic methods of managing health service providers, encouraging competition and the possibility for consumers to choose doctors and health institutions, developing various forms of ownership, and implementing a program to privatize health care provision.

The implementation of compulsory medical insurance has already begun. Not only will this help tackle the problem of financing, but will also increasingly make employers and state agencies responsible for their employees' health and individuals responsible for maintaining their own health and that of others. Health will be placed in direct relation to the costs that poor health incurs to society, and economic incentives to promote good health will emerge.

Prior to national implementation of compulsory medical insurance, the authorities conducted a pilot in four *oblasts*: Kokshetau, South Kazakhstan, West Kazakhstan, and Zhezkazgan. Changes made as a result of the pilot included reorganizing the management system and introducing new provider payment mechanisms that take the volume and quality of activity into account. Policymakers have developed an administrative and legislative framework for medical insurance, licensing, and assessing provider quality, and have put in place a temporary framework for the financial relationships between providers and medical insurance bodies. Pertinent personnel training was conducted, and public awareness campaigns were launched.

The pilot programs exhibited specific achievements and peculiarities in each of the four *oblasts*. For example, in Zhezkazgan a quality monitoring system was developed, in West Kazakhstan the pilot emphasized the application of health insurance mechanisms to rural providers and the collection of contributions from rural populations, and in South Kazakhstan a system of voluntary medical insurance was piloted.

The health insurance experiments have fundamentally changed the basis for financing health care by introducing the principle of payment for work done. While compulsory medical insurance cannot substitute for state financing of health care, it will serve as an additional, parallel source of funds to protect the public's health. State financing will increasingly focus on those services that address the most important social aspects of health care.

Reform of health care financing is intimately related to the introduction of improved methods of economic management of health services at all levels. Thus introducing a market for medical services and encouraging competition between health care providers is necessary. The main effort in this area is directed toward promoting different modes of ownership and privatization and reducing state involvement. More than 50 privately owned organizations, which mainly offer outpatient care, have emerged in recent years. However, to date the range of services they offer is small, and the quality of service is generally not much better than that of state facilities.

Given current conditions, a radically new approach to health financing is required, which will be accomplished by introducing compulsory medical insurance and per capita reimbursement of providers. Capitation financing will improve the efficiency of resource allocation and provide incentives to providers. The Ministry of Health is currently formulating a precise capitation methodology.

The introduction of compulsory medical insurance will also provide an opportunity to mobilize more resources for health care. In addition to transferring resources from the Ministry of Health to the Compulsory Medical Insurance Fund, an additional sum of 20 to 25 percent of the total health budget will for the first time be collected from employers in the form of insurance contributions. Nonetheless, the budgetary situation of the health sector remained critical in 1996, with only 40 percent of the sector's estimated finance needs being met.

### *Improving Health Care Quality*

Improving the quality of health care, including the technology used in health care delivery, is essential. Key elements of reform in this context are to provide people with timely care provided by appropriately qualified medical personnel at all phases of health care, to raise the population's health status, to reduce maternal and infant mortality and morbidity, and to increase the duration of active life. Critical tasks that policymakers must address to achieve these goals are as follows:

- Reduce bed capacity and inappropriate and irrational bed use
- Reorganize the operation of hospitals at all levels by establishing departments of intensive care, neonatal care, and ambulatory surgery and introducing day hospitals
- Strengthen emergency and primary health care, especially maternal and child health services
- Introduce quality standards for health care delivery
- Develop and strengthen the medical supply and pharmaceutical industries to ensure that health care providers are properly equipped and stocked.

New organizational forms have emerged in recent years, including family doctors, ambulatory surgery centers, day hospitals, and neonatal care departments. Eleven diagnostic centers have also been established to improve the quality of diagnostic services available to rural populations.

### *Developing Biomedical Science*

Kazakhstan has considerable potential in certain areas of biomedical science, but in some fields lags far behind international standards. Areas of research that are lagging are allergies, endocrinology, pediatrics, microbiology, epidemiology and infectious diseases, traumatology, biochemistry, pharmacology, and neurology.

Long-term changes are required in the approaches to scientific research. The state budget should remain a primary source of funding for biomedical research, but in addition, research contracts should be awarded on a competitive basis. Independent income generation by scientific institutes and medical schools through contracts with private and nonstate organizations will be permitted.

### **Conclusion: Obstacles to Success**

In the course of implementing health sector reform, policymakers, health workers, employees of compulsory medical insurance entities, and all other interested parties should work with the government to ensure that obstacles, inefficient structures, and expensive transitional measures do not overwhelm the health sector. An analysis of the progress of health reform in Kazakhstan to date indicates that the following obstacles are impeding the successful implementation of reform:

- The continued economic crisis and its negative effects on the social sector
- The low priority of the health sector on the agenda of state authorities
- The inadequate development of optimal reform concepts and measures and of modern management techniques
- The shortage of specialist personnel able to devise and implement large-scale financial and economic reform in the health sector at both the national and institutional levels.



# 9

## *The Rationalization of Health Care Infrastructure in the Kyrgyz Republic*

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The collapse of the Soviet Union left each of its constituent republics to face its problems alone. As a result, to address the critical need for health care reform the Ministry of Health of the Kyrgyz Republic requested assistance from the European Office of the World Health Organization. In 1994 a memorandum of understanding established the "Manas" plan on fundamental health reform. The Manas plan seeks to develop short-, medium-, and long-term strategies for health care reform, while improving managerial capacity in the health system at both the national and regional levels. Implementation of the Manas plan is now well under way, with significant assistance from several international organizations.

### **The Health Reform Framework in the Kyrgyz Republic**

The following principles have been developed and adopted to guide the process of health reform in the Kyrgyz Republic:

- To improve the population's health
- To reduce and eventually eliminate regional disparities in the population's health status
- To guarantee access to high-quality, effective health care
- To make people responsible for their own health, but to respect and protect their rights as patients.

### *The Short-Term Strategy (1995–96)*

The main goal of the short-term strategy was to identify ways to increase the effective use of resources. Its key elements included transforming many rural hospitals into primary care facilities; modernizing various specialist facilities, including those for treating tuberculosis, sexually transmitted diseases, and cancer; rationalizing the use of primary care facilities; and training doctors, nurses, and paramedics, including training doctors in how to establish a general practice.

### *The Medium-Term Strategy (1997–2000)*

In the medium term, the key reform goals are as follows:

- To implement new mechanisms to increase the resources available to the health sector
- To establish a system for national allocation of financial resources
- To give higher priority to primary care relative to other services
- To allow hospitals to manage their own resources, and thus allocate resources more effectively at the local level
- To provide training for general practitioners and nurses.

Changes in support of these initiatives have included increasing the Ministry of Health's control of the health care budget to allow more effective prioritization, introducing selective taxation and user fees, implementing more equitable mechanisms for resource distribution, and granting hospitals greater autonomy in resource allocation and internal management.

### *The Long-Term Strategy (2000–2005)*

In the longer term, health care reform will have the following goals:

- To increase the quality and effectiveness of health care delivery through structural change
- To categorize health care institutions as purchasers and providers within the health care financing structure
- To introduce compulsory medical insurance
- To increase patient satisfaction through improved service availability and quality.

### **Structural Rationalization of Hospital Services**

In the short term, the rationalization of health services is a critical objective, particularly the restructuring of hospital services, which represents a key source of potential savings. As table 9.1 shows, bed utilization in hospitals has been falling in recent years, a clear indication of surplus bed capacity.

In 1994, a survey of village hospitals found that 25 percent of beds were occupied for less than 210 days per year (57.5 percent occupancy) and 45 percent were occupied for less than 270 days (73 percent occupancy). During 1990–94 the average length of stay increased from 14.9 days to 15.4 days. Clearly a significant and urgent problem of irrational bed use needs to be resolved, especially given that 75 percent of the total health budget is spent on hospital services. As a result, rationalization efforts during 1996–97 concentrated on reducing, amalgamating, and closing surplus facilities.

Because of the ineffective levels of utilization, the initial focus of rationalization under the short-term strategy was to reduce hospital capacity at the village level, followed by rationalization of specialist, national, and research institutions. Village hospital rationalization was to be guided by the following criteria: range and quantity of medical services provided, distance from central *raion* or other village hospitals, road conditions and accessibility, number of beds, and number and type of staff. The rationalization of village hospitals has involved their categorization into three groups:

- No change (85 hospitals with 2,752 beds): would remain open without bed closures because of their significant distance (45 to 60 kilometers) from central *raion* hospitals

**Table 9.1.** *Bed Utilization, 1990 and 1994*

<i>Type of hospital</i>	1990		1994	
	<i>Occupied bed days</i>	<i>Percentage occupancy</i>	<i>Occupied bed days</i>	<i>Percentage occupancy</i>
Oblast hospitals	321	87.9	298	81.6
Central <i>raion</i> hospitals	294	80.5	268	73.4
Village hospitals	290	79.4	246	67.4
National hospitals	311	85.2	269	73.7
National average	300	82.2	278	76.1

*Source:* Staff data.

- Remain open with bed reductions (22 hospitals): while these hospitals would stay open, the number of beds would be reduced from a total of 1,279 to 730
- Transformed into primary care facilities only (57 hospitals): all 1,563 beds would be eliminated.

The planned reorganization would have led to a reduction of 1,928 beds, with a projected saving of KGS12.8 million at 1994 prices. By the end of 1995, however, only 1,210 village hospital beds had been eliminated, saving some KGS8 million.

Nevertheless, the overall reduction in hospital beds nationwide has been significant, with major reductions not just in village hospitals, but in all types of hospitals. Between 1990 and January 1, 1996, the authorities had closed 13,897 hospital beds across the country, a reduction of 26.4 percent. At the *oblast* level, the reduction varied from 20 to 55 percent of beds closed. As a result, the ratio of beds to population was reduced from 118.9 beds per 1,000 population in 1990 to 86.9 beds per 1,000 population in 1996.

### Improving Primary Health Care Services

Today, only some 15 percent of total health care financing is allocated to primary care services. As a direct result of this underfinancing, primary care services tend to refer patients to hospitals even when they could easily have been treated more cost-effectively in an ambulatory care setting or at home. The current system also fails to provide appropriate incentives for health professionals to function effectively.

Therefore, the key element of health reform in the longer term will be the improvement of primary care services. Table 9.2 shows the extent of provision of primary care services in rural areas. In urban areas primary care is provided through adult and children's polyclinics, with larger numbers of staff than in rural areas.

The existing primary care infrastructure represents a valuable inheritance. Following reorganization, the infrastructure will continue to provide the key elements of primary care, as designated by the World Health Organization, namely:

- Medical care, including diagnosis, treatment, and rehabilitation
- Health promotion, including family planning, immunization, epidemiological surveillance and control, and maternal and child health care
- Prophylactic activities, for example, in preschools, schools, and workplaces
- Environmental health protection through the sanitary-epidemiological service.

Existing primary care services will be reorganized into stronger centers of primary medical and sanitary care. These centers will be independent institutions, with control over their own funds that are expected to bring about the following benefits:

- To improve the quality of medical care through incentives to staff and provider organizations
- To increase levels of training and qualification among staff and to enhance understanding between those working in different specialties

**Table 9.2.** Primary Care Services in Rural Areas, 1996

Type of facility	Number	Percentage of total population covered	Ratio of paramedical staff to population
Feldsher station	852	24.2	1:721
Outpatient clinic	124	13.8	1:3,087
Village hospital	161	15.6	1:721

Source: Staff data.

- To provide general medical services by means of family practices
- To increase medical productivity
- To reduce inappropriate hospitalization
- To reduce referrals to specialists
- To improve the continuity of care.

At the same time, the introduction of a system of payments based on fixed rates will provide incentives to reduce hospitalization, increase the number of patients treated, and save resources, leading to the natural reduction of surplus hospital capacity.

From the point of view of the general public, the reorganization of the primary care system into centers of primary medical and sanitary care will bring the following benefits:

- Better access to health care providers
- Improved quality of care, and independent assessment of the quality of health care
- Abolition of waiting lists for those requiring examination, consultation, or hospitalization
- Provision of a guaranteed level of basic health care free of charge
- Institution of a fair system of payments for medical care beyond the guaranteed level.

To achieve these results, practical answers must be found to two key policy questions—the introduction of capitation funding and the transfer of funds to centers of primary medical and sanitary care to allow their separation from the hospital sector. Clearly, a suitable legislative and regulatory framework will have to be developed to support this process of change.

Ahead of this general reform of primary care, however, the authorities have launched a pilot to experiment with several of the proposed changes in Bishkek and Issyk-Kul *oblasts*. Specialist polyclinic departments have been combined, and the training of general practitioners began in November 1995 (a 2-year course with 33 physicians enrolled). A training course for primary care nurses commenced in 1996. In two *raions* of Issyk-Kul Oblast, groups of family doctors have been formed who work in former outpatient clinics. Following a public awareness campaign, residents were offered a choice of which group they could join. The association of family practitioners has conducted major renovations and improvements and has equipped family practice premises. Note, however, that the pilots in Bishkek and Issyk-Kul have taken place under the current national financing system, so that new incentives and salaries have not been available for general practitioners. Given that a new incentive structure is not yet in place, it is too early to evaluate the success of the pilots.

### **Lessons of the Reform Process**

Certain lessons from the experiments with health care rationalization and reform can be identified. The authorities soon realized that reducing the number of hospital beds without a corresponding move out of a building and reductions in the number of staff allows a reduction only in variable costs, as all fixed costs remain unchanged. Because they had not appreciated the importance of closing entire sites or buildings and cutting back on staff, the first phase of the hospital rationalization plan did not realize any substantial savings. This mistake has now been rectified.

However, empty facilities create a problem if an alternative use cannot be found for them. While they can add value to the health sector through, for example, lease to the private sector, conversion into staff accommodation, privatization, or transfer to charitable uses (orphanages and so on), such options tend not to be available in rural areas.

A third key problem involves the difficulties of redundant medical and paramedical personnel.

Examples from Issyk-Kul illustrate the kinds of mistakes and problems that arose in connection with the rationalization of health care infrastructure. The city hospital of Karakol, the main city in the *oblast*, had 100 beds and only two departments, therapy and neurology. In 1995 the number of beds was reduced by 30. This freed up one building, into which an ambulance station was moved,

while the building previously occupied by the ambulance station was leased to a medical practitioner. Of the remaining 70 beds, 20 were used as a day care unit. In 1996 all 70 beds were to be closed, and the central *oblast* hospital was to take on additional inpatient activity to compensate. The buildings thus released are to be used for staff accommodations or leased to private businesses.

In the *raion* of Ak-Sui as a whole, the 1995 reorganization led to the elimination of 27 medical posts, 75 paramedics, 50 nurses, and 28 other staff. Table 9.3 shows some of the changes made.

The reorganization in the *raion* of Tup (table 9.4) allowed a total reduction of 38 staff posts.

**Table 9.3.** *Changes in Ak-Sui Raion, 1995*

<i>Facility</i>	<i>Change</i>
Central <i>raion</i> hospital	30 of 165 beds transferred to day care unit
Village hospital, Karakol	5 of 30 beds closed, but no reduction in costs (variable or fixed) was achieved
Village hospital, Boz-Uchuk	25 of 45 beds eliminated
Village hospital, Enilshek	5 beds transferred to day unit
Bone tuberculosis sanatorium Svetlyi Mus	Closed in 1994, buildings used to set up a drug and alcohol treatment center and for staff accommodation

*Source:* Ministry of Health, Kyrgyz Republic.

**Table 9.4.** *Changes in Tup Raion, 1995*

<i>Facility</i>	<i>Change</i>
Central <i>raion</i> hospital	60 of 265 beds eliminated, 5 beds transferred to day unit
Village hospital, Michailovka	Transformed into ambulatory clinic with 5 day beds
Village hospital, Kuturgu	Transformed into ambulatory clinic with 5 day beds
Village hospital, Santash	20 of 30 beds eliminated
Village hospital, Ak Bulak	5 of 15 beds eliminated
Village hospital, Taldu-Sulu	15 of 40 beds eliminated, 10 other beds transferred to day care unit

*Source:* Ministry of Health, Kyrgyz Republic.



# 10

## *Health Care Policy and Strategy during the Transition Period in Tajikistan*

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Tajikistan embarked on health sector reform immediately following independence in September 1991, but the rapidly deteriorating economic situation slowed progress. Between 1991 and 1995, industrial output declined by 60 percent, while inflation spiraled to 2,200 percent in 1993, 350 percent in 1994, and 400 percent in 1995. Estimated annual per capita income stood at US\$350 in 1994, down from US\$480 in 1992. Declining output and a strained state budget inevitably had adverse social and economic consequences for the population and a negative impact on the entire health care system.

To find a way out of economic crisis, the government took decisive action in 1993 in the form of a systematic economic reform program that seeks to bring about a transition to a socially-oriented, diversified, and competitive market economy. The first phase of economic reforms sought to address property issues, the legal framework, economic restructuring, and privatization; a second phase will consolidate the institutional base of the market economy; and a third phase from 2000 onward will focus on developing and upgrading the economy.

### Economic Transition and Health Sector Reform

The state health care budget for 1996 was Rub 2,048 billion (US\$6.83 million), equivalent to 9 percent of public expenditures and an estimated 6.5 percent of gross national product. In 1996 per capita public health expenditure was Rub 359 rubles (US\$1.20). Revenues for the health budget come from both the central (25.9 percent) and local (74.1 percent) government budgets. In 1995, 75.6 percent of total health expenditure was financed from the state budget; a further 1 percent was raised from user fees; and external financing (humanitarian aid and so on) from international, bilateral, and nongovernmental organization donors amounted to 23.4 percent of total expenditure. The financing available in 1995 was still insufficient to fully fund the operating costs of the health sector.

The Ministry of Health has developed a phased reform program for the health sector, including restructuring and decentralizing control, introducing a system of self-financing in health care, implementing new approaches to professional education and training, and strengthening the legal framework relating to health care. The ministry is reallocating resources to strengthen primary health care, planning privatizations in health care, and strengthening drug supply and disease control policies.

The legislative basis of the health care sector in Tajikistan has been strengthened in various ways, namely:

- The new constitution gives all citizens the right to receive free health care from state medical institutions.
- Health care laws passed since 1993 include legislation on blood donation and composition of blood products, AIDS prevention measures, and sanitary and public health measures.

- Draft legislation has been prepared on health care reform, medical insurance, psychiatric care, and pharmaceuticals. The draft law on health care reform envisages, for the first time, the creation of a mixed economy of health care provision that includes health care provision by the public and private sectors, by cooperatives, by employee collectives, and so on. The draft law on medical insurance provides for both voluntary and compulsory health insurance. The government will create both a compulsory health insurance fund and a health care fund. The latter will finance the following activities:
  - Implementing priority health care programs
  - Training and retraining personnel
  - Carrying out scientific research
  - Renovating, rehabilitating, and upgrading facilities
  - Financing emergency health care services to control communicable and infectious diseases and epidemics and to take responsibility for health care during natural disasters
  - Redistributing funds among regions to equalize the availability of resources.

In 1994 and 1995 the total number of hospital beds in Tajikistan decreased by 20 percent, with a further 10 percent reduction during 1996. Future reform efforts will include increasing use of user fees and self-financing services, private medical practice, privately run facilities, and voluntary health insurance. A professional association for nurses has been established and professional education and training is being reorganized.

Tajikistan's plentiful natural resources mean that the development of a domestic pharmaceutical industry is possible. Four pharmaceutical and medical supply plants are under construction, and a joint Tajik-Indian venture began producing pharmaceuticals in 1995.

The authorities have placed high priority on combating infectious diseases, drawing on the recommendations of the World Health Organization, the United Nations Children's Fund, and other international organizations. The particular areas of focus include women and children's health, reproductive health, respiratory disease, diarrheal diseases, breastfeeding, and iodine deficiency.

They have also taken steps to reform and upgrade the conduct of biomedical science and research, including training and the establishment of research priorities. Only high-quality research into priority health problems will receive funding.

Finally, a national health policy has been developed following the recommendations of the World Health Organization's Regional Office for Europe. While health care reform is important for improving the health of the people of Tajikistan, health care is only one of many factors that affects health status, and the Ministry of Health will strive to develop health policy that also addresses lifestyle issues and the social and physical environment.

# 11

## *Implementing the State Program on Health in Turkmenistan*

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Turkmenistan's existing health care system has not met the essential needs of the populace and fails to provide for each citizen's right to health care. As a result, in July 1995 the president announced a new state health program that is based on a series of fundamental reforms to health care, including

- Improving health care management
- Introducing voluntary state medical insurance
- Changing to a system based on family practitioners
- Strengthening primary care
- Strengthening preventive and public health activities
- Improving the health infrastructure and rationalizing bed capacity
- Strengthening and modernizing health care logistics and equipment
- Developing a domestic pharmaceutical industry
- Improving professional education and training.

Reform of the health management system will require integrating horizontal and vertical organizational structures and clarifying the responsibilities of different agencies. The authorities have undertaken various organizational steps to support the reform program, including consideration of establishing new standards, developing a personnel training system, differentiating the management responsibilities of state agencies, decentralizing management and decisionmaking, and developing management information systems.

### **Making Insurance Available**

Since January 1, 1996, voluntary state medical insurance with a fixed premium of 4 percent of income has been available to all citizens of Turkmenistan. Insured citizens have access to a range of benefits, including a 90 percent discount on drugs at state pharmacies, a 25 percent discount on dental treatment, free planned hospitalization, and a choice of family practitioner. The current level of coverage is 1.3 million people (excluding dependents), out of a total population of 2.1 million people.

### **Introducing Family Practice**

A key objective is the gradual transformation of primary care services into a family practitioner-based service, along with a general strengthening of primary care services to improve reliability, effectiveness, and accessibility. The introduction of patient choice of physician and of better continuity of care for the entire family will significantly improve the quality of primary care. Training programs in family medicine are being introduced, and a chair in family practice has been

established at the Turkmen State Medical Institute. Similarly, special training is being established for family nurses. In 1996, 1,777 doctors were redesignated as family practitioners and 2,759 nurses as family nurses. By the end of 1996, the entire population was covered by the family practice system.

Experience with a pilot family practice program established in polyclinics in Ashgabat in 1994 suggests that the system has resulted in reduced infant mortality and lowered incidence of tuberculosis and cancer, and the hope is that the system will assist in the early diagnosis of disease.

### **Controlling Disease**

The cornerstone of Turkmenistan's health care system is disease prevention, and the strengthening of primary care will focus on the use of the most effective disease prevention and treatment methods. The authorities are well aware of the social and economic importance to the nation of improving the population's health status. Key priorities in this context include

- Reducing health risks from smoking and alcohol and drug abuse
- Ensuring the provision of prenatal care
- Providing early childhood care
- Immunizing children
- Focusing on nutrition, including infant nutrition, and adding iodine to salt
- Promoting healthy lifestyles.

Young people's health care is the priority for preventive measures. Decisive steps will be taken to improve preschool and school medical services, for instance, by improving the effectiveness of pharmaceuticals used and improving nutritional status through vitamin and micronutrient supplements. In addition, the authorities will promote healthy lifestyles among the young by introducing a course on sanitary skills and disease prevention into the secondary school syllabus, having the national broadcasting company transmit health programs on television and radio, and developing facilities and improving access to physical training and sports.

Progress in this area to date includes a mass diphtheria immunization program in January 1996, which covered 1.9 million people, and a vaccination campaign in April and May 1996 that covered 500,000 children under four. Particular efforts are being directed toward reducing tobacco and alcohol consumption through the media and health education campaigns.

### **Restructuring Health Service Provision**

The authorities plan significant restructuring of inpatient provision to make more effective use of current bed capacity. Plans for reducing the number of hospital beds, incorporating polyclinics into hospitals, and lowering the number of hospitalizations are being formulated and implemented. Better pre-admission examinations will improve diagnostic accuracy, while the development of treatment guidelines for key diseases, the extended opening of diagnostic departments (for example, during weekends and evenings), and the development of domiciliary care will improve the efficiency and effectiveness of inpatient care. The expectations are that savings from inpatient capacity reductions will release resources to improve the quality of the technologies and facilities employed, thereby improving the quality of care.

As of 1996, 6,525 beds had been closed nationwide and 3,726 doctors, nurses, and paramedics had been released from their duties. As a result the government saved manat 10.05 billion, and will use these funds to improve service quality and strengthen logistics. Arrangements have also been made to allow members of the armed forces to work in public health institutions to improve the quality of services offered.

## **Financing Health Care**

In 1996, health care expenditure amounted to 3.5 percent of gross national product. New sources of income for the health sector include contributions under the national voluntary medical insurance scheme, income generation through contracts with the private sector and treatment of foreigners, duties on imported medicines, user fees, and foreign investment in the health sector.

The flexibility with which health care provider institutions can allocate resources internally has been significantly improved. Global budgets have replaced the previous line item budget allocation system, allowing maximum freedom to deploy resources to best effect. At the same time, institutions have been allowed to use savings to boost staff salaries, thereby improving incentives. The allocation of state funding will move toward a per capita basis in the near future. Overall, the largest proportion of state health expenditure will be devoted to primary care services.

The reform program also envisages the development of private medical practice to meet the vast demand for health care services. Both practitioners of modern medicine and traditional practitioners will be able to operate, and the Ministry of Health and Medical Industry will regulate private activity by issuing licenses to individual practitioners and to corporate bodies. However, the ministry recognizes that public financing and provision of health care will outweigh private financing and provision for the foreseeable future.

## **Investing in the Health Sector**

Investment will continue, both to ensure that facilities are properly equipped with modern resources, and to reconstruct existing facilities and develop new facilities across the country. To achieve this, foreign and private investment will be used. These funding sources would also be used to supply health care providers with appropriate medical equipment. The construction of a resuscitation unit and the reconstruction of a surgical unit in two Ashgabat hospitals is taking place in partnership with foreign companies, while in 1996 the governments of Israel and Japan and the Islamic Development Bank extended credit totaling US\$20 million for medical equipment. The government plans to build in Ashgabat a 300-bed multispecialty medical center, equipped with up-to-date diagnostic equipment and facilities, and 150-bed centers in each of the provinces.

A key priority for Turkmenistan is to produce a sufficient quantity and quality of medicines to meet the population's needs. Local investment in the pharmaceutical industry will spur the growth of domestic drug production, and the development by the state of modern centers of training and production will attract expert personnel and investors into this sector. A joint venture with an Indian company in the pharmaceutical and medical supplies sector is under way. Regulations on the licensing of pharmaceutical and medical supply activities have been introduced, and a center for quality control, testing, and registration has been established.

## **Providing Training and Human Resources**

The level of qualification of health care staff and the extent to which such staff are responsible for achieving results affect the quality of care. The health reform program envisages radical reforms in personnel policy and in the distribution of manpower across the country. Changes in further medical education, periods of joint study and practice for medical and nursing students, and improved training in modern diagnostic and treatment methods will be implemented. Better training, competitive selection, certification, and refresher training will be introduced for faculty members in medical and health training establishments, and exchange visits with foreign countries to update skills will be encouraged. Particular attention will be paid to improving training in management, health economics, health financing, engineering, and health care logistics.

Licensing will oblige medical employees to undertake regular retraining in expert facilities, and will mandate the recertification of personnel to meet the requirements for primary care and family

practice. Retraining courses will be established in research institutes and in large multispecialty hospitals, and self-financing centers will be established to train medical personnel.

### **Conclusion**

The state program on health establishes the legislative basis for developing the health sector. Amendments and additions to existing laws include the Law to Protect the Population's Health, the Law on Voluntary Medical Insurance, and the Law on Procurement of Medicines. These additions will protect citizens' rights to have access to health care, promote the effective functioning of the health care system, and promote the improvement of the population's health. Their implementation is therefore of the utmost priority.

# 12

## *Health System Reform in Uzbekistan*

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Like all other former Soviet republics, Uzbekistan is currently in a period of transition to a market-oriented economy. Inevitably, the changed situation has had a profound impact on the health system. To meet the challenges posed by economic and political transition, the Ministry of Health has prepared a strategy to guide health sector development. The ministry has undertaken a series of reforms to improve health status and has established clear-cut objectives to be achieved by the year 2000. Health sector reform in Uzbekistan is based on the principles of the basic human right to health care, of equality of and accessibility to health care for all, of the need to give priority to preventive measures, and of the need to provide social protection for the disabled. Above all, the reforms seek to improve the quality of primary health care, which should be the most important component of the health care system.

In launching health reform in Uzbekistan, the authorities paid special attention to reorienting the cumbersome, capital-intensive, and ineffective structure of medical institutions inherited from the former Soviet regime, which proved unsuitable for a market-oriented system. In the last few years, the number of hospital beds has been reduced by about 35 percent, while administrative personnel have been downsized by 45 percent. In addition, new types of medical services, such as one-day procedures, day-time hospitals, and outpatient surgery centers, have been introduced.

Another change is the decentralization of health system management. Many of the Ministry of Health's rights and functions have been delegated to local health agencies and medical institutions. In addition, considerable human and financial resources are being shifted from hospitals to outpatient and ambulatory services. In 1991 only 20 percent of all funds available for health care were spent on primary care, but in 1995 this proportion reached 35 percent, and will be raised to 50 percent by 1998.

Special attention is paid to maternal and child health care, and a state program has been adopted to improve the health of children and young people. As a result, maternal mortality has decreased by 70 percent since independence and infant mortality by 45 percent. Family planning is being introduced in an attempt to reduce the average number of children per family from six or seven to two or three. The number of women of childbearing age using contraceptives has increased from 9 percent to 40 percent and the birth rate has decreased from 34.5 to 29.4 per 1,000 population.

Infectious disease prevention is also of great importance. In 1995, 95 to 97 percent of children were vaccinated against polio and diphtheria. A national program of child vaccination has been developed, and concrete measures aimed at reducing the incidence of hepatitis, acute respiratory infections, and other especially dangerous diseases (cholera, plague, rabies, and so on) are being implemented.

Under the Soviet regime, Uzbekistan, like the other Commonwealth of Independent States countries, had a large number of physicians whose quality of training and knowledge fell short of contemporary standards. Therefore the authorities have developed a new system for training and retraining physicians based on international standards, and in 1996/97 established the Institute of General Practice.

Private medical practice has been permitted for the first time, making it possible to lay the foundation for a private health sector. Currently, 10 percent of all medical workers are employed in the private sector, and this percentage is increasing.

The pharmacy network and procurement agencies have been successfully privatized, which will considerably improve the provision of pharmaceuticals and medical equipment to both medical institutions and the population at large. The pharmaceutical manufacturing industry is developing successfully, and three joint ventures with foreign companies are under way. While in 1991 Uzbekistan's pharmaceutical industry met only 4.1 percent of domestic drug requirements, that figure had grown to 10 percent by 1995, and by 2000 is expected to have increased to 25 percent.

### Reforming the Network of Health Care Providers

The historical development of medical institutions in Uzbekistan resulted in the duplication of functions, with most of these institutions housed in inadequate buildings. Of 6,539 *feldsher* posts, 3,209 (49 percent) are packed into one or two rooms, and of the 1,465 rural outpatient clinics, 1,131 (77.2 percent) are unfit for examining and treating patients. Most rural outpatient clinics and rural hospitals have only one or two physicians and lack electrocardiograms and well-equipped laboratories. At the same time, the number of people attending these facilities remains constant. *Feldsher* posts receive up to 24.0 percent of all rural patients, rural outpatient clinics receive up to 34.0 percent, and rural hospitals receive 42.0 percent. This has resulted in poor-quality medical services.

The Ministry of Health has examined the infrastructure of health institutions. Its aim is to use the existing institutions rationally, while improving medical services and extending them to rural residents. The ministry decided to set up rural medical stations, each serving 1,500 or more patients depending on population density in the area. Rural medical stations will house general practitioners trained at institutes of higher learning or retrained at the Tashkent Institute for Continuing Medical Education. The State Institute for Health Facility Design has prepared a design for a rural medical station that consists of 13 rooms, including rooms for a physician, a *feldsher*, an obstetrician, a visiting nurse, a physiotherapist, a location for functional diagnosis, a clinical laboratory, and a day-time hospital. Each rural medical station will have a telephone, natural gas, hot and cold water, and an ambulance.

Rural medical stations will permit the provision of a wide range of health services to rural residents, assist in the early diagnosis of diseases and the timely referral of patients to *raion* hospitals and other curative and preventative facilities, and help with health screening and health promotion. In the course of establishing rural medical stations, some *feldsher* posts will be transformed into branches of rural medical stations, while the remainder will be eliminated. Plans are also under way to reorganize many rural hospitals into zonal consultative polyclinics housing six to eight physicians each and nursing beds. To ensure a flexible approach to these changes, the authorities have proposed retaining *feldsher* posts, rural outpatient clinics, and rural hospitals in mountainous, semidesert, and remote livestock grazing areas.

A vertical health reform aimed at changing the infrastructure of curative and preventative institutions, especially in rural areas, has been launched. This is in addition to the horizontal health reform plan, which focuses on the transition from extending the physical capacity of the health care network to improving its productivity by eliminating 70,000 hospital beds; reducing the number of administrative personnel; and training, retraining, and retaining medical staff.

### Health Care Logistics and Drug Provision

The privatization of state enterprises in the medical supply and pharmaceutical sectors produced positive financial and economic results in 1995. For example, the trade turnover goal for 1995 was 140 percent of that in 1994, but the actual figure was 263 percent, or UZS539 million.

The enterprises that repair, assemble, and maintain medical equipment rendered UZS23.7 million worth of services to health facilities, which significantly surpassed the planned volume of UZS11.8 million. After paying taxes and fees, the enterprises spend part of their profits not only on expanding existing facilities, but also on building new ones, for instance, a plant to produce a stitching material for surgery. In addition, three new joint ventures in which foreign investment constitutes 51 percent of authorized capital are selling medical equipment, glasses, and drugs.

All 13 enterprises in the medical supplies system have been privatized. Eleven of the enterprises have become collectives and two have been transformed into limited liability companies. These enterprises now work with both customers and their own suppliers on a contractual basis. Among their customers are the *oblast* health agencies and the Ministry of Health. The medical supplies enterprises provide their clients with the necessary medical goods within the shortest possible period of time at lower prices. Goods are delivered within five to six days and the mark-up rate was reduced from 30 percent in 1994 to 22 percent in 1995, while profits almost quadrupled. Following privatization of these enterprises, the number of employees has fallen 25 percent, from 311 in 1994 to 235.

The National Pharmaceutical Production Association (Pharmacia) has been reorganized into a joint stock company (Dori Darmon), which has led to changes in the management structure, procurement system, forms of ownership, and functions of pharmacies. The State Property Committee of Uzbekistan has delegated to the association the rights to manage the activity of territorial state joint stock associations and the joint stock company, which was established on the basis of the Republic Drug Warehouse in accordance with the block of shares held by the state. The reforms have improved drug provision by meeting 60.5 percent of the 1995 requirement, instead of 43.6 percent as in 1993.

In 1995 the Uzmedexport Foreign Trade Association was formed. A state owned agency, Uzmedexport is primarily engaged in buying drugs, vaccines, serums, medical appliances, equipment, and chemical reagents. The government has appointed Uzmedexport as an agent for holding tenders and signing contracts to supply medicines, medical equipment, and baby food to the country using the ECU 59 million credit extended by the European Union in 1994–95. The association possesses Uzbekistan's only extensive database that details the assortment and prices of world manufacturers' medical products and is included on the national list of enterprises with priority rights to convert currency.

The Main Administration for Quality Control of Pharmaceuticals and Medical Equipment has been set up under the Ministry of Health in accordance with a cabinet resolution. This is in pursuit of a policy that governs quality control, certification of pharmaceutical products, medical equipment, dietary foodstuffs, and withdrawal of preparations from sale, as well as the gradual adaptation of the quality control system to internationally accepted standards. Currently 600 foreign made drugs have been registered in Uzbekistan, and the Pharmacological Committee has examined and permitted the use of more than 30 domestic preparations.

Foreign countries such as Germany (41.3 percent within the framework of the European Union credit), Hungary (11.9 percent), France (10.7 percent), Slovakia (8.7 percent), Poland (6.6 percent), Belgium (5.0 percent), and the Czech Republic (3.4 percent) are quickly winning the market for medical goods in Uzbekistan. In 1995 Medpribor imported 52.1 percent of its medical goods from Germany, 27.8 percent from the United Kingdom, 9.0 percent from Italy, and 4.4 percent from the United States.

### **Training Reform**

Medical staff play a key role in developing the health system. The number of physicians in Uzbekistan surpasses by far the number in industrial countries. However, their excessive number is not reflected in the amount of work they perform or in their efficiency. In some cases their workload is half that of Western levels. By contrast, paramedical staff are in extremely short

supply, with the result that physicians are often forced to undertake nursing duties. In 1995 the physician to nurse ratio was 1:3.3, compared to around 1:5 in countries with well-developed health systems. Moreover, considerable shortcomings in the training system itself, coupled with a lack of material incentives, have resulted in extremely low professional skills among most medical workers. High-quality training was impossible in the past because of the excessive load on teaching staff (up to 1,000 hours per person per year), as well as insufficient individual work with students. In addition, wage leveling and the lack of incentives for producing well-trained students meant that the teaching staff themselves were not highly skilled.

This situation has necessitated a radical review of the training of medical staff, and has resulted in the development of a new concept of medical training based on a thorough study of health systems and training of medical staff abroad. The reorganization of medical training and an emphasis on qualitative instead of quantitative indicators are based on the introduction of a continuous, multistep system of medical training, the integration of medical training with science and practice, a reduction in the number of medical students enrolled, the introduction of a competitive system for entry to medical school, a greater emphasis on the role of paramedical personnel, and the training of the most capable students and specialists abroad.

The first level in the multistep training system is general medical training for four to five years, which gives students a bachelor's degree and the right to work as a doctor's assistant. The second level (years 5 to 7) trains general practitioners who will work in ambulatory clinics, polyclinics, emergency stations, and day hospitals. A master's degree is awarded on completion of the third level of training (years 9–11). University graduates and specialists who have the appropriate work experience at health institutions and have passed specific examinations may study for a master's degree. Holders of the master's degree will work at specialized institutions and will be permitted to engage in private practice.

The reform of medical training began four years ago. Academic year 1992/93 saw the introduction of new curricula. A rating system for assessing students' knowledge is currently being introduced through computer testing. The training process has also been changed: lectures are now given to groups of no more than 60 students, study groups consist of only 12 students, and practical classes are conducted in groups of 3 to 6 students. Enrollment in medical schools has been virtually halved in the past four years. At the same time, the number of teaching staff has remained constant, which reduced the teacher to student ratio to 1:6. To raise professional skills among the teaching staff, special departments have been opened at the Tashkent Institute for Continuing Medical Education, and plans are under way to introduce a regular test of professional fitness for all who teach at medical colleges. The final goal of the reorganization of medical training is to bring it to internationally accepted standards, thus making Uzbekistan's medical diplomas valid in other countries.

# 13

## *Implementing Primary Health Care Reform in Romania: An Experiment in Eight Districts*

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The Romanian health care system inherited the same problems from the former Soviet Union as the Central Asian republics: centralized planning and financing, underfunding, and poor performance. At the same time, no new investment and little maintenance had taken place during the previous decade. Health workers' salaries were low relative to average wage levels, and few incentives for efficiency existed.

Hospitals traditionally controlled funds for both primary and secondary care services in their districts, so that primary care had tended to be starved of resources, and drugs and equipment had been largely hospital-based. This had led to excessive reliance on hospital services and little emphasis on preventive medicine and health promotion. These problems and the following other factors have prompted the authorities to initiate reform of the health care system:

- The transition to a free market economy
- The escalation in costs caused by new technologies, an aging population, and rapid health sector price inflation
- The new concepts regarding the appropriate roles and responsibilities of the state and other actors in the health sector
- The activities of international organizations and institutions.

### **Policy Formulation**

Since 1989, the health of the population has become a much higher policy priority, especially against the backdrop of the economic crisis. In 1991 the World Bank agreed to a loan of US\$150 million in the form of a health rehabilitation program. Based on the results of a feasibility study undertaken prior to agreement on the loan, the program has focused on strengthening primary health care and reorganizing health service financing and management. Funds provided under the loan will be used to purchase new equipment; rehabilitate infrastructure; provide technical assistance; and run training programs for managers, nurses, and family planning personnel.

Two parallel projects are components of the World Bank program. The "Healthy Romania" study assessed national health needs and developed detailed proposals for a health strategy, incorporating new methods of organization, financing, resource allocation, and service delivery. A decentralization project established action plans in four districts to improve resource utilization, increase responsiveness to local needs, encourage local decisionmaking, and establish accountability mechanisms.

The choice of primary care as the key focus for reform reflected the various inherited structural problems of the health system. The main issue was how to strike a better balance between primary and secondary care in the hope that strengthening primary care would both improve health status and reduce the workload in the secondary sector. To avoid making costly mistakes at the national level, policymakers decided to introduce the reforms in an experimental manner in eight pilot districts.

### **The Experiment**

The experimental reforms of primary care service provision and resource allocation were launched in eight districts in August 1994. The aim of the approach was to permit learning from experience and to introduce health professionals and the public to the key concepts and changes involved. The objectives of the first stage of the experiment were as follows:

- To enhance the role of primary health care and develop a clearer distinction between primary and secondary care providers in terms of organization and management
- To achieve universal population coverage for a basic package of services
- To improve access to primary care
- To promote individual choice and participation
- To improve consumer satisfaction in relation to primary care services
- To change the professional status of general practitioners (GPs)
- To increase autonomy in decisionmaking at local levels.

To achieve these objectives, the authorities set specific targets, namely:

- To shift the responsibility for funding and managing primary care clinics from hospitals to district health authorities
- To establish contracts between district health authorities and GPs (both individual or group contracts) that specified payment, activities, and standards
- To replace the former wage system for payment of physicians with one based on weighted capitation and fees for service
- To allow patients to register with whichever GP they wanted and to change to another after three months
- To train GPs in family medicine and improve doctor-patient relationships
- To implement accreditation for GPs
- To develop continuing education, peer review, and periodic assessment of skills
- To involve communities and local government in health care.

The most important element of this package has been the change in the way physicians are paid. GPs are now paid through a mix of capitation fees and fee for service payments, with the fee for service element making up no more than 40 percent of total income. Combined with patients' right to choose GPs, capitation has the advantage that unpopular or substandard GPs will find attracting patients difficult. The authorities expect that most GPs will have 1,500–2,500 patients registered on their lists. Fee for service elements will be used to promote the uptake of particular services, such as immunization, chronic disease management, and cancer screening. Fee for service items are restricted in number and frequency, and district health authorities will periodically monitor the accuracy of fee for service claims.

Next steps in the experiment will include developing budgets for GPs, organizing group practices, including nurses in the reform program, extending the experiment to Bucharest and four other districts (thereby covering nearly 50 percent of the population with the new system), and experimenting with new methods of service delivery and resource allocation in secondary care.

## **Implementation**

In comparison with other Central European countries, health reform in Romania started comparatively late. This has given planners the advantage of being able to learn from the experience of others and to avoid repeating others' mistakes. Planners held fruitful discussions with colleagues from Bulgaria, the Czech Republic, Hungary, and Poland on the best courses open to them and how to overcome the obstacles they might encounter.

The preparation phase of the program (situation analysis and development of options) involved all key players within the health sector, and media campaigns were targeted at both the public and at health professionals prior to the launch of the pilots. In addition, routine monitoring of progress incorporates the opinions of health professionals and the general public. This process of involvement appeared to minimize opposition to the reform package. Local-level managers also play an important role by providing feedback on decisions taken centrally and explaining such decisions to local personnel.

## **The Roles of Key Actors**

Not only does health reform affect different segments of the population in different ways as discussed in the next section, but each segment has its own role to play.

### *Central Government*

The implementation of health reform requires strong support at the national level. To this end, the Ministry of Health established the Health Reform Coordination Committee, while at the government level, a special health committee has been set up to monitor overall progress. The Ministry of Health collaborates closely with other ministries and institutions in the area of capacity building and implementation, especially with the ministries of Finance, Labor, and Social Protection.

### *District Level*

Prior to the start of the reform experiment, the authorities set up reform and health insurance departments in each of Romania's 41 health districts to take on local responsibility for reform issues. Key personnel in these departments have received training in health systems management at home or abroad. Given the importance of their recently acquired experience, the directors of the eight pilot districts will act as consultants to new districts as they are brought into the experiment.

Under the new resource allocation scheme, local authorities provide and manage funds for the maintenance and repair of health facilities. The World Bank funds were used to rehabilitate 499 primary care clinics, and the remaining 561 were rehabilitated using local government funds. Local governments also work closely with health authorities to prepare new community health programs.

### *Doctors*

Doctors working in both primary and secondary care periodically participate in meetings with the reform team so that the team can pass information on to the doctors, while the doctors provide feedback on progress and obstacles. Policy relating to the experiment has been changed twice in response to feedback from doctors. Meanwhile, a high response rate (80 percent) to a key survey about the experiment among doctors demonstrated their high level of interest in the reform process.

### ***Nongovernmental Organizations***

The most important nongovernmental organizations involved in the reform process include the following:

- *The Romanian Public Health and Health Management Association*—This association has more than 500 members, including doctors, economists, pharmacists, and nurses. Association members regularly discuss health reform at their meetings, and the association is involved in specialist international networks, arranges study tours and conferences, and so on.
- *The Romanian Nursing Association*—The key concerns of this 10,000-member organization include professional training and accreditation and the setting of standards and regulations.
- *The Physicians and Pharmacists' College*—Founded in 1995, the college will ultimately be responsible for planning postgraduate training, setting clinical standards, and negotiating doctors' remuneration.
- *The Hospitals Association*—This is an independent professional association of more than 80 hospitals, who are represented by their directors. Its objectives include defining the role of hospitals within the reformed system, improving hospital management, promoting high-quality care, and establishing international contacts.

### ***General Public***

The public has been informed of the content of the reforms at the primary care level, and growing consumer choice has increased the influence of the public. In the pilot districts 84 percent of the population are registered with a GP, and 1.6 percent have already exercised their right to change GPs at least once. Changing the psychology of consumers, who had been accustomed to the concept of health care being free of charge, is a key objective. Having been properly informed about the issues involved in the introduction of health insurance, the general public is more willing to pay insurance contributions than to continue making under-the-table payments. The introduction of social insurance, with its redistributive nature, is also culturally appropriate in Romania.

### ***International Organizations***

The World Bank has been the most important international actor in the Romanian health reform process by providing the US\$150 million loan, providing assistance in procuring consultants, and being directly involved in the evaluation of the reform experiment.

### **Impact of the Experiment**

As noted earlier, the health reform experiments will affect different groups in a variety of ways.

#### ***Impact on the General Public***

Public satisfaction with health services following the reforms in the pilot districts appears to have increased significantly, as demonstrated by a 1995 survey carried out by the Institute of Hygiene, Public Health, Health Services, and Management. Since being allowed the freedom of choice, patients feel closer to their doctors, while physicians' interest in their patients' health has increased, as has their sense of competition, which will ultimately lead to improved health outcomes for patients. Access to GPs has also improved. Key factors leading to greater public happiness with the health system include their ability to choose their GP, 24-hour coverage, GPs' greater willingness to make house calls, and improvements to the physical infrastructure of primary care clinics.

### ***Impact on Primary Care Professionals***

GPs have generally welcomed the new method of remuneration, which allows greater differentiation in pay according to workload. GPs' incomes have generally risen under the experiment according to a survey that showed that 52 percent of GPs earned more money under the new system than before, and only 17 percent believed they earned less than before. However, the workload has increased under the new system, with more consultations (up 21 percent), more house calls (up 40 percent), and 64 percent of GPs offering 24-hour coverage.

Overall, 74 percent of doctors surveyed wished to keep the reformed system, and GPs from other parts of the country are keen to see the experiment extended. However, doctors do not feel that the social status of their profession has risen substantially since reforms began: 53 percent thought their social and professional status was unchanged.

### ***Impact on Secondary Care***

Evaluation of the health care reform program indicated that between 1994 and 1995 referrals from GPs to polyclinics fell by 23.9 percent, and GP referrals to hospitals fell by 53.6 percent. However, no reduction in total hospital admissions or attendance at emergency departments was observed during this period, which indicates that admission to hospital is a complex and multifaceted issue.

### ***Impact on District Health Authorities***

Districts have gained valuable experience in the management of change, while the reform and health insurance departments of each of the eight districts are vying with one another to obtain the best results. Changes in central-local government relationships have also taken place, with greater decentralization of health care occurring as it becomes clear that local levels are better equipped to handle certain issues. Districts outside the experiment are interested in the pilot, and several have expressed an interest in becoming involved.

### ***Impact on Local Authorities***

Good working relationships have been established between local authorities and health authorities, with an increasing acceptance that health is an intersectoral issue and that many factors that affect health remain outside the control of the health services.

## **Problems and Obstacles Faced**

Certain problems have been encountered in the course of the reform experiment as follows:

- The reluctance of some patients to register with a GP or cases where patients were simultaneously registered with two or more GPs.
- A tendency for some GPs to overemphasize provision of those services that offered fee for service payments and to neglect services that do not attract fees, and an absence of standards and protocols. Districts are currently being helped to develop standardized data collection systems to tackle these problems.
- The limited extent to which decentralization was actually achieved. District health authorities have increased their responsibility for operational management, but strategic planning continues to take place largely at the Ministry of Health level.
- The involvement of nurses in reform has been limited to date.
- The failure of admissions to fall even though GP referrals to secondary care have decreased is also of concern. Reasons for this include high rates of self-referral, substantial numbers of unfilled GP posts (29 percent), and admissions for welfare reasons.

## **Conclusions**

The experiment in the eight pilot districts has provided many valuable lessons about the reform implementation process. Changes in the method of financing can provide a way to attract more resources for health care, and perhaps to improve accountability for and transparency in expenditure. Changing the payment system provides better incentives for professionals to provide improved services and can prevent cost escalation and supplier-induced demand. Other lessons learnt from the experiment include the vital importance of improving communication systems within the health sector, of providing formal training in health service management for key personnel, and of conducting periodic evaluations of success and progress toward the objectives of reform.

Changes in health policy in Romania are unavoidable given the existence of forces for change both within and outside the health system. The main challenge is to define clear and feasible objectives for health policy, remembering that health sector reform is not an end in itself, but is merely a vehicle through which to achieve the desired objectives of health policy.

# 14

## *Planning the Implementation of Health Sector Reform in Central Asia*

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Reforming health care systems in the Central Asian republics is not an easy task. Difficulties arise because health care may not command a high priority while the government is laying the foundations of an independent state as a result of profound economic problems, and because the historically centralized organization of the countries' health systems may mean that the process of reform could take a long time to begin. However, reform is both vital and inevitable given rising mortality and morbidity levels, diminishing resources for health and health care and growing inequity in the distribution of these resources, along with the weakness of primary care and the bias toward specialist care.

Until now, debate has focused primarily on the desired content of reforms, but has dealt little with the question of how reform should be implemented. This chapter therefore focuses on the process rather than the content of change based on our somewhat limited experience in Central Asia. We hope to present ideas that are practically feasible, rather than theoretically attractive, and stress that all our recommendations are specific to the context of Central Asia in the latter half of the 1990s.

### **Where to Start**

In the former Soviet Union, national health plans were primarily prepared by the Soviet Union's central institutions in Moscow, for example, the Ministry of Health, the State Planning Committee, the Permanent Commission on Public Health Services, the Council of Ministers, and the Supreme Soviet. As a result, the policy development and strategic planning capacities of national ministries of health in the Central Asian republics remain limited, and the management capacity needed to realize a comprehensive reform program frequently does not exist.

### *Establishing a Coordinating Unit*

The first task of the reform process must therefore be the creation of such management capacity within national health systems. This can be achieved by setting up a policy, planning, and coordination unit (PPCU) in the ministry of health, which will take the lead responsibility for developing health care reforms. Such an approach could be described as a centralization of the reform process, and this is exactly what is required. Given that tight central control over decisionmaking predominated for so many years, local officials are not accustomed to strategic planning and lack a culture of discussion and consultation with other actors. Indeed, one of the PPCU's tasks will be to create an open discussion forum for all the relevant actors. The PPCU will act both as a catalyst within the national system, and as a focal point and counterpart for international organizations, thus ensuring the coordination of donors' activities.

The PPCU team must be multidisciplinary in nature, and must include epidemiologists, statisticians, economists, lawyers, physicians, nurses, dentists, and pharmacists. Other professions

that could be valuable assets to the PPCU include sociologists, medical anthropologists, and social psychologists. At the same time, the involvement of key groups in the reform process will be vital, and representatives from the office of the president, the ministry of finance, the state planning committee, academic institutions, *oblast* administrations, and health care professional associations should be included. Thought should also be given to striking a balance in the representation of both younger and more experienced personnel.

### *Developing Management Capacity*

The team members of the PPCU must be offered training to build their management and policymaking capacity rapidly. Older staff may benefit more from study tours to other countries, while younger staff will benefit most from formal, longer-term training programs, such as postgraduate courses. Programs should be selected in those areas that the public health programs of the former Soviet system do not cover adequately, such as health financing, health service management, and health policy. While providing training overseas does raise questions as to whether participants will return to their own country on completion of the course, the training thus provided is vital to the reform process. Countries must therefore employ incentives and sanctions to ensure that these individuals do return, and, most important, should agree with them on their future position and job description before they leave for their training.

The timing of training programs is a delicate issue. Initially, the team needs to remain in the country and receive intensive English language training, and those receiving postgraduate training must ensure that their English is adequate prior to starting. Long-term training should be phased to ensure continuity of work within the PPCU. If the country is planning to use a World Bank loan, sending a few individuals for masters of science training with the support of project preparation funds means that some staff will already be trained by the time project funds actually become available.

Short-term training of up to three months is more appropriate for staff who have experience or background training on the subject. Study tours should be carefully designed and organized. Participants should prepare carefully, learning about the system they will be visiting and identifying the areas upon which they wish to focus. This preparation is essential to avoid study trips becoming little more than vacations abroad. It must be accepted that social and political influence may play a part in the selection of certain candidates for training abroad, and that this is probably inevitable and relatively harmless.

Formal, planned capacity building of this nature is necessary to create a pool of knowledge and expertise, which will in turn improve the capacity for subsequent skill transfer, by avoiding the dissemination and dissipation of foreign expertise to unconnected individuals.

### *Remunerating PPCU Members*

Paying realistic salaries to PPCU team members is clearly important. While their pay should not differ radically from that of others in the health sector, incentives to ensure continuity of personnel are desirable. Realism about total potential incomes, that is, what PPCU staff might earn in the private sector, is essential, and should enter into calculations of appropriate salary levels.

### *Carrying Out Situation Analysis*

One of the first tasks of the PPCU will be to undertake a thorough situation analysis to identify the problems faced. The PPCU must pool any existing data and analyses, for instance, reports already prepared by foreign consultants, and undertake further analysis (perhaps with foreign assistance) to develop a comprehensive understanding of the situation. The temptation to say, "We know what our problems are, we don't need to write them down," should be firmly resisted.

Such analysis will rapidly identify areas of information deficit. Information gaps typically include data on unit costs, financial flows to providers, household health expenditures, and service utilization, which are vital for consideration of financing and remuneration issues. The PPCU therefore needs to fill these information gaps as far as possible to enable planning to take place on an empirical footing. It should give priority to creative analysis of secondary data before attempting to undertake primary data collection.

### **What to Do**

While we have already stated that our main focus will be on the process of reform rather than its content, clearly content is closely related to form and cannot be ignored. For this reason, we will briefly highlight some aspects of the content of reform that we consider to be important.

#### ***Protecting the Positive Elements of the Old System***

Currently, consensus exists that the Central Asian republics should preserve the positive characteristics of the health system inherited from the former Soviet Union. However, agreement on what exactly those positive elements are may be harder to arrive at. We propose that the following are beneficial elements worth preserving:

- Universal coverage with comprehensive health services
- Well-structured systems of sanitary-epidemiological services for communicable disease control and environmental health
- An extensive and well-structured health care infrastructure and sufficient human resources
- Regional coverage by health services organized around *raions* and *oblasts*.

#### ***Developing Clear Policy Goals***

The goals of health policy must be clearly defined while reform is carried out, and the contribution of particular policy tools to achieving those goals must be clarified. If the tools do not match the goals, the tools should be reviewed. Policymakers must always remember that health reform is undertaken to improve the health status of the population. This must be done in a way that benefits all and does not put particular groups of people at a disadvantage. For example, the risks health reform measures pose to rural and unemployed urban populations in many Central Asian republics are clear.

#### ***Choosing the Focus and Tools Carefully***

The approach to health reform in many Western countries has relied heavily on financial tools, largely to achieve cost containment. In Central Asia, however, given the many problems with the delivery of services, financial levers may be neither the appropriate nor the primary tool available. Considerable effort is currently being devoted to establishing health insurance schemes as a way to raise more funds for health care. However, the general economic climate in the Central Asian countries indicates that health insurance may not be a sustainable approach over the next few years.

User charges are another frequently cited source of funds for health care. While patients in the Central Asian republics make unofficial payments for all sorts of health care, reformers have not yet been demonstrated that official user charges will eliminate unofficial payments by users. Formal user charges may simply place an additional burden on users, thereby increasing transaction costs for the sake of only marginal revenue benefits. Nonetheless, simple flat-rate fees with straightforward exemption criteria do offer the chance to reduce inappropriate use (and abuse) of health services.

A focus on government revenues and financing therefore seems reasonable in the first instance. In this case, however, policymakers should pay particular attention to how financial resources are allocated to the regional level, because current methods fail to ensure equitable distribution of resources based on health care needs. Thus the first step should be the development of simple resource allocation guidelines using basic demographic, mortality, and morbidity data. Provider payment mechanisms will also be important to the success of reforms. While some sophisticated payment systems are being developed, we believe that the key change to be achieved is simply to shift the orientation of payment from inputs toward outputs, for which moves to global budgets for hospitals and capitation payments for primary care providers would be sufficient.

Almost all the Central Asian republics are attempting to reduce the size of their hospital sector by closing hospital beds. The challenge, however, is to find ways to shift resources (funds, skills, and technologies) into primary care. Policymakers should bear in mind that whatever the financing mechanism, health services are delivered by health personnel, which implies that human resource issues are crucial components of the reform process. Upgraded medical and nurse training and development of the nursing function are sorely needed. Shifting nurses out of hospitals and into preventive functions in primary care, plus emphasizing the training of general practitioners rather than medical specialists, would yield significant benefits in terms of health status.

Policymakers should also exercise care when discussing privatization and decentralization, two topics that frequently arise during debates about health reform. The former Soviet Union operated a heavily centralized decisionmaking system, but its breakup resulted in the creation of national ministries of health that often have weak policymaking functions, alongside peripheral structures that may be able to exercise significant autonomy on many issues. As a result, considering the desirability of recentralization and not decentralization may well be more appropriate. Similarly, many health services have operated in a quasi-privatized fashion, run by their head doctors, with income generated via out-of-pocket payments, and medical and pharmaceutical supplies purchased directly by patients on the open market; thus again, some effective deprivatization might well be a desirable component of the reform package.

## **How to Do It**

### *Deciding on the Right Approach*

The policymaking process in Central Asia naturally continues to display many characteristics of the Soviet era, and can generally be described as a top-down model with some exceptions (often donor-driven local experiments). The central authority predominates in policy development, with implementation delegated to the periphery purely as an administrative process. By contrast, managerial autonomy is significant, especially at the hospital level, but local operational management is obviously quite different from national policymaking.

Thus the question is what is the most appropriate model of policymaking for Central Asia, a rational, top-down approach, or an interactive, bottom-up model? The former has existed in all former Soviet republics for decades, with many negative consequences, while the latter requires the full participation of all levels in policymaking and implementation. Changing the top-down administrative culture substantially in a short time would be extremely difficult. We therefore suggest a combined approach: the development of a master plan by the PPCU using a participatory approach. Implementing change in any part of a Central Asian health system is likely to involve multiple impacts and effects elsewhere in the system. A master plan provides a way to establish links between different parts of the system, and can be used not as a blueprint, but as a flexible template that can evolve with experience.

### ***Encouraging Participation and Transparency***

PPCUs should develop master plans in a transparent and participatory environment that requires identification of all relevant institutions, groups, and individuals. However, the development of professional and industry associations and lobbies remains limited in Central Asia. In particular, the PPCUs may need to take steps to facilitate the formation of nursing and medical professional associations and consumer associations. In particular, they should help primary care professionals to air their views, because to date the most vocal physicians have tended to represent tertiary and research institutes with a vested interest in maintaining the status quo. Both individual and roundtable discussions with all these groups should take place (perhaps in the form of an annual congress), and PPCUs should be at pains to recognize all views, both positive and negative, that arise from such discussions. Opposing views must be given proper weight if trust is to be developed.

The use of a common vocabulary when discussing reform is important, and PPCUs should develop a glossary of terms to prevent misunderstandings. Terms such as privatization and health insurance have often been used in the Central Asian republics in a political rather than a technical sense as a catch-all simply to describe moves away from traditional structures. A broader communication strategy must ultimately be developed to ensure that the correct messages are conveyed to the public, and to facilitate informed public participation in the debate as a legitimate interest group.

### ***Analyzing the Opposition***

Opposition to health care reform may arise from many different sources because of institutional, individual, professional, and ideological reasons. For example, shifting resources into primary care may create opposition among academics and specialist hospitals, bureaucrats may oppose change to preserve their individual positions, the training of nonphysicians for health service management posts may create opposition among doctors, and some may view sanitary-epidemiological stations as the symbol of the successes of Soviet health care and therefore resist moves to change their functions. PPCUs need to understand the underlying reasons leading to opposition to particular measures and the driving forces behind competing arguments.

### ***Setting the Pace of Implementation***

While support (or pressure) for speedy reform is often substantial, implementing the proposed change on a small scale and evaluating its results prior to countrywide implementation is generally advisable. While arguments against the use of pilot projects are legitimate, for example, that they tend to attract unreplicable levels of support and funding, or that they lead to a never ending cycle of pilot and demonstration projects that never ultimately lead to national change, PPCUs should bear the advantages of gradual implementation in mind, be it through regional pilots or the phased introduction of certain measures, such as gradual raising of prices.

### ***Handling the International Community***

The initial phase of contact between the Central Asian republics and the international community has allowed the development of mutual trust, so that many multilateral and bilateral agencies are now engaged in assisting health sector reform in the region. Different international institutions have their own specific *raison d'être* and their specific policies, regulations, and style of operation, and it is not surprising that they sometimes give conflicting messages. International organizations do sometimes work closely together, but this is not always the case. They may wish to preserve their own distinct identity within projects and to have direct access to the government, and they may be strongly opposed to another organization telling them what to do.

Clearly, the national government is the only actor in a position to coordinate the activities of the international assistance community effectively, and a structure is required to fulfill this function. State planning committees or external relations departments of ministries (which currently undertake this coordinating task) may not be well suited to dealing with technical issues, and PPCUs are probably better able to coordinate the technical inputs and activities of international organizations. PPCUs may be able to synchronize the outputs of different agencies to achieve maximum impact, which may be more acceptable than trying to coordinate inputs into areas that the donors do not necessarily favor. External assistance may not correspond with national priorities, however, and countries must be willing to say no to an offer of assistance that does not fit their own assessment of needs.

# 15

## *The Role of the World Bank in Facilitating Health Sector Reform*

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World Bank

The World Bank made its first health sector loan in 1970, when it lent US\$2 million to Jamaica. Since then, the Bank's activities in the health sector have grown to the extent where it is now the single largest external financier in low- to middle-income countries and a significant contributor to international debates on health policy. This trend is consistent with the Bank's mandate, which is to be a partner in strengthening economies and expanding markets to improve the quality of life for people everywhere, especially the poorest.

Although the proportion of children who die before reaching the age of five is still unacceptably high, it is less than half the level that prevailed in 1960. With improved education, populations throughout the world have a better chance to live healthier, more productive, and independent lives. Reduced poverty, combined with adequate food, clean water, and better housing, create the environment necessary for good health. Yet as we approach the turn of the century, hundreds of millions of people still lack access to basic health services, acceptable levels of education, and adequate nutrition (Jamison and others 1993). Each year 0.5 million women die from preventable complications of pregnancy, 3 million children die from a lack of clean water, more than 1 million children go blind because they do not get enough vitamin A, and another 50 million children are mentally and physically impaired because of a lack of iodine in their diets. Estimates indicate that deaths from tobacco-related diseases will rise from 3 million per year today to 10 million by 2025, with 7 million of these deaths occurring in developing countries. The health challenges of the 21st century are therefore great.

### **The Role of the World Bank Group**

The World Bank's activities in the health sector fall into four categories:

- Credits and lending
- Policy advice
- Research
- Special grants.

#### *Evolution in Credits and Lending*

The Bank has changed a great deal since its creation in 1944. During the last 50 years it has evolved from an organization created to reconstruct postwar Europe into a modern institution that seeks to enter into partnerships with clients and other international organizations to expand markets and strengthen economies to improve the quality of life for people everywhere, especially the poorest. Box 15.1 explains the terms under which the World Bank credits and loans operate, and box 15.2 illuminates the Bank's efforts to improve health care in Eastern

**Box 15.1. Terms of Credits and Loans**

The World Bank consists of the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). A country must have a per capita annual income of less than US\$905 to be considered for new assistance under IDA terms (the cutoff for existing IDA members is US\$1,465 per capita). Countries that fall into this category benefit from a zero percent interest rate, a 0.75 percent service charge, a 10-year grace period, and a 35- to 40-year maturity. Currently about 60 percent of the Bank's financial support to the health sector is on IDA terms.

Most of the Bank's remaining financial support to the health sector stems from IBRD loans. Countries that borrow from the IBRD pay close to going international commercial interest rates (currently around 7 percent). Terms range from 15 to 20 years, with a grace period of 3 to 5 years depending on the country's income level. A process of graduation from Bank borrowing is initiated when a country reaches a per capita annual income of US\$5,295.

Currently, related World Bank Group institutions—the International Finance Corporation, which works closely with the private sector, and the Multilateral Investment Guarantee Agency, which provides guarantee facilities for direct foreign investment—do not play an active role in the health sector. This may change as private sector involvement in the health sector increases.

**Box 15.2. Confronting the Health Care Crisis in Eastern Europe and Central Asia**

Preventing a collapse in basic health services during a period of severe economic decline, supporting structural reforms, and finding effective ways to address an "epidemic" in chronic diseases has been a major challenge for the Bank in the region during the past five years (Preker and Feachem 1995). In Albania, Bulgaria, Georgia, and Macedonia the focus has been on strengthening essential health services. Projects in the Kyrgyz Republic, Romania, and Russia have tried to address acute pharmaceutical supply shortages. Projects in Estonia, Poland, and Hungary have attempted to adapt the former centrally planned health services to an emerging decentralized and market-oriented society. Responding to reconstruction needs, shortages in critical supplies and rehabilitation of war victims has been the priority in Bosnia and Croatia. Additional projects are under preparation in most of the other former socialist states. The current health portfolio value in the region has reached nearly US\$800 million and is expected to increase to about US\$2 billion in the next three years.

Europe and Central Asia. In recent years this transformation has had a profound impact on the Bank's involvement in the human resource sectors (education, population, health, nutrition, and social safety nets).

Evidence that human capital development contributes to economic growth and poverty reduction is well known. No country can achieve sustained improvements in living standards without investing in its people. As a result of heightened awareness of this relationship, Bank lending for human development increased sharply from an average of about 5 percent of total lending in 1980 to more than 17 percent of total lending in 1996. Currently some 10 percent of the Bank's staff work in the field of human development.

Since 1970, the Bank's lending to the health, nutrition, and population sector increased to reach a portfolio value of more than US\$10 billion in 1996, which consisted of 191 projects in 86 countries. The average annual value of new loans to the health sector was US\$1.3 billion during 1993–95, and was anticipated to increase to more than US\$2 billion per year during 1996–98. The major focus of lending—more than 75 percent of total lending—remains basic health, nutrition, and population services. In recent years loan funds dedicated to nutrition, reproductive health,

and the control of tuberculosis and of HIV and other sexually transmitted diseases have also increased dramatically. Average annual lending for nutrition was US\$185 million during 1990–95, while lending for reproductive health activities was around US\$300 to US\$500 million. Average annual lending for essential drugs and other work related to the pharmaceutical sector has now reached US\$350 million.

Direct investment in the health, nutrition, and population sector is, however, only one of many Bank activities that have an impact on health. Lending in 1995 included US\$2.1 billion for projects in the education sector and US\$648 million for other social sector projects. At the time of the March 1995 World Summit on Social Development in Copenhagen, the Bank committed itself to providing US\$15 billion for basic social needs and a further US\$5 billion for water supply and sanitation programs during the next few years.

### *Policy Advice*

The Bank participates in national and international health policy debates through several channels. Country-based analytical studies of specific topics such as health financing, health care delivery systems, and health manpower—so-called sector work—have long been an important complement to direct financial support. These studies serve both to educate Bank staff about health issues and investment needs in client countries, and to stimulate analysis, debate, and consensus building among national decisionmakers. Examples of countries for which the Bank has recently published such studies include Chile, India, the Kyrgyz Republic, Malawi, Mexico, Poland, and Tunisia. Major country reports will soon be published for China and Jordan.

The Bank is also active in conducting studies of and providing policy advice on the interaction between different sectors and their impact on the health sector. The most prominent example of recent work in this area was *The World Development Report 1993: Investing in Health* (World Bank 1993). This report has helped guide and refine Bank support for health, as well as to influence national and international debates on health policy in middle- to low-income countries. The reference list provides examples of other recent publications (World Bank 1994a,b,c,d).

Finally, the Bank participates in international forums, including major conferences like the 1994 International Conference on Population and Development in Cairo and the 1995 Social Summit in Copenhagen. One area of growing concern has been the nurturing and development of the next generation: the children of developing countries. The Bank sponsors and participates in the Task Force for Child Survival and in the Global Micronutrient and Safe Motherhood Initiatives. In 1996 the Bank was a major participant in the First International Health Economics Association Conference in Vancouver, the International AIDS Conference in Vancouver, and the Sixth International Conference on Systems Science in Health Care in Barcelona.

### *Research*

The Bank also carries out additional research and analysis to address key health needs and concerns common to many developing countries. In recent years, health sector reform has been at the center of much of the Bank's project and sector research work in both middle- and low-income countries. This emphasis on health sector reform is part of a general shift that sees systemic reforms in the human resource sectors (education, health, and social safety nets) as a way to improve investment sustainability, growth, and poverty alleviation. Through the Ad Hoc Committee on International Health Research and Development, the Bank is currently working to develop new strategies for international collaboration to address neglected research priorities in infection, noncommunicable diseases, and health policy.

### *Special Grants*

In addition to loans, the Bank cofunds 20 regional health programs through a special grants program that supports activities that could not easily be undertaken at an individual country level. Typically, the Bank provides 10 to 15 percent of the total costs, with approval contingent on the commitments of other donors. The longest standing and best known activity is the highly successful Onchocerciasis Control Program. At a cost of less than US\$1 per person per year, the impact of this program has been immense. Since it began in 1974, 30 million people have been protected from river blindness, 9 million children have been born safe from the risk of acquiring the disease, and 1.5 million afflicted people have been cured. Other special grants address the AIDS epidemic, micronutrient deficiency, reproductive health, tropical diseases, vaccination programs, and research on a variety of health policy-related topics.

### **Preparing for the Challenges of the 21st Century**

None of the international organizations have the global perspective, knowledge, specialized expertise, local field presence, and financing to face the health care challenges of the 21st century alone. Demographic shifts, with continued population growth, aging of populations, urbanization, and a growing number of poor, will put new demands on health care systems. Looming behind these trends are a number of as yet unknown threats, which might include new diseases and epidemics, political turmoil, and economic disparity. Responding to developing countries' most pressing needs will require the combined ingenuity of all those who work in the international field, including nongovernmental organizations and academic institutions.

Several recent initiatives underscore the importance and urgency that the Bank has attached to finding new and more effective ways to assist developing countries. These fall into four categories as follows:

- Developing a strategic view of the health sector that builds on the Bank's relative strengths as a financial and policy-based technical agency
- Improving the knowledge base used to provide effective and top-quality advice to developing countries in critical areas where the Bank has a relative advantage, while working more closely with other agencies that have specialized skills in areas where the Bank has no specific advantage
- Strengthening the professional skills of people working in the human resource sectors
- Adapting business processes to the evolving context of both developing countries and other development agencies.

The hope is that these efforts will allow the Bank to remain on the cutting edge in helping developing countries break the vicious cycle of poor health, low productivity, and poverty.

### **References**

- Jamison, D., W. H. Mosley, A. Measham, and J. Bobadilla. 1993. *Disease Control Priorities in Developing Countries*. New York: Oxford University Press.
- Preker, A., and R. Feachem. 1995. *Market Mechanisms and the Health Sector in Central and Eastern Europe*. World Bank Technical Paper no. 293. Washington, D.C.: World Bank.
- World Bank. 1993. *World Development Report 1993: Investing in Health*. New York: Oxford University Press.
- \_\_\_\_\_. 1994a. *Better Health in Africa: Experience and Lessons Learned*. Washington, D.C.
- \_\_\_\_\_. 1994b. *Enriching Lives: Overcoming Vitamin and Mineral Malnutrition in Developing Countries*. Washington, D.C.
- \_\_\_\_\_. 1994c. *New Agenda for Women's Health and Nutrition*. Washington, D.C.
- \_\_\_\_\_. 1994d. *Population and Development: Implications for the World Bank*. Washington, D.C.

# Appendix

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in collaboration with

### ***Human Resources Development Division of the Europe and Central Asia Country Department III of the World Bank Senior Policy Seminar on Health Sector Reform and Implementation in the Countries of Central Asia***

Ashgabat, Turkmenistan, June 3–7, 1996

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