

Состояние здравоохранения
в Центральной Азии

Report on Health Trends
in Central Asia

Декабрь 1994/December 1994

DRAFT

**HEALTH SECTOR INDICATORS
AVAILABLE THROUGH
GOVERNMENT INSTITUTIONS
IN THE CENTRAL ASIA REGION
OF THE FORMER SOVIET UNION**

Prepared by Mary Church and Eugene Koutanev

ZdravReform

Abt Associates, Inc.

Almaty, Kazakhstan

10 January, 1995

I. BACKGROUND	1
II. INDICATORS	2
II.A. Demographics.....	3
II.A.1 Regional Demographics	4
II.A.2 Kazakhstan	5
II.A.3 Kyrgyzstan	6
II.A.4 Turkmenistan	6
II.A.5 Uzbekistan	7
II.B. Health Outcomes	7
II.B.1 Regional Health Outcomes	11
II.B.1.a Crude Birth Rate.....	11
II.B.1.b Crude Death Rate	12
II.B.1.c Infant Mortality Rate.....	12
II.B.2 Kazakhstan.....	14
II.B.3 Kyrgyzstan	16
II.B.4 Turkmenistan	18
II.B.5 Uzbekistan.....	19
II.C. Morbidity	21
II.D. Maternal and Child Health	21
II.D.1 Regional Maternal and Child Health	22
II.D.1.a Maternal Mortality Ratio.....	22
II.D.1.b Abortion Rate.....	23
II.D.1.c Contraceptive Client Rate.....	24
II.D.2 Kazakhstan.....	25
II.D.3 Kyrgyzstan.....	26
II.D.4 Turkmenistan.....	27
II.D.5 Uzbekistan	27
II.E. Infrastructure.....	28
II.E.1 Regional Infrastructure	29
II.E.1.a Physician Rate	29
II.E.1.b Midlevel Personnel Ratio	29
II.E.1.c Hospital Bed Rate	30
II.E.2 Kazakhstan.....	30
II.E.3 Kyrgyzstan.....	31
II.E.4 Turkmenistan	32
II.E.5 Uzbekistan.....	32
II.F. Hospital Utilization	33
II.F.1 Regional Hospital Utilization	34
II.F.1.a Admission Rate	34

II.F.1.b Bed Occupancy Rate	34
II.F.1.c Average Length of Stay	35
II.F.2 Kazakhstan	35
II.F.3 Kyrgyzstan	36
II.F.4 Turkmenistan	37
II.F.5 Uzbekistan.....	37
II.G. Finances.....	38

I. BACKGROUND

ZdravReform, a USAID-funded program, is compiling health indicators available through government sources in the Central Asian republics. This compilation serves *ZdravReform's* major objective of supporting health service delivery and finance reforms by:

- providing a quantitative context in which government officials, project staff, and external experts can establish reform priorities,
- providing comparisons with health indicators in other countries so that relevant international experience can be focused on regional issues, and
- revealing unmet information needs to be addressed by a health information system that is more responsive to the management decisions critical in reform.

In November, 1994, two *ZdravReform* information systems specialists began a round of visits to Kazakhstan, Kyrgyzstan, Turkmenistan, and Uzbekistan (each Central Asian country except Tajikistan). The tables and charts included in this report were prepared in collaboration with the national medical statistics departments. The medical statistics managers and other officials then provided comments on the quality and interpretation of information. These comments form the bulk of the following narrative.

Reporting protocols established by the former Soviet Union (FSU) form the basis of the health information systems currently used in the Central Asian countries. During this period, achievement of centrally planned targets governed management strategy, rather than efficient operation of the service delivery network. This emphasis has had several consequences for information systems.

- Data are overcollected and underutilized. In the Soviet period, targets (and the data to indicate their achievement) proliferated. An enormous amount of data is collected, much of it unused.
- Data have been misreported in some areas in order to meet targets. Medical statistics managers can identify these areas.
- Some reporting protocols are idiosyncratic and do not accord with international standards. These protocols, for example, the infant mortality rate, often give a more positive cast to health status in the FSU than the international definitions would.

- Financial data reflect budget allocations rather than costs. During the Soviet period, facilities were allocated funds based on their capacities; there was no emphasis on the efficient use of financial resources, and little interest in the actual cost of maintaining the capacity.

The effects of the system's biases on the information can be fairly clearly defined. Hence the limitations on interpreting the information are also fairly clear. While the medical statistics departments are keenly aware of the constraints in their information systems and agree that complete reengineering is required for the information systems to support management decision making for health reform, funds are not available for personnel to redesign the system or for the purchase of the information technology required.

II. INDICATORS

Seven categories of indicators were collected: demographics, health outcomes, morbidity, maternal and child health, infrastructure, utilization, and finance. Each indicator was collected for the years 1978 through 1993, for both oblast and national levels. (Some data was unavailable, particularly for the early period.)

The indicators included here are collected through three government institutions: the Ministry of Health (MOH); the Bureau of Statistics (Goskomstat); and the Ministry of Finance (MOF). Data on infectious disease and immunization are collected by the Division of Sanitation and Epidemiology (SES). The MOH includes some of the SES data in its Annual Statistical Reports.

Each of these institutions uses a similar reporting hierarchy. Data at the national level comes from the oblast, which in turn collects it from the rayon administration. The rayon level collects from individual facilities in the case of the MOH and MOF, and from local representatives in the case of Goskomstat. The boundaries of these administrative areas remain essentially as they were in the Soviet period. (In Turkmenistan, the term velayat has replaced oblast, and etrap has replaced rayon.) The reporting protocols have been standardized and in place for several decades. Routine data is collected and reported at weekly, monthly, quarterly, and annual intervals; the frequency depends on the type of data.

The data included in this report were all taken from annual national reports. Nearly all of the data is included in the Annual Statistics Report published by the MOH in each country. Soviet reporting protocols compared the current year's performance with the previous year's. Little trend analysis was done, except for epidemiological surveillance. Medical statistics managers have begun analysis of longer term trends, but are constrained by limited technological and staff resources.

For each group of indicators, national trends are compared over the previous 15 years. For each separate indicator, the oblasts are ranked, and their rates of change compared

with each other and with the national trends. Temporal and geographic trends were discussed with the Ministry. The charts, maps, and tables that formed the basis for these discussions are included as Annexes to this report.

The period of time included, 1978-1993, covers 3 major periods in the former Soviet Union: 1978-1985, when the political and economic structures were relatively stable; 1986-1990, when the structures were crumbling; and 1991-1993, when the union had split into independent nations. Some officials, particularly within the FSU, criticize health reform and point to recent negative trends to substantiate their arguments. In fact, some of these trends began to decline in the mid to late eighties, before reforms had been implemented. A longer term analysis provides perspective on health trends, and may assist advocates of reform to state their case more convincingly.

Comparison of the indicators by oblast emphasizes the diversity within each country. Officials pointed to localized infrastructure weaknesses, ethnic makeup, and urban/rural patterns while explaining differences between oblasts.

II.A. Demographics

Population figures are collected and analyzed by Goskomstat. The MOH uses Goskomstat data for its population estimates. The last FSU census was in 1989, and current population estimates are extrapolated from this census and from vital events and residential registration records. While the census itself is generally regarded as accurate, there have been substantial population shifts since 1991. Russian, German, and other European ethnic groups have emigrated from Central Asia, and there has been some internal migration both within the region and within individual countries. At least in some localized areas, both the size and ethnic composition of the population may have been changed considerably as a result of these migrations.

During the Soviet period, migration was strictly controlled, and essentially no relocation occurred without the knowledge and consent of the government. Hence it was possible to have accurate population counts without using special demographic techniques to estimate migration. This may no longer be the case. While the law still requires registration, incentives for compliance are weak, especially for those migrating to Europe. Goskomstat also uses intercensal surveys and variations to estimate various population categories. These techniques may not entirely capture the effects of the substantial population shifts that have occurred since the last census. MOH and Goskomstat officials agree that population size and age stratification are uncertain in localized areas in each country. These include areas with large European and Russian populations and large urban centers.

Goskomstat in each country publishes annual population estimates by gender in five year age groupings and an urban/rural breakdown by rayon. Goskomstat provides the MOH with population estimates of target groups established during the Soviet period: 0-14 years (pediatrics); 15-18 years (teens); 19 years and older (adults); and women of child bearing

age (15-49 years). Goskomstat can also provide specific age breakdowns, like 2 year olds, upon special request. In some countries Goskomstat also publishes estimates grouped by working age, those below and those above. (Women 55 and older, and men 60 and older, are considered above working age.) This provides an estimate of the size of a group whose health risks may be growing, the pensioners.

Goskomstat also publishes both the growth rate, which is the actual change in population between two points in time, and the rate of natural increase (RNI) which is simply the birth rate minus the death rate. The RNI is sometimes mistranslated as growth rate in English documents. Growth rates estimated after the last census may be unreliable because of the uncertainties arising from of recent migrations.

The tables in this compilation show total population for all countries. Where available, breakdowns of health service groups, urban/rural distributions, and pensioner populations are also included.

II.A.1 Regional Demographics

	Все население Total Population			% of		породское сельское: urban rural:		Pensioners	
	x1000	Rank	Total			x1000	% pop		
Центральная Азия и Казахстан - всего (4 countries) Central Asia - total (4 countries)	47843.2								
респ. Казахстан - всего Rep. Kazakhstan - total	16853.4	2	35%	57%	43%	2106.7	12.5%		
респ. Кыргызстан - всего Rep. Kyrgyzstan - total	4429.9	3	9%			454.8	10.3%		
Туркменистан - всего Turkmenistan - total	4361.3	4	9%	45%	55%				
респ. Узбекистан - всего Rep. Uzbekistan - total	22198.6	1	46%	40%	60%				

Uzbekistan has the largest population of the Central Asian countries, and Kazakhstan has the second largest. Turkmenistan and Kyrgyzstan, the smallest countries, each has roughly a quarter the population of one of the larger republics.

In each country, the urban and rural populations are very roughly the same size. Kazakhstan has the highest proportion of urban dwellers, and Uzbekistan has the lowest. The two largest countries have significant differences in the distribution of at risk age groups. Kazakhstan has a smaller proportion of the younger age group (and by inference a larger proportion of pensioners, although this data was not available for Uzbekistan).

In describing regional and national differences for all of the indicators, officials often point to behavior patterns associated with different ethnic groups. The fact that Kazakhstan has a more urban, older population reflects the fact that it has larger proportion of Russian and European ethnic groups. This explanation assumes that these ethnic groups work in industrial and professional jobs and tend to have smaller families than the more traditional Central Asian ethnic groups. The Russian and European ethnic groups are also considered to be more exposed to economic difficulties since they lack strong family ties to the agricultural sector, and to be readier to adopt new practices (like contraception). (Kazakhstan's population is 36 percent Russian and 44 percent Kazakh, according to Goskomstat,¹ and Uzbekistan's is 8 percent Russian and 71 percent Uzbek, according to the 1993 World Bank Country Report.²) Kazakhstan's age distribution, with 32 percent of the population under 15 years, suggests a reproductive rate more typical of urban European societies than its larger neighbor, Uzbekistan, where 41 percent of the population is under 15. Two oblasts in southern Kazakhstan that border on Uzbekistan have some demographic patterns that are congruent with this neighbor. South Kazakhstan has the same urban/rural distribution as Uzbekistan (40/60). Kzyl-Orda, largely populated by Central Asian ethnic groups, has the largest proportion of 0-14 year olds in Kazakhstan, 40 percent. This distribution is much closer to Uzbekistan's.

The areas bordering on the Aral Sea and the Amudarya and Syrdarya rivers, a focus of international attention because of catastrophic environmental degradation, are in three countries of the region: Kazakhstan, Uzbekistan, and Turkmenistan. The total population of the oblasts in the area surrounding the Sea itself and the rivers is approximately 5.9 million. These oblasts are: Kzyl-Ordinskaya, in Kazakhstan; Dashkhovuzsky and Lebapsky, in Turkmenistan; and Buharskaya, Navoiskaya, and the autonomous Republic of Karakalpakistan, in Uzbekistan. MOH officials described how all have suffered from the consequences of diversion of the river, agricultural and industrial chemical waste, and the receding sea. These have led to water shortages, high levels of soil and water contamination, and elimination of traditional water-based sources of food and livelihood. Predominantly rural, with low population densities, the oblasts surrounding the Aral Sea have limited infrastructure and financial resources to support health care delivery.

II.A.2 Kazakhstan

The 1993 figures show that South Kazakhstan is the largest oblast, with 12 percent of the population. (Almaty Municipality is separated administratively from the remainder of Almatinskaya, the oblast. The population of these two together is slightly larger than South Kazakhstan.) One-quarter of the population is concentrated in 3 (out of 21) areas:

¹ *Историко-географический атлас Казахстана 1993 (Исторические названия + новые названия)*, Goskomstat, Almaty, 1994, p. 11.

² *Uzbekistan: An Agenda for Economic Reform. A World Bank Country Study. 1993, Box 13.1.*

South Kazakhstan, Karagandinskaya, and Almaty Municipality; one-half of the population lives in 7 of the oblasts.

As the population density map shows, the north eastern, eastern, and south eastern portions of the country are the most densely populated, with the center and remaining border areas on the west more sparsely populated. The smallest oblasts, (Tourgaiskaya, Mangystauskaya, Atyrauskaya, Dzhezkazganskaya, and Kzyl-Ordinskaya) generally have poor, rural populations, with inadequate physical infrastructure, particularly transportation.

South Kazakhstan, the largest administrative unit, has large components of both urban and rural populations. The urban, industrialized population, centered around Shymkent, has very different responses to health care delivery than the outlying rural traditional areas. Ministry staff suggested that this would be a good area to compare rural and urban populations, since they live in relatively close proximity.

Kzyl-Orda borders on the Aral Sea. Its population of 603,000 comprises 10 percent of the Aral Sea catchment area, and 4 percent of Kazakhstan's population.

II.A.3 Kyrgyzstan

Osh and Dzhahalal-Abad are the most populous of Kyrgyzstan's seven oblasts, with more than half of the country's population. They are the westernmost oblasts and share borders with three countries: Uzbekistan, Turkmenistan, and China. Officials describe both oblasts as Uzbek, based on the large proportion of this ethnic group, and characterize both oblasts as conservative and traditional areas. Bishkek Municipality and its adjacent oblast, Chuiskaya, have another third of the population. This area has a different ethnic mixture: predominantly Kyrgyz and Kazakh, with a substantial Russian minority and is described as less conservative.

II.A.4 Turkmenistan

The three eastern and north central velayats of Turkmenistan have nearly two-thirds of the country's population. These velayats, Mary, Lebapsky, and Dashkhovuzsky, share borders with Uzbekistan on the north and Afghanistan on the east. These are all predominantly rural areas, with scattered populations. Dashkhovuzsky has the severest water problems, most limited transportation facilities, and weakest infrastructure.

The western velayat that borders on the Caspian Sea, Balkansky, is the only administrative area besides the capital, Ashgabad Municipality, that is predominantly urban. Its population centers around oil and gas production facilities and accounts for only 9 percent of the national total.

Lebapsky and Dashkhovuzsky, with a combined population of 1,890,000, account for 32 percent of the Aral Sea catchment population, and 43 percent of Turkmenistan's total population.

II.A.5 Uzbekistan

Uzbekistan's population is concentrated in the northeastern part of the country, which borders on Kazakhstan, Kyrgyzstan, and Tajikistan. Half of the population lives in 5 administrative units, or a third of the 14 units in the country. These areas have been population centers for millennia, because of their fertile soil and strategic position on trade routes between Europe and China. Tashkent oblast and municipality together account for 20 percent of the population, with Samarkand, Fergana, and Andijan contributing another 30 percent.

The western and south central oblasts of Karalpakistan, Navoi, and Bukhara, areas that border on the Aral Sea and the Amudarya river, have a total population of 3,396,000, or 15 percent of Uzbekistan's total population, and account for 58 percent of the Aral Sea catchment population. Karakalpakistan and Navoi have the country's weakest infrastructure.

II.B. Health Outcomes

The outcome indicators are broad characterizations of the population's health status, and the MOH in each country frequently uses them to compare areas. Three indicators are included in this category:

- crude birth rate (CBR: annual number of live births/1000 mid-year population),
- crude death rate (CDR: annual number of deaths/1000 mid-year population), and
- infant mortality rate (IMR: annual number of deaths of infants before one year/1000 live births in that year).

The crude birth rate and the crude death rate are exactly that: crude. They are often considered too imprecise for effective program evaluation. These rates have also attracted demographic and political attention with their unexpected trends during recent years in the FSU. These rates also can provide useful information, when interpreted with caution.

The counts of births and deaths used to calculate these indicators are collected through the Goskomstat vital events registration system. While the MOH receives reports on these events from hospitals, the Goskomstat data is used because it captures events that occur outside the hospital and records deaths by place of residence. During the Soviet period, compliance with vital events registration was enforced very effectively, and most births and deaths were likely captured. In recent years both procedures and incentives for compliance have changed, and in some areas fees are now charged for registration services that were

previously free. For example, Goskomstat used to come to the hospital to check that all births had been registered; now parents are expected to come to a government office to register the birth. In return they receive an entitlement to special food and services for the infant. Statistics managers believe that this incentive is powerful enough to ensure that virtually all births are registered. However, registration may be delayed by as much as several months, and the incentive for registration diminishes as infant services decline with the economy.

The accuracy of the vital events registration system in regard to infant deaths, particularly before the mid-eighties, has been questioned by many. Some maintain that infant deaths were consciously underreported, particularly in Central Asia.³ This view was indirectly corroborated by one statistical manager who suggested that political goals might be more useful than medical reasons in explaining infant mortality rates before the early to mid-eighties. Recent demographic analysis of the IMRs throughout the FSU from 1965 onwards suggests that the vital events registration system in Central Asia may have lost events before the late seventies and early eighties. This undercounting may have been large enough so that its correction could account for a noticeable rise in the rates during the seventies, and perhaps later, when the reporting system began to capture events more completely.⁴

There is general agreement among the statistical managers that the current vital events registration system captures virtually all deaths, even in remote and rural areas. Survivors require a death certificate to transfer any benefits and close the affairs of the deceased. Deaths outside the residence of record, particularly if there are no survivors, may not be recorded.

Infant deaths may still be moderately underenumerated in some areas. Registration of the death may be delayed in rural areas, with the result that some infant deaths may be registered as occurring after 12 months of age. The explanation is that in rural areas, people prefer to have their family members die at home. The death at home is registered eventually, but not as promptly as it would have been at a hospital. The statistics manager in Kazakhstan has compared infant mortality rates with 12-23 month death rates in several areas. He saw no indication that declines in infant mortality were accompanied by increases in the rate for the older group.

Live births and deaths in the first few hours of life have also been undercounted according to international definitions. The protocols used to define live births during the Soviet period enumerate premature and underweight infants who die within the first few hours of life as stillbirths rather than live births, which would be their classification using international definitions. Various groups have estimated the adjuster that should be applied

³Murray Feshbach and Alfred Friendly, Jr. *Ecocide in the USSR*, BasicBooks. New York, 1992, pp. 4-5.

⁴Get reference from George Demos documents.

to make Central Asian and other FSU IMRs comparable with those of countries using the international definition. The estimates range from an increase of 20 percent⁵ to 50 percent⁶. Kyrgyzstan began using the international definition in 1992. The change is reflected in the 1993 rate, which increased only 1 percent over the previous year's rate.

All of the countries in Central Asia except Kyrgyzstan continue to use the old Soviet definition of live birth, while recognizing the desirability of moving to the international standard. Kazakhstan and Uzbekistan plan to begin using the international definitions in the near future. The fact that the Soviet definition has remained the norm for most countries means that current data are comparable with those from the Soviet period.

The crude birth and death rates are calculated using the whole population as a denominator. Changes in these rates may reflect changes in reproductive and morbidity patterns, or they may simply reflect changes in the age distribution of the population. For example, if a population experiences a sudden exodus of young adults in the 18 to 35 age group, one would expect a decline in the birth rate because there are proportionally fewer women of reproductive age, along with an increase in the death rate because there are proportionally more in the young and old age groups that have a higher risk of death. In recent years, many areas of the FSU have reported a declining birth rate and increasing death rate.⁷ In at least some of these areas there have been fairly large outmigrations of young adults. The question is how much of the change in birth and death rates is associated with real changes in reproductive and mortality patterns, and how much with underlying changes in the population structure. Officials interviewed believe that recent changes in the rates reflect changes in reproductive and mortality patterns brought about by the general decline in the economy. Study of age-specific birth rates and of age-specific, cause-specific death rates would help elucidate the mechanisms of change.

⁵ Reference???

⁶ Feshbach and Friendly, op. cit., p.5. Also BUCEN reference.

⁷ *Russian Federation and Territories Data Base: Health and Economic indicators. ZdravReform Program*, September 1994, Tables 2.2.1 and 2.2.2.

To place these indicators in an international perspective, they may be compared to those of a high income country and of a developing country (Turkey).⁸ (These indicators are also compared graphically in Regional Trends: Chart 2.4.)

	IMR	CBR	CDR
респ. Казахстан Rep. Kazakhstan (1993)	28.0	19	9
респ. Кыргызстан Rep. Kyrgyzstan (1993)	31.9	26	8
Туркменистан Turkmenistan (1993)	45.9	33	8
респ. Узбекистан Rep. Uzbekistan (1993)	32.0	31	7
Turkey (1990)	60.0	48	7
High Income Country (1990)	8.0	7	9

The CBRs of all the Central Asian republics are between the comparator rates, with Kazakhstan closer to the developed countries; Turkmenistan and Uzbekistan closer to Turkey; and Kyrgyzstan between. The CDRs in each of the four countries fall near the comparator range. Uzbekistan's is slightly below; Kazakhstan's slightly above; and Turkmenistan's and Kyrgyzstan's in the center.

Turkey's IMR was 60.0 and the high income country's 8.0. All of Central Asia's rates were well below Turkey's, with Kazakhstan's IMR, the lowest, at half that of Turkey; and Turkmenistan, the highest, at two-thirds of Turkey's. If these rates are corrected by 50 percent, to account for deviations from international definitions, the lowest rates, in Kazakhstan, Kyrgyzstan, and Uzbekistan, become two-thirds of Turkey's, and Turkmenistan's becomes comparable to Turkey's.

⁸Data for Central Asian countries from the respective MoH Data for comparison from: Susan Welsby. *Republic of Turkmenistan: Review of the Documentation on Women's and Children's Health*, 1992, p.2.

II.B.1 Regional Health Outcomes

	Рождаемость на 1000 Crude Birth Rate				Смертность на 1000 Crude Death Rate				Млад.смертность Infant Mortality Rate			
	Изменение в 1993		Знач. Rate	Ранг Rank	Изменение в 1993		Знач. Rate	Ранг Rank	Изменение в 1993		Знач. Rate	Ранг Rank
	% % Change	1978 - 1988 - 1993 1993			% % Change	1978 - 1988 - 1993 1993			% % Change	1978 - 1988 - 1993 1993		
респ. Казахстан - всего Rep. Kazakhstan - total	-22%	-24%	18.7	4	26%	19%	9.2	1	-22%	-4%	28.0	4
респ. Кыргызстан - всего Rep. Kyrgyzstan - total	-14%	-17%	26.1	3	-4%	3%	7.7	3	-26%	-13%	31.9	3
Туркменистан - всего Turkmenistan - total	-4%	-8%	33.1	1	-2%	1%	7.9	2	-21%	-14%	45.9	1
респ. Узбекистан - всего Rep. Uzbekistan - total	-9%	-12%	30.9	2	-4%	-3%	6.6	4	-31%	-26%	32.0	2

II.B.1.a Crude Birth Rate

Crude birth rates during the past 10-15 years have shown very similar trends in countries in the region (Regional Trends: Chart 2.1). In each country, a peak was reached in the mid-eighties, and the CBR has declined fairly steadily since then. In all countries, CBRs have fallen below the 1979 levels. The pattern of recent steady decline in the CBR has been observed in many areas in the FSU.

The rates and trends for Uzbekistan and Turkmenistan have been almost identical over the past 15 years, with Uzbekistan's CBR currently 10 percent lower than Turkmenistan's. While Kazakhstan's declining trend over the past 8 years parallels the other two countries, its CBR has been consistently lower, about two-thirds of the other two countries. Kyrgyzstan's trend parallels the others, with the rate lying about midway between Kazakhstan's and those of Uzbekistan and Turkmenistan.

Officials often use the CBR as a rough indicator of reproductive patterns at different points in time and in different geographical areas. Because the CBR is sensitive to the age structure of the population, the total fertility rate (TFR: the average number of live births for a woman entering her reproductive years) is usually considered a more reliable indicator of reproductive patterns *per se*. In Kazakhstan, trends in the CBR and TFR have mirrored each other closely for the past 15 years (Kazakhstan : Health Outcomes: Chart 2.6), and the recent decline in the CBR appears to reflect changes in reproductive patterns. It would be useful to calibrate the CBR's responsiveness to reproductive patterns in other settings, and to estimate the effect of population distribution on the variance between different areas.

Officials in all four countries point to recent declines in the general economic outlook to explain recent declines in the birth rate. Birth rates began to decline in 1988, and by 1993 had reached the lowest point in the past 15 years. In all four countries, the CBR's decrease during the past five years accounts for all of the change during the past decade. The rate of decrease since the mid-eighties may reflect differences in the countries' urban/rural population distribution and ethnic makeup, with urban areas with large Russian and European populations showing the steepest declines. Kazakhstan's rate of decline since 1988 is 24 percent; Kyrgyzstan's, 17 percent; Uzbekistan's, 12 percent; and Turkmenistan's, 8 percent.

II.B.1.b Crude Death Rate

Like the crude birth rates, the crude death rates for Turkmenistan and Uzbekistan show similar trends for past 15 years (Regional Trends: Chart 2.2). Fairly steady in the early eighties, the CDRs declined in the second half of the 1980s, and had begun to rise by the nineties. In Kazakhstan the rate began to rise around 1986; in the other three countries, around 1990-91. During the eighties, Kazakhstan's CDR lay between Uzbekistan, the lowest, and Turkmenistan and Kyrgyzstan, the highest. By 1990, Kazakhstan's CDR exceeded all of the other countries, and it has remained the highest throughout the nineties.

Kazakhstan's current CDR is the highest recorded in any of the countries in the past 15 years. 1993 CDRs in Kyrgyzstan, Turkmenistan and Uzbekistan are at roughly the same level as they were in 1979; below the peaks of the early eighties and above the troughs in the late eighties. Between 1992 and 1993 three countries, Kazakhstan, Kyrgyzstan, and Turkmenistan experienced rises of 10-15 percent in the CDR.

Age-specific, cause-specific mortality data is available in all countries, both from hospital reports to the MOH and from Goskomstat civil registries. The MOH data is described as more accurate, medically, and the Goskomstat data as more complete. The medical statistics division in Kyrgyzstan has begun analysis of age-specific rates for 1992-1993. Preliminary results indicate that death rates are increasing among the over 45 age group. ZdravReform is assisting in preparing the Kyrgyzstan Goskomstat age-specific, cause-specific data for analysis.

II.B.1.c Infant Mortality Rate

Trends in infant mortality rates (Regional Trends: Chart 2.3) show many of the same characteristics as the birth and death rates. IMRs in all countries declined from 1978-1983. In Kyrgyzstan, Turkmenistan, and Uzbekistan, the rates then rose back to their 1978 levels, then declined again from 1986 to 1990. In Kazakhstan, the decline begun in 1978 continued gradually until 1990. Officials attribute the declines apparent from 1986-87 onwards to special maternal and child health programs begun during this period; many of these programs no longer have the resources to continue operating. Trends since 1990 are

mixed: level, with some slight increases. (The statistics chief in one MOH cautioned that IMRs before 1985-86, especially declines, might be more reflective of centrally planned targets than infant deaths.)

In all countries, the rates hover at their lowest levels since 1978. During the past 15 years, Kazakhstan has had the lowest rate; Turkmenistan, the highest; and Uzbekistan and Kyrgyzstan roughly midway between the other two. Rates in Uzbekistan and Kyrgyzstan have declined more quickly than in Kazakhstan.

Officials monitor the infant mortality rate closely. While they see some tendencies towards slight increases, only in Bishkek has the rate increased enough to attract significant attention. There the rate rose from 28 to 50 between 1991 and 1993. Some of this rise may be attributable to changes in the reporting system (see below, under Kyrgyzstan).

Because of the international attention that has been focused on the environmental damage to the Aral Sea region, the outcome indicators for the affected oblasts have been compared. The infant mortality rates, Regional Trends: Chart 2.31, show the most striking trends. This chart includes the IMRs for the oblasts immediately adjacent to the Sea, along with overall rates for the countries: Kzyl-Orda, in Kazakhstan; Karakalpakistan, in Uzbekistan; and Dashkhovusky, in Turkmenistan. (Dashkhovusky does not border the Sea, but is, geographically, the southern portion of Karakalpakistan.)

From 1985 to 1987, the IMRs in both Karakalpakistan and Dashkhovusky showed a sharp increase. They have declined since then, both returning to near the 1983 levels by 1993. The national rates remained fairly steady, during the same period, indicating that it was a localized crisis. (Turkmenistan's IMR does rise slightly, perhaps an effect of the events in the Aral Sea region, since the Dashkhovusky velayat accounts for 20 percent of the country's population.) The fact that the IMR for Kzyl-Orda, the Kazakhstan oblast on the northern side of the Sea, remains fairly steady during this period surprised all of the statistics managers.

Analysis of age and cause specific death rates might help clarify the mechanisms at work in this sudden rise in the IMR. It is not known how much of the relevant data is available.

The statistics chiefs noted that the situation in the Aral Sea had been difficult for some years, but in the mid-eighties, it became a crisis. In 1989 Turkmenistan sent teams of physicians from Ashgabad to the affected areas, to screen the population and provide basic curative and preventive care. Positive effects of this action may be traced in a decline of some 20 percent in the IMR between 1989 and 1992. While the Turkmenistan MOH has wished to repeat this intensive effort, lack of funds has prevented it from doing so.

[Add: comments from Feshbach and Aral Sea study group.]

Ecological damage to the Aral Sea has been caused in part by siphoning the water of the Amudarya river into irrigation projects, where concentrated agricultural chemicals were

sometimes used. Similar charts of the IMRs in the oblasts bounding the river, Regional Trends: Charts 2.32 and 2.33, do not show the same effects as in the oblasts near the Sea. The IMRs in Lebapsky velayat, in Turkmenistan, show a modest increase in the late eighties and have declined in the nineties. In Uzbekistan, Buhara oblast's IMR rose from 1982-84 and has declined since then; data from Navoi are incomplete, but suggest a modest rise in the mid-eighties, followed by a steady decline.

The crude death rates for the Aral Sea region (Regional Trends: Chart 2.21) show trends similar to the IMRs, with peaks in 1986 for Karakalpakistan and Dashkховusky. In the nineties, CDRs in both Kzyl-Orda and Dashkховusky began to rise, while that of Karakalpakistan has declined fairly steadily. Kzyl-Orda's rise has been quite steep; now its CDR is quite close to that of Dashkховusky. It is difficult to associate recent changes in the CDRs in Kzyl-Orda and Dashkховusky with events in the Aral Sea, however, since their increases in the nineties parallel the changes in national CDRs.

Crude birth rates for the Aral Sea oblasts (Regional Trends: Chart 2.11) remained fairly steady through the mid-eighties. They began to decline towards the end of the decade, and this trend has continued to the present. As with the CDRs, these trends are difficult to associate with the situation in the Aral Sea, since they closely match the national trends. Karakalpakistan's CBR is somewhat exceptional; it has declined far more rapidly than that of the whole of Uzbekistan.

II.B.2 Kazakhstan

The national trends for the three outcome indicators are shown Table 2.1 and Chart 2.1. The direction of all three trends changed between 1986 and 1989. To interpret these changes, the ministry points to political, economic, and population changes beginning around 1988 and a progressively worsening environment.

CBR: The CBR rose slightly from 1978 to 1984, then was steady until 1988, when an annual incremental decline of some 5 percent began (Tables 2.1-2 and Chart 2.2). By 1993, the CBR had declined to 18.7, three-quarters of its 1978 level, with nearly all the change in the 1988-93 period. The MOH attributes the decline in the birth rate to reluctance to enlarge a family in the face of bleak economic prospects. Trends in Kazakhstan's CBR appear to parallel changes in its TFR, as mentioned previously (Kazakhstan : Health Outcomes: Chart 2.6). Comparison of age-specific birth rates between 1987 and 1993 suggest that the population changed its reproductive behavior during this period.⁹

Births / 1000 women
Age group (years)

⁹ *История Казахстана 1993, op. cit., p. 26.*

Year	<20	20-24	25-29	30-34	35-39	40-44	45-49
1987	41.5	227.5	188.6	103.1	51.3	15.7	1.5
1993	47.5	207.0	128.5	65.9	28.3	7.0	0.7
% difference	14%	-9%	-32%	-36%	-45%	-55%	-53%

While the teen birth rate increased, and the 20-24 decreased by 9%, rates in the 30 and older groups (those more likely to have at least one child already) declined by a third to a half.

Kazakhstan's demographic diversity shows itself in the variance of CBR among oblasts. The highest 1993 rate, 30.3 in Kzyl Orda, was nearly treble that of the lowest rate, 11.6 in Almaty Municipality. The oblasts with higher CBRs are characterized by traditional rural populations. Those with lower CBRs have large populations of urban dwellers and of European and Russian ethnic groups. These are the industrialized oblasts in the north and east and in the largely German, rural oblast of Acmolinskaya. South Kazakhstan, which has the second highest CBR, fits into the CBR patterns characteristic of rural areas even though it has a large urban population. Oblasts with the lowest rates had shown the greatest change during the past 15 years, and those with the highest rates had the smallest change.

CDR: The CDR rose between 1978 and 1986, then declined until 1988, when it began to rise again (Tables 2.1, 2.3 and Chart 2.3). Since 1988 it has increased by 19 percent to 9.2, a rate of change comparable to the decline of the CBR.

The variance of CDR among oblasts is not nearly so large as the variance of the CBR. The highest CDRs are found in the industrialized oblasts of the north and east, and the lowest in rural areas. South Kazakhstan, with one of the lowest CDRs, again fits into the rural pattern. The highest CDRs are associated with areas where levels of industrial pollutants are known to be high: East Kazakhstan, North Kazakhstan, Semipalatinsk (radiation pollution), and Karaganda. They have also been most strongly affected by the economic decline. Both internal and external migration of marginal populations into industrial areas may also have contributed to the rise of the CDR in these areas. Almaty Municipality has always had a high CDR, attributed partly to an older population and partly to the fact that chronically ill people may move to the capital for care. Age and cause specific death rate analysis could clarify the medical factors contributing to the CDR.

Within Kazakhstan, the CBR and CDR have a rough inverse relation to each other, as seen in the maps of these rates. Areas with high CBR have a low CDR; those with a high CDR have a low CBR. In explanation, ministry staff point to the demographic differences between the areas mentioned above. The oblasts with higher CDRs tend to be urban industrial areas with large Russian and European ethnic groups, while those with lower CDRs are more rural areas. All of the statistics managers are attentive to areas in which the CBR may drop beneath the CDR, resulting in a negative rate of natural increase (or a positive rate of natural decrease). In Kazakhstan, the MOH is tracking Almaty

Municipality closely because the difference between the CBR and CDR went from 10/1000 to 2/1000 between 1988 and 1993 (Kazakhstan : Outcomes: Chart 2.5).

IMR: The IMR declined from 1978 to 1989, when it began to rise again (Tables 2.1, 2.4 and Chart 2.4). Despite a rise during the past four years, at 28.0 the IMR remains lower than it was in 1988.

- The highest IMRs, and the highest CBRs, are in the least densely populated, and largely rural, oblasts. Transportation is expensive and unreliable in these areas, and the Ministry sees this, as well as a conservative population, as a serious obstacle to improving health care delivery.
- The lowest IMRs are in highly urbanized areas, where birth rates are lowest, and where family planning and medical services are more accessible; these areas have also seen substantial declines in their IMRs during the past decade.

II.B.3 Kyrgyzstan

The national trends for the three outcome indicators are shown Table 2.1 and Chart 2.1, and the oblast trends in Tables 2.2-4 and Charts 2.2-4. As in Kazakhstan, the direction of all three trends changed in recent years, between 1986 and 1992. The ministry emphasizes political, economic, and population changes in interpreting the changes.

CBR: The national rate increased fairly steadily between 1978 and 1987, when a sharp decline commenced resulting in the 1993 rate of 26.1, some 15 percent below the 1978 level. The ministry associates this decline with families' reluctance to have more children in the face of economic uncertainties. Age specific analysis of birth rates would help clarify this mechanism.

As in Kazakhstan there is a fairly consistent inverse relationship between an oblast's current CBR and its change during the past 15 years. The ministry points to different family size preferences in the ethnic groups to explain CBR differences between oblasts.

- The western oblasts of Osh and Dzhatal-Abad have the highest CBRs, closely followed by their neighbors in the center, Naryn and Talas. These oblasts are both rural and urban; all have predominantly Central Asian populations.
- The lowest CBRs are in Bishkek Municipality and its surrounding oblast, Chui. Both have large Russian ethnic populations.

CDR: Between 1978 and 1986 the rate rose and fell several times; it remained fairly steady around the 1986 low until 1991 when it began to increase. Between 1992 and 1993, the increase was quite steep, approximately 15 percent, to 7.7. As mentioned previously, the ministry has undertaken an analysis of age specific rates to clarify the factors causing the change and has discovered that while death rates in the over 45 population are rising, those in the younger population are falling. ZdravReform will assist in expanding the data for analysis to include cause specific information.

As in Kazakhstan, the highest CDRs are in the areas that have the lowest CBRs, Chui and Bishkek; and the lowest CDRs in the areas that have the highest CBRs. Based in part upon its age-specific analysis of death rates, the ministry suggests that the older population here has more difficulty finding the means to survive than the same age group in rural communities. Osh, also an urban center, has the lowest CDR. Here the consequences of economic decline on the older population may be mitigated by the family ties to rural resources common among urban Central Asian ethnic groups.

IMR: Fairly even from 1978 to 1985, the IMR declined steadily until 1990-91, when it began to increase. At its 1993 level of 31.9, it remains below the 1988 level. The ministry associates the IMR's decline in the late eighties with the introduction of a maternal and child health program that included food supplementation. This program has considerably reduced its services because of funding decreases.

Bishkek has the highest IMR in the country, with a very steep increase from 36.5 to 50.0 between 1992 and 1993. The reasons for this increase are not entirely clear. In general, Bishkek can be expected to have a higher rate simply because it is the only referral center for difficult cases. Since infant deaths are registered at the location of death (rather than mother's residence), Bishkek will have a larger number of infant deaths registered than its population warrants. (Approximately 25 percent of infants whose deaths are registered in Bishkek had parents who were registered elsewhere. This proportion does not appear to

have changed substantially between 1992 and 1993.) Some of the increase in Bishkek's IMR may arise from the adoption of international standards to report infant deaths; these standards count more events as infant deaths than do the earlier standards. There is also some evidence that births are undercounted in Bishkek because some are not registered; the unregistered may amount to some 2000 births per year. A cause specific death rate analysis could provide clues to the medical factors influencing the IMR. The ministry points out that the increased difficulty and cost in obtaining transport to a hospital may have begun to deter families from seeking medical assistance in a timely manner.

II.B.4 Turkmenistan

Turkmenistan's slight declines in crude birth and death rates since 1978, 4 percent and 2 percent, show the smallest changes among the four countries. The decline in its IMR, 21 percent, is greater than Kazakhstan's and less than Kyrgyzstan's and Uzbekistan's. These changes suggest a country in which improvements in basic health services have reduced infant mortality, while the social and economic factors that affect overall birth and death rates have changed little.

Some government officials have questioned the accuracy of population figures provided through Goskomstat, and a census has been scheduled for January, 1995. (For example, between 1992 and 1993, the population was said to have increased by some 10 percent.) Population-based rates, like the CBR and CDR, should be interpreted cautiously for recent years.

CBR: Rising gradually from 1978 to 1987, the CBR has since declined slightly since then to its current level of 33.1 (Tables 2.1-2 and Chart 2.2). Four velayats, Dashkhovuzsky, Maryisky, Ahalsky, and Lebapsky, have the highest rates, around 35. Ashgabad, the capital, has the lowest rate, at 21.9, and Balkansky, the western velayat that borders the Caspian Sea, also has a low CBR. The ministry associates this pattern with several factors. Areas with high CBRs have traditional populations who place a high value on large families. Ashgabad's and Balkansky's CBR reflect the values of a recently urbanized population. Dashkhovuzsky, the northwestern velayat near the Aral Sea, had the largest decrease in CBR of the high areas. The difficulty of supporting large families in the declining environment may account for this decline. Balkansky, the western, predominantly industrial, velayat that borders the Caspian Sea, has had an influx of a largely male labor force to work in the oil and gas industry, and has had the largest CBR decline in the country since 1978. Analysis of age specific birth rates and age-gender population distributions could help explicate these factors.

CDR: While the CDR shows some unexpected reverses in several years, in general it declined from 1981 to 1990, when it began to rise again (Tables 2.1, 2.3 and Chart 2.3). As in Kazakhstan and Kyrgyzstan, the CDR increased sharply between 1992 and 1993. The ministry has analyzed national cause specific rates for 1990-1992 and would like to expand this analysis to include age, gender, and location stratifications. The cause specific

analysis was hampered by the large number of deaths recorded with unknown causes, and the ministry is attempting to improve the quality of this record keeping.

Ashgabad has the highest CDR, and is the only velayat with a substantial increase in the death rate since 1978. Dashkhovuzsky has had a small increase in its CDR since 1978 and has the third highest death rate (as well as a very high morbidity rate). Mary, Lebapsky, and Ahalsky have had modest decreases in their death rates, but Mary has the second highest rate in the country. The ministry attributes Ashgabad's high CDR to the migration of marginal populations to the capital; Dashkhovuzsky's increase to Aral Sea environmental degradation; and the decrease in other velayats to the improvement of medical services. The expanded analysis of death rates should be of great assistance to the ministry in further understand of the mortality patterns.

IMR: The national IMR has shown a tendency to remain fairly level for 4-5 years, then increase or decrease to another plateau; it increased in 1981, again in 1986, and then declined in 1990 (Tables 2.1, 2.4 and Chart 2.4). Its 1993 IMR, 45.9, is 21 percent lower than the 1978 level. During this period it has always been the highest among the four countries; its current rate is half again as much as the next highest, in Uzbekistan and Kyrgyzstan.

With the exception of the capital, the velayats' current IMRs are inversely proportional to their decrease since 1978.

- Dashkhovuzsky has the highest rate, 52.1, and has had the smallest decrease. The ministry points to the environmental damage caused by the Aral Sea, coupled with the area's poor transportation and service infrastructure, in explanation.
- Balkansky and Lebapsky have the lowest rates and the greatest declines. The ministry suggests that overall improvement in health services, and general economic improvement in Balkansky because of the petrochemical industry, are major factors in declining rates in these two velayats.

II.B.5 Uzbekistan

Uzbekistan has one of the highest CBRs in the region, despite the fact that its CBR has fallen in the past 8 years, at a rate roughly equal to that of Kazakhstan's. Its CDR is the lowest in the region, and the IMR is in the regional middle range.

CBR: Rising slowly between 1978 and 1986, the CBR has declined some 20 percent since 1986 (Tables 2.1-2 and Chart 2.2). The ministry attributes the recent decline to the effects of its family planning program. Nationwide, the number of contraceptive clients per 100 women of child bearing age has increased sevenfold since 1986 (see Section ??? below). Comparison of age specific birth rates and age-specific contraception and abortion rates would help corroborate the program's effects.

- The largest decline in CBR, some 30 percent, was in Karakalpakistan, the autonomous region bordering the Aral Sea. This region had one of the highest rates in the country until around 1989. The ministry suggests that it is unlikely that the family planning program alone could have had this effect and that the Aral Sea crisis also prompted families to limit their numbers. Declines of 15-20 percent in Horezm, Buhara, and Syrdarya may also be associated with the Aral Sea crisis as well as the family planning program.
- Small declines of less than 5 percent coincide with high CBRs in Sourhand (where the CBR increased), Samarkand, Ferghana, Namansky. The ministry pointed out that these are all fertile areas with large traditional agricultural populations. They are relatively immune to current adverse economic trends and have less incentive to limit family size.

CDR: After a slight increase from 1978 to 1983, the CDR declined steadily from 1983 to 1990, then began to increase at about the same rate as the earlier decline (Tables 2.1, 2.3 and Chart 2.3). Uzbekistan did not experience the same sharp increase in CDR between 1992-1993 as did the other countries in the region. The changes in oblast CDRs present something of a puzzle. The largest declines are in areas affected by Aral Sea, and the largest increase was in Sourhand, whose economy is relatively stable. Age and cause specific analysis of death rates could increase understanding of the mortality patterns.

IMR: The IMR wavered at the same level from 1978 to 1987, when it began to decline (Tables 2.1, 2.4 and Chart 2.4). The current rate, 32.0, is two-thirds of the 1978 rate. Since 1990, it has increased, then fallen again below the 1990 level. The ministry suggests that this may indicate some interruption of service following breakup of the FSU.

Karakalpakistan has the highest IMR in the country, as it has since 1985, when its IMR increased sharply (see section IIB.1.c Infant Mortality Rate, above). Its IMR has declined more slowly than any other oblast in the country. The ministry suggests that the Aral Sea crisis is a major factor influencing Karakalpakistan's IMR. However, the large decline in Horezm is puzzling, precisely because it is part of the Aral Sea catchment areas.

II.C. Morbidity

Morbidity data is collected through two channels: SES (the Division of Epidemiology and Sanitation) and the MOH. SES collects information on infectious diseases at weekly, monthly, quarterly, and annual frequencies; it also has a 24 hour emergency alert system. SES analyzes its own data and makes reports available to the MOH. The MOH itself collects data from all of its facilities (including outpatient points) and prepares annual morbidity summaries by oblast. These tables divide the age groups into 0-14 years; 15-17; and 18 and over. For each age group, the number of cases, number of first lifetime occurrences, and the number under treatment at the end of the year are reported, using the standard international ICD-9 classification system.

The Annual Statistics Reports published during the Soviet period and by its successor states have focused on the number of lifetime occurrences. This indicator is useful for assessing disabling or chronic conditions, but less useful than the number of cases for understanding the total disease burden, or the impact of treatment of chronic conditions. The first occurrence indicator is the only morbidity indicator that is disaggregated by oblast in the Annual Reports, and hence the only readily available morbidity comparator between oblasts.

While interesting, overall disease patterns are less useful for understanding issues and managing delivery than patterns and trends in specific diseases. Disease specific data, for both morbidity and first occurrence, by oblast, is available in MOH archives for 1989 onwards, but unpublished and largely unanalyzed (except for infectious diseases).

Collection and analysis of this data has begun for Kazakhstan. Morbidity data reported through the MOH must have a diagnosis attested by a physician. The outreach service team may not include a physician, and the cases they treat are not included in the MOH statistics. Morbidity estimates for those diseases that might be treated by a doctor in an urban area, but by midlevel personnel in an outreach setting, may not be reliable.

II.D. Maternal and Child Health

Three indicators were selected:

- maternal mortality ratio (MMR, annual number of deaths due to pregnancy and childbearing complications/100,000 live births in that year),
- abortion rate (abortions/1000 women of childbearing age (15-49)), and
- contraceptive client rate (annual number of contraceptive clients/1000 women of childbearing age).

The infant mortality rate and crude birth rate, discussed above, are also indicators of maternal and child health.

Immunization statistics have not been included with this group because several officials pointed out that this statistic is highly unreliable over time, since it was misreported in seventies and well into eighties to conform to government targets.

The MOH does not publish (and apparently rarely uses) the standard international indicators of child death rate (1-4 years) and under five mortality. Goskomstat does disaggregate deaths in the first five years of life by single year age groupings; it also can also estimate population by single years for this age group. The MOH sometimes uses this data for special studies. Births and deaths are also recorded in five year age groupings, by age of mother and age of deceased. Population estimates for these groups are also available.

II.D.1 Regional Maternal and Child Health

	Материнская Смертность Maternal Mortality				УровеньAbortов Abortion Rate				Использование контрацептивов Contraceptive Clients			
	Изменение в %		Знач. Rate	Ранг Rank	Изменение в %		Знач. Rate	Ранг Rank	Изменение в %		Знач. Rate	Ранг Rank
	1990 - 1978	1993 - 1985			1988 - 1979	1993 - 1985			1982 - 1988	1993 - 1993		
респ. Казахстан - всего Rep. Kazakhstan - total	-17%	-16%	62.8	3	-23%	-9%	68.9	1	#N/A	48%	292	1
респ. Кыргызстан - всего Rep. Kyrgyzstan - total	-2%	5%	80.1	2	-36%	-42%	51.4	2	#N/A	37%	235	2
Туркменистан - всего Turkmenistan - total	-6%	36%	105.3	1	-24%	-19%	35.0	3	#N/A	#N/A	#N/A	4
респ. Узбекистан - всего Rep. Uzbekistan - total	-42%	30%	42.8	4	-30%	-41%	28.1	4	1005%	251%	144	3

II.D.1.a Maternal Mortality Ratio

Data for the MMR is collected through the MOH. Virtually all pregnancies are followed, and every birth attended, by MOH personnel, who may be based in fixed facilities or outreach points. Each ministry believes that the system will capture most, if not all, events of maternal mortality. In the Annual Report, each ministry publishes the MMR and the number of maternal deaths by cause, disaggregated by oblast.

Following regional trends in the MMR is difficult because of changes in case definition and reporting mechanisms in the eighties (Regional Trends: Chart 4.1). From 1978 to 1987, maternal mortality included only women in the 28th or higher week of gestation. The denominator used to calculate the rate was the number of deliveries, including both still and live births. In 1988 the case definition was expanded to include all pregnant women,

and the denominator was changed to 100,000 women of childbearing age. This change caused the rate to increase. In Kazakhstan, for example, the 1988 rate calculated by the old method was 46 (per 100,000 deliveries), based on 182 maternal deaths; by the new method, the rate was 60.4 (per 100,000 childbearing age women), based on 237 maternal deaths.

In the late eighties, in Kyrgyzstan and Turkmenistan, maternal deaths were reported through Goskomstat, and were usually undercounted, in comparison with MOH records.

Since 1990, in all countries, data has been reported through the MOH and the new case definition and denominator used. In that short period, Uzbekistan has shown a consistent decline, while the MMRs in the other three countries have fluctuated up and down. Uzbekistan's MMR is the lowest, 24; Turkmenistan's the highest, 105; and Kazakhstan and Kyrgyzstan are roughly midway between the two. (Turkmenistan's rate may be inflated because of the inclusion of deaths not directly attributable conditions of pregnancy or delivery.¹⁰

II.D.1.b Abortion Rate

Each country's Annual Report includes both the abortion rate (per 1000 childbearing age women) and the abortion ratio (per 1000 live births). From 1978 to 1985 the Soviet protocols reported the number of abortions per 100 deliveries, both live and still births; from 1986 onwards both the rate and the ratio have been reported. The MOH collects information on abortions performed from all of its facilities. The reports distinguish between two types of abortion: outpatient procedures (vacuum extractions), called miniabortions; and inpatient procedures (usually D&C), called abortions. Except in Kazakhstan, the rate published in the Annual Report does not include miniabortions, which were introduced around 1985. In Kazakhstan, the rate has included miniabortions in some years, but not in others (1988-1991).

Officials in several countries pointed out that before the breakup of the FSU, the fear of negative social and professional consequences sometimes prevented single women from seeking an abortion in medical facilities. Unofficial abortions were and are performed (both within and outside MOH facilities). These abortions are not included in the official count unless they have sequels that cause hospitalization. Anecdotal evidence suggests that unofficial abortions may be less frequent now than during the Soviet period.

To include as much consistent data as possible, some of the rates in this compilation have been recalculated from counts of abortions and population estimates. However, it was not possible to return to the raw data in all cases. The regional abortion rates must be interpreted with caution (Regional Trends: Chart 4.2). In Kazakhstan, rates were

¹⁰Welsby, op. cit. p. 16.

recalculated to include miniabortions from 1988 to 1993; rates calculated by the MOH were used for 1979 to 1987. In Kyrgyzstan, rates were calculated for all years and include miniabortions. In Turkmenistan, the MOH rates, which apparently do not include miniabortions, were used. In Uzbekistan, rates were calculated for all years, but do not include miniabortions. The bottom line is: rates in Turkmenistan and Uzbekistan do not include miniabortions; rates in Kazakhstan and Turkmenistan are not comparable before and after 1986 because of the change in the rate's definition.

In the two countries where we can compare the trends over the past 15 years, Kyrgyzstan and Uzbekistan, the rates remained fairly level until 1988, when both began to decline steadily. By 1993 each had declined by about 40 percent of its 1988 level. The rate also declined from 1988 to 1993 in the other two countries, but not as steeply. Currently Kazakhstan has the highest rate, at 69; and Kyrgyzstan the second highest. Miniabortions are included in the rates for these countries; in both countries miniabortions account for about 30 percent of all abortions. The other two countries, in which miniabortions are not included, have the lowest rates. Adjusted for miniabortions by the 30 percent figure, they would approach Kyrgyzstan's abortion rate.

II.D.1.c Contraceptive Client Rate

While contraceptive data was collected during the Soviet period, it was not included in Annual Reports, and none of the four Central Asian countries includes this information in its Annual Report. The MOH collects the number of contraceptive clients in the previous year from the service delivery points' annual report. These reports include the number of IUD users (both ongoing and new) and the number of ongoing and new clients for oral contraceptives. This data does not include contraceptives obtained outside the MOH structure, like condoms purchased from a private vendor. For comparison between time periods and geographic areas, this data has been presented as the rate per 1000 childbearing age women.

The raw numbers of IUD and oral contraceptive clients were collected in Kazakhstan, Kyrgyzstan, and Uzbekistan; they were divided by the number of childbearing age women to estimate a client rate per 1000 women (Regional Trends: Chart 4.2). (The MOH supplied the population estimates, based on Goskomstat extrapolations.)

The client rate is highest in Kazakhstan, at 292, and lowest in Uzbekistan, at 144, with Kyrgyzstan roughly midway between. The proportion of oral contraceptive users is quite small in all countries. Since 1988 Uzbekistan's client rate has increased by 250 percent, compared with around 40-50 percent in the other two countries. In Kyrgyzstan and Uzbekistan, the abortion rates have fallen at the same time contraceptive client rates have risen.

II.D.2 Kazakhstan

Kazakhstan has the second lowest MMR and the highest rates of abortion and contraceptive clients among the four countries of the region. Because of changes in the definitions of maternal mortality and the abortion rate between 1985 and 1987, and because contraceptive data was available from only 1988 onwards, the time trends can be considered consistent only since 1988. During that period the MMR has wavered between 60 and 80; the abortion rate has fluctuated between 65 and 85; and the contraceptive client rate has steadily increased to its 1993 level of 292.

MMR: Since 1978, the MMR has shown annual fluctuations, but no particular long-term trend appears (Tables 4.1-2 and Chart 4.2). (The apparent rise between 1987 and 1989 coincides with the redefinition of MMR to include more events.)

Within Kazakhstan, the MMR varies considerably from oblast to oblast: Tourgaiskaya's MMR, the highest at 125, is nearly five times that of Actubinskaya, the lowest at 27. The ministry explained the variation in terms of environmental and sociological factors. Conditions in Tourgaiskaya are very harsh, with limited transportation and services. In Dzhambyl, which has the second highest MMR, rural women with traditional values who have not been particularly receptive to government health messages and education. (This is also the situation in Kzyl-Orda and South Kazakhstan.) The high MMRs in Pavlodar and North Kazakhstan are attributed to the large proportion of women in ill health because of prison terms and chronic alcoholism. The Ministry also noted three clinical factors that contribute to elevating the national MMR: 1) 70 percent iron deficiency anemia among pregnant women, caused by poor nutrition; 2) a high proportion of women with kidney and cardiovascular problems, which contribute to 3) high rates of eclampsia. The patterns underlying maternal mortality could be further differentiated by a review of the medical records associated with maternal deaths. Maternal mortality is a fairly rare event: some 250 deaths in 1992 and 200 in 1993; these are manageable sizes for case review.

Abortion Rate: As mentioned above, the denominator used for abortions was changed in 1985. Both before and after this date, the rate has a predominantly downward trend (Tables 4.1, 4.3 and Chart 4.3). There was, however, a noticeable rise in abortions in 1991, followed by a decline in 1993.

There is wide variation in the current oblast rates in Kazakhstan, from a high of 112 in Almaty Municipality to a low of 33.6 in Kzyl-Orda. Oblasts with higher rates tend to be largely urban, with good access to service and relatively large European and Russian ethnic populations. Those with lower rates tend to be rural, with less accessible services and larger Central Asian populations. The abortion rates have decreased more in oblasts with lower rates than in those with higher rates.

Nationally, 29 percent of all abortions performed in 1993 were miniabortions. Most of the oblasts fall into the 20-35 percent range, with urban Almaty Municipality, the highest at 57 percent, and rural Tourgaiskaya, the lowest at 0 Percent.

Contraceptive Clients: National trends from 1988 to 1993 show a consistent increase, amounting to 48 percent, in contraceptive clients (Tables 4.1, 4.4 and Chart 4.4). Like abortion rates, the contraceptive client rates show a wide variation among the oblasts, ranging from a high of 438 in East Kazakhstan to a low of 143 in Tourgaiskaya. Again like abortion rates, the contraceptive rates are higher in more urban oblasts and lower in more rural areas. The contraceptive client rates appear to have a rough inverse relation to the crude birth rates; oblasts with higher contraceptive rates tend to have lower birth rates, and vice versa.

Nationally, 5 percent of contraceptive clients were oral contraceptive clients; the rest were users of pills. Only two oblasts have more than 10 percent of their clients for oral contraceptives: Koustaniskaya at 11 percent and Almaty Municipality at 14 percent.

II.D.3 Kyrgyzstan

In comparison with the other three countries in the region, Kyrgyzstan falls in the middle range of values for the MCH indicators. It has the second highest value for each of the indicators.

MMR: From 1978 to 1985 the MMR is flat (Tables 4.1-2 and Chart 4.2). Trends between 1986 and 1990 have little meaning because: in 1986 the definition of the rate changed, and from 1988 to 1990, the rate was calculated from Goskomstat records. Since 1990, the MMR has fluctuated around 80.

The highest maternal mortality ratios are in Naryn and Bishkek, and the lowest in Talas and Osh.

Abortion Rate: The abortion rate remained fairly stable from 1978 to 1985, then increased until 1988 (Tables 4.1, 4.3 and Chart 4.3). By 1991, it had dropped to the 50's, where it has remained.

Abortion rates are highest in the capital, Bishkek, and its surrounding oblast, Chui (at 107 and 70, respectively). The ministry points out that these are urban areas, with good access to service, and a larger population of ethnic Russians and Europeans than other oblasts. The lowest abortion rates are in Osh and Dzhalal-Abad (around 30). where the traditional Islamic values of the predominant Central Asian ethnic groups do not countenance abortion.

In 1993 29 percent of the abortions performed were miniabortions. All oblasts were in the 20-40 percent range, except Dzhalal-Abad, where the rate was 4 percent.

Contraceptive Clients: Since 1988, the national rate has increased by 37 percent (Tables 4.1, 4.4 and Chart 4.4). The change has been steady, except for a brief decline in 1990

which may be associated with a shortage of IUDs. While the national figures are accurate, a series of changes in the oblast territories may have created inconsistencies in the way counts were assigned to oblast. Oblast rates may be inaccurate.

II.D.4 Turkmenistan

Turkmenistan has the highest MMR of the four countries, and very nearly the lowest abortion rate (although inclusion of miniabortions would increase the rate. Contraception data was not collected in Turkmenistan.

MMR: The MMR has fluctuated widely since 1978 (Tables 4.1-2 and Chart 4.2). In the years between 1985 and 1990, which coincide with change in the rate's definition and Goskomstat collection, broad fluctuation can be expected. There are also surprising changes in the other periods. Turkmenistan's rate, 105.2 in 1993, may be artificially high due to the inclusion of deaths unrelated to pregnancy or delivery, as mentioned above.

Abortion Rate: The abortion rate has declined consistently since 1978, except for an increase in 1987, which coincides with a new definition for the rate (Tables 4.1, 4.3 and Chart 4.3). The rates are highest in the capital, Ashgabad, and Lebapsky, which has an extensive network of service delivery. They are lowest in Dashkhovuzsky, Ahalsky, and Mary, which have more traditional populations.

II.D.5 Uzbekistan

Of the four countries, Uzbekistan has the lowest MMR, the lowest abortion rate, and the lowest contraceptive client rate.

MMR: From 1978 to 1984 the rate was stable, then rose between 1984 and 1989, when the rate's definition also changed (Tables 4.1-2 and Chart 4.2). Since 1989 it has declined nearly 50 percent to its current level of 42.8.

Karakalpakistan, the oblast bordering the Aral Sea, has the highest MMR by far; at 109.2, it is well more than double the national rate. Karakalpakistan also has the highest IMR. The fertile agricultural oblasts of the east and center of the country have the lowest rates.

Abortion Rate: The abortion rate was fairly even from 1978 to 1983, when it increased steadily until 1988 (Tables 4.1, 4.3 and Chart 4.3). Between 1988 and 1993 it decreased by some 40 percent to its current level of 28.1. This data does not include miniabortions. The rate was calculated from the number of abortions and women of childbearing age, so trends are based on consistent definitions for all years from 1978 to 1993.

Tashkent Municipality has the highest rate, at 51.5, and Sourhandya, the lowest, at 9.4, as well as the steepest decline since 1988, nearly 70 percent.

Contraceptive Client Rate: The rate increased slowly from 1982 to 1990 (Tables 4.1, 4.4 and Chart 4.4). Between 1990 and 1991 the rate trebled. Since 1991 the rate has increased steadily, albeit more slowly, to its current level of 144. The increase in 1990 may be associated with receipt of a large supply of IUDs, in the wake of earlier shortages.

Tashkent Municipality has the lowest rate, at 55, and the highest proportion of oral contraceptive users (a third). It also has the highest abortion rate. Some oblasts in the Aral Sea catchment area, Horezm, Syrdarya, and Karakalpakistan, have the highest contraceptive client rates. Nationally, 12 percent of all clients are oral contraceptive clients.

II.E. Infrastructure

Three indicators were selected:

- physician rate (physicians/1000 population),
- midlevel personnel ratio (midlevel personnel/physician), and
- hospital bed rate (hospital beds/1000 population).

The data for these indicators are collected annually, from the ministries' own records, as well as from other ministries and organizations that have medical facilities. During the Soviet period, the number of physicians, midlevel personnel, and hospital beds per 10000 population were published in the ministries' Annual Reports, and all four countries continue to publish these statistics. The data in the Annual Reports provided the basis for this compilation.

Physicians include both clinical and nonclinical personnel. The physician rates for capital cities, which are centers for research, teaching, and administration, are artificially high because of the large number of nonclinical staff. Usually the physician count includes dentists.

Midlevel personnel include nurses, medical assistants, and feldshurs. The statistics managers noted that this figure includes staff who may be temporarily inactive, a period that may last for several years or more. The proportion of inactive staff is unknown, but it may be sizable in some areas. To obtain the midlevel/physician ratio, the midlevel rate per 10000 was divided by the same rate for physicians.

Hospital beds include both those within and without the MOH network. They also include specialty care centers, like psychiatric and tuberculosis hospitals. These figures may artificially inflate the rate in capital cities, where specialty centers are likely to be placed.

II.E.I Regional Infrastructure

	число врачей/1000 населения Physicians / 1000 population				Кол. медсестер на одного врача Midlevel personnel per physician				Число больн. коек/1000 населения Hospital beds / 1000 population			
	Изменение в % % Change		Знач. Ratio	Ранг Rank	Изменение в % % Change		Знач. Ratio	Ранг Rank	Изменение в % % Change		Знач. Ratio	Ранг Rank
	1978 - 1993	1988 - 1993			1978 - 1993	1988 - 1993			1978 - 1993	1988 - 1993		
респ. Казахстан - всего Rep. Kazakhstan - total	23%	-3%	3.7	1	-7%	-3%	3.0	2	4%	1%	13.4	1
респ. Кыргызстан - всего Rep. Kyrgyzstan - total	25%	-5%	3.2	4	2%	8%	2.9	4	-7%	-8%	10.8	3
Туркменистан - всего Turkmenistan - total	30%	1%	3.5	2	25%	7%	3.0	2	13%	5%	11.5	2
респ. Узбекистан - всего Rep. Uzbekistan - total	#N/A	0%	3.3	3	#N/A	11%	3.3	1	#N/A	-22%	9.3	4

II.E.1.a Physician Rate

During the Soviet period, increases in the number of physicians were encouraged, and physician/population ratio targets set in Moscow. It is not surprising to see almost matching rising trends and little rate variance among the countries during this period (Regional Trends: Chart 5.1). Kazakhstan was the first country to show a decline in this ratio, in 1990. Since then the ratio has declined in all countries. Some of the decrease has likely been caused by physicians seeking a better livelihood in other occupations. While the physician rate is generally agreed to be higher than required for efficient service delivery, officials expressed concern that those who leave medicine include a high proportion of the ablest physicians.

There is little variance in the rates. Kazakhstan has the highest, at 3.7, and Kyrgyzstan the lowest, at 3.2.

II.E.1.b Midlevel Personnel Ratio

In 1983, Kyrgyzstan, Turkmenistan, and Uzbekistan all had the nearly the same level (Regional Trends: Chart 5.2). Since then the rate in each country has risen, although at different rates. In 1993 Uzbekistan had the highest rate of all four countries, at 3.3, and Kyrgyzstan the lowest, at 2.9. In 1978 Kazakhstan had the highest rate in the four countries. Since then it had declined fairly steadily. In Kyrgyzstan and Uzbekistan, the

number of midlevel personnel per 1000 population appears to be declining, even though the midlevel/physician ratio continues to increase.

II.E.1.c Hospital Bed Rate

During the Soviet period hospital bed rates, like the physician rates, were centrally targeted. Between 1978, they increased slowly in each country; Turkmenistan's rate, then always the lowest, increased somewhat more rapidly (Regional Trends: Chart 5.2). In Uzbekistan since 1991, and in Kyrgyzstan since 1992, the rates have declined sharply. In Uzbekistan the rate has declined by 16 percent since 1991. In Kazakhstan the rate has declined slowly since 1991. The ministries attribute these changes to recent closures and bed capacity reduction, particularly in the rural hospitals. In Turkmenistan the rate has increased since 1991.

Officials agree that the hospital bed rate is unnecessarily high. While several areas have experimented with the New Economic Mechanisms (NEM), which often involve payment to providers based on care provided, the bulk of funds are still distributed on the basis of the facility's capacity. Hence the incentive is to maintain the number of beds at previous levels.

II.E.2 Kazakhstan

Kazakhstan has the highest physician rate and highest hospital bed rate of the four countries. Its midlevel/physician ratio in the midrange of countries.

Physician Rate: The physician rate increased from 1978 to 1990, when it began a 7 percent decline to its 1993 level of 3.7 (Tables 5.1-2 and Chart 5.2). The ministry suggests that the rate has declined because of low wages in the health sector. In July, 1994, the highest base monthly salary for a physician was 1308 tengye (about US\$ 29); this is a low wage by local standards. Delays in budget releases compound the problem; health staff in some oblasts have not been paid for periods of three months.

Given the FSU's goal of distributing physicians equitably in the population, there is surprising variation in the physician rate among oblasts. Excluding Almaty Municipality and oblast (which have the highest and lowest rates), the highest rate, 4.9 in Karaganda, is nearly double that of the oblasts with the lowest rates, like South and North Kazakhstan and Koustaniskaya. Decline in physician rates has been highest in Almaty oblast, Koustaniskaya, and Kzyl-Orda.

Midlevel Personnel/Physician Ratio: The midlevel ratio declined from 1978 to 1987, then rose until 1990, when it began to decline to its 1993 level of 3.0. (Tables 5.1, 5.3 and Chart 5.3). The fact that the number of midlevel personnel per physician is declining, while the number of physicians is also declining, means that even more midlevel staff are

leaving the health sector than physicians. This is the only country in the region where this has been observed. The ministry sees low wages are seen as the main factor in personnel loss; the highest base monthly salary for a nurse is 804 tengye (about US\$ 18).

The midlevel ratio shows a variance among oblasts similar to the physician rate: the highest ratio, 4.4 in Kzyl-Orda, is approximately double the lowest, 2.4 in Actubinsk (and excluding the municipalities that have artificially lower rates). Two of the oblasts with a high decline in physician rates, Almaty and Kzyl-Orda, showed the highest increase in nurse ratio. The ministry suggests that this may indicate that an enlarged nursing staff is absorbing some of the physicians' tasks.

Hospital bed rate: The rate rose from 1978 to 1991, when it began a slow decline to its 1993 level of 13.4 (Tables 5.1, 5.4 and Chart 5.4). It remains higher than the 1988 level, unlike the physician rate and nurse ratio, both of which are lower than 1988 levels. The Ministry points to the hospital bed ratio as indication that funds should be distributed using a capitation method rather than the current capacity based mechanism.

The bed rate variance among oblasts is fairly small, approximately 1.5:1. Four areas have reduced their bed rates by 10-15 percent: West Kazakhstan, Semipalatinsk, and Almaty Municipality and oblast. The Ministry suggests that this may reflect management initiatives undertaken with the NEM.

II.E.3 Kyrgyzstan

Kyrgyzstan has the lowest physician rate and the lowest midlevel personnel ratio of the countries in the region. Its hospital bed rate is in the midrange of countries.

Physician Rate: The physician rate increased slowly from 1978 to 1989 when it plateaued; between 1992 and 1993 it decreased to 3.2 (Tables 5.1-2 and Chart 5.2).

There is minimal variance among the oblasts, excluding Bishkek, whose rate is artificially high. While Osh and Dzhahalal-Abad have low rates, both have large urban centers, where physicians can treat more patients. In fact, Osh is considered a desirable location by many physicians.

Midlevel Personnel/Physician Ratio: The ratio declined from 1978 to 1989, when it began a rise to its current level of 2.9 (Tables 5.1, 5.3 and Chart 5.3). Even though the midlevel/physician ratio is increasing, the number of midlevel personnel per 1000 population declined between 1992 and 1993.

There is minimal variance among the oblasts, excluding Bishkek. Osh and Dzhahalal-Abad have the highest ratios.

Hospital bed rate: The rate remained fairly stable from 1981 to 1992, when it declined sharply to its 1993 level of 10.8 (Tables 5.1, 5.4 and Chart 5.4). The ministry attributes the decline in 1993 to policy that implemented cost-reduction measures.

The variance among oblasts is small, again excluding Bishkek.

II.E.4 Turkmenistan

Each of Turkmenistan's infrastructure indicators is in the midrange of values for countries in the region.

Physician Rate: The physician rate increased slowly from 1978 to 1991 when it plateaued; between 1992 and 1993 it decreased to 3.5 (Tables 5.1-2 and Chart 5.2).

Excluding the capital, whose rate is artificially high, the highest rate, 3.7 in Lebapsky, is some 70 percent higher than the lowest rate, in Dashkhovuzsky.

Midlevel Personnel/Physician Ratio: The ratio was fairly level from 1979 to 1989, when it began a rise to its current level of 3.0 (Tables 5.1, 5.3 and Chart 5.3).

The highest ratio, 4.9, is in Dashkhovuzsky, which had the lowest physician rate. This ratio is 50 percent higher than the lowest midlevel ratio, in Labapsky, which had the highest physician rate. (The capital has been excluded from these comparisons.)

Hospital bed rate: Except for small declines in 1983-5 and 1992, the rate has increased steadily since 1978 to its 1993 level of 11.5 (Tables 5.1, 5.4 and Chart 5.4). Turkmenistan is the only country of the four that has not yet implemented a policy of reducing bed capacity.

The highest velayat rate (excluding the capital) is in Balkansky, the urban area bordering the Caspian Sea. At 13.6 Balkansky's bed rate is nearly double the lowest rate, in Dashkhovuzsky, the rural velayat near the Aral Sea.

II.E.5 Uzbekistan

Uzbekistan has the highest midlevel/physician ratio and the lowest hospital bed rate of the four countries. Its physician rate is in the midrange of values. Data for these variables was not available for the years between 1978 and 1982.

Physician Rate: The physician rate increased steadily from 1983 to 1990 when it began to decline to its 1993 level, 3.3 (Tables 5.1-2 and Chart 5.2).

Excepting the capital, the highest oblast rate is in Samarkand, at 3.5. This is about a third higher than the lowest rate, which is found in Karakalpakistan, the Aral Sea oblast, in densely populated Fergana, and in Tashkent, the oblast surrounding the capital.

Midlevel Personnel/Physician Ratio: The ratio has increased regularly from 1983 to its 1993 level of 3.3 (Tables 5.1, 5.3 and Chart 5.3). Even though the midlevel/physician ratio is increasing, the number of midlevel personnel per 1000 population has declined since 1991.

The highest oblast ratio is in Karakalpakistan, at 4.7. With the exception of the capital, this is some 70 percent higher than the lowest rate, in Samarkand. Samarkand has the highest physician rate, and Karakalpakistan the lowest.

Hospital bed rate: The rate increased slowly from 1983 to 1991, when it began a sharp decline of nearly 25 percent to its current level of 9.3 (Tables 5.1, 5.4 and Chart 5.4). The ministry associates this decrease with its policy to eliminate excess bed capacity.

The highest rate, excluding the capital, is in Karakalpakistan, at 10.4. Its rate is more than 50 percent higher than the lowest rate, 6.8, in Dzhzagskaya.

II.F. Hospital Utilization

Three indicators were selected:

- admission rate (number of admissions/100 population)
- bed occupancy rate (BOR, percent of days bed occupied), and
- average length of stay (ALOS, average number of days per hospital stay).

The ministries collect annual utilization statistics from both its own facilities and those of other organizations. These statistics are published in the Annual Reports, from which the data in this compilation was taken. The ministry uses the absolute number of days a bed was occupied rather than the BOR. The BOR was calculated from the ministries' statistics, assuming the beds were available 365 days per year.

In Kazakhstan, the admission rates were disaggregated between urban and rural from 1978-1986. The average of these two rates was taken to provide a comparison with other countries during this period. The ALOS figures for Kazakhstan are disaggregated by pediatric facilities (0-14 years) and adult facilities (15 years and older) for all years between 1978 and 1993. The average of these two rates was taken for comparison with other countries.

II.F.1 Regional Hospital Utilization

	Число госпитализаций (% насел.) Admissions (as % population)				Занятость койки (%) Occupancy Rate				Сред. продолжительность лечения (дней) Average Length of Stay (in days)			
	Изменение в % % Change		Знач. Rate	Ранг Rank	Изменение в % % Change		Знач. Rate	Ранг Rank	Изменение в % % Change		Знач. Rate	Ранг Rank
1978 - 1993	1988 - 1993	1978 - 1993			1988 - 1993	1978 - 1993			1988 - 1993			
респ. Казахстан - всего Rep. Kazakhstan - total	-4%	-16%	21.2	3	-10%	-10%	77%	3	-6%	3%	15.3	1
респ. Кыргызстан - всего Rep. Kyrgyzstan - total	-8%	-18%	24.6	1	-13%	-10%	79%	2	-7%	2%	15.3	1
Туркменистан - всего Turkmenistan - total	-2%	-20%	17.2	4	-14%	-14%	72%	4	-7%	0%	14.9	3
респ. Узбекистан - всего Rep. Uzbekistan - total	6%	-15%	22.0	2	#N/A	1%	88%	1	#N/A	-1%	14.5	4

II.F.1.a Admission Rate

Trends for all four countries parallel each other quite closely (Regional Trends: Chart 6.1). Rates for all countries showed a steady increase between 1978 and 1987, when they began a decline of some 15-20 percent to their 1993 levels. Kazakhstan, Kyrgyzstan, and Uzbekistan have had rates within 2 to 3 percentage points of each other. Turkmenistan's rate has generally been some 3-4 percentage points below those of the other countries.

While government officials sometimes point to a decrease in the admission rate as an indicator of improved primary care and greater efficiency in the system in general, others are more skeptical of "improvements" in admission rates (and the ALOS). Some believe that the quality of hospital care has deteriorated so badly, because of lack of supplies and medication and increasingly inferior food, that no one wants to go to hospital.

II.F.1.b Bed Occupancy Rate

Trends for all four countries are fairly similar (Regional Trends: Chart 6.2). Between 1978 and 1987, BORs in Kyrgyzstan and Uzbekistan were the highest and fairly level. From 1978-1983 rates in Kazakhstan and Turkmenistan showed slight increases to nearly the level of the other two countries. In 1983, rates in Kazakhstan and Turkmenistan began to decline slightly. In 1987, about the time that admissions began to decline, the BOR began a sharp decline in all countries. This decline has continued to 1993 in all countries except Uzbekistan, which has shown a sharp increase in BOR since its beginning its reduction of bed capacity in 1991. In 1993 Uzbekistan had the highest rate, at 87.7, some

20 percent higher than Turkmenistan, the lowest, where there has been no decline in capacity. The other two countries are at nearly the same level, midway between the highest and lowest.

II.F.1.c Average Length of Stay

The ALOSs in all four countries have mirrored each other fairly closely both in terms of level and trends (Regional Trends: Chart 6.3). A modest rise between 1978 and 1981 was followed by regular declines to a plateau that began around 1987-88. Since 1992, the rates have begun to diverge slightly. In 1993, Kazakhstan and Kyrgyzstan had the highest rates, at 15.3 only some 5 percent above the lowest rate, in Uzbekistan.

The ALOS is high by North American and European standards; the ministries attribute its length to lack of pharmaceuticals and different emphases in treatment strategies.

All statistics managers suggested that analysis of capacity, staffing, and utilization by level of hospital (oblast, municipal, rayon, and rural) would be useful in understanding priority needs and guiding government policy.

II.F.2 Kazakhstan

Kazakhstan has the highest ALOS, while its admission rate and BOR fall in the midrange values for the countries.

Admission Rate: The national admission rate rose slowly between 1978 and 1986, when it reached a brief plateau (Tables 6.1-2 and Chart 6.2). Since 1988, it has declined by 16 percent, to its 1993 level of 21.2. The hospital bed rate has remained fairly steady during this decline in admissions. The figures for rural and urban admissions, disaggregated for 1978 to 1986, show that rural admissions were consistently higher than urban and increased at a higher rate. By 1986, rural admission rates were nearly a quarter higher than urban rates. This corresponds with anecdotal evidence that rural hospitals sometimes served as nursing and rehabilitation centers, caring for patients that may not have required full hospital services.

The rate varies slightly among the oblasts. In three oblasts that have seen the highest decline, Semipalatinsk, West Kazakhstan, and Almaty Municipality, the Ministry points to management initiatives as potential causes; these areas were also the leaders in reducing their hospital bed to population rates.

Bed Occupancy Rate: The BOR remained fairly level from 1978 to 1987, when it began a decline of some 10 percent to its 1993 level of 77 percent (Tables 6.1, 6.3 and Chart 6.3). While the BOR has declined, the bed capacity has remained fairly stable in recent years (Chart 6.5).

The rate varies from around 70 percent, in rural oblasts, to 85 percent in Almaty Municipality. The largest declines in BOR were in Taldykourganskaya, Actubinskaya, Kokchetauskaya, Semipalatinsk, and Koustanskaya.

Average Length of Stay: The adult ALOS, was fairly level from 1980 to 1986, when it declined briefly; since 1988 it has increased by 4 percent to its current level of 17.1 (Tables 6.1, 6.4 and Chart 6.4). The pediatric ALOS declined between 1980 and 1988; since that time it has remained around its 1993 level of 13.5.

The variance among oblasts is small. Since 1978, adult ALOSs have increased in the industrial oblasts. Declines of 30-40 percent in pediatric rates since 1978 have been seen in West Kazakhstan, Almaty Municipality, and Mangystauskaya.

II.F.3 Kyrgyzstan

Kyrgyzstan, like Kazakhstan, has the highest ALOS, while its admission rate and BOR fall in the midrange values for the countries.

Admission Rate: The national admission rate rose slowly between 1978 and 1987, when it began a decline of nearly 20 percent to its 1993 rate of 19.9 (Tables 6.1-2 and Chart 6.2).

There is little variance among the rates in the oblasts. Bishkek, its surrounding oblast of Chui, and Issyk-Kul have shown the greatest declines in admission rates since 1978.

Bed Occupancy Rate: The BOR remained fairly level from 1978 to 1987, when it began a decline of some 10 percent to its 1993 level of 79 percent (Tables 6.1, 6.3 and Chart 6.3). While the BOR has declined, the bed capacity remained fairly stable until a sharp drop between 1992 and 1993 (Chart 6.5).

Variance among the oblasts is fairly small. Bishkek, with the highest rate, may be receiving patients from its surrounding oblast Chui, which has the lowest rate.

Average Length of Stay: The ALOS was fairly level from 1978 to 1982, when it began a steady decline until 1988; it remained stable until 1993, when it increased slightly to its current level of 15.3 (Tables 6.1, 6.4 and Chart 6.4). The ministry notes that it has been very difficult to reduce the ALOS given the severe shortage and high cost of pharmaceuticals.

Among the oblasts, Bishkek has the highest ALOS, at 18.1, some 40 percent higher than the lowest rate in Issyk-Kul

II.F.4 Turkmenistan

Turkmenistan has the lowest admission rate and the lowest BOR of the four countries. Its ALOS is in the midrange of these countries' values.

Admission Rate: The national admission rate rose slowly between 1978 and 1987, when it began a decline of nearly 20 percent to its 1993 rate of 17.2 (Tables 6.1-2 and Chart 6.2).

Lebapsky velayat has the highest rate, at 20.1, and Dashkhovuzsky the lowest, at 16.6. (Ahalsky, the velayat surrounding the capital, which actually has the lowest rate, has been excluded since many of its patients use hospital facilities in Ashgabat).

Bed Occupancy Rate: The national BOR remained fairly level from 1978 to 1987, when it began a decline of some 15 percent to its 1993 level of 72 percent (Tables 6.1, 6.3 and Chart 6.3). While the BOR has declined, the bed capacity has continued to increase, growing by 5 percent since 1988 (Chart 6.5).

In 1993 Lebapsky had the highest rate, at 74 percent, while the lowest rate, in Balkansky is some 10 percent lower.

Average Length of Stay: The ALOS has remained fairly level from 1978 to 1993; its current rate, 14.9, is at the same level as 1988 and only 7 percent lower than the 1978 rate (Tables 6.1, 6.4 and Chart 6.4).

Rates among the velayats in 1993, varied from Ashgabat, the highest at 17.6, to Mary some 25 percent lower.

II.F.5 Uzbekistan

Of the four countries, Uzbekistan has the highest admission rate and BOR, and the lowest ALOS. (It also has the lowest hospital bed capacity rate.)

Admission Rate: The national admission rate rose slowly between 1978 and 1987, when it began a decline of nearly 15 percent to its 1993 rate of 22.0 (Tables 6.1-2 and Chart 6.2).

In 1993, Tashkent Municipality, Namanganskaya, and Fergana had the highest admission rates, around 25, some 25 percent higher than the lowest rates in Kashkadarinskaya and Dzhizgaskaya.

Bed Occupancy Rate: The national BOR remained fairly level from 1980 to 1987, when it declined until 1991 (Tables 6.1, 6.3 and Chart 6.3). Since 1991, the rate has increased by some 7 percent to its current level of 88 percent. The recent increase in the BOR

coincides with the period when the bed capacity was being reduced substantially, and the ministry associates the decrease in capacity with the increased BOR (Chart 6.5).

Among the oblasts, Dzjzagskaya has the highest BOR; it also has the lowest admission and hospital bed capacity rates. At 92 percent, Dzjzagskaya's 1993 is some 10 percent higher than the lowest oblast, Buhara.

Average Length of Stay: The ALOS declined fairly regularly from 1980 to 1988, when it rose slightly; its current rate, 14.5, is at the same level as 1988 (Tables 6.1, 6.4 and Chart 6.4).

In 1993 the highest ALOSs were in Tashkent and Karakalpakistan. At 16.3, their rates were some 20 percent higher than the lowest rate, in Buhara.

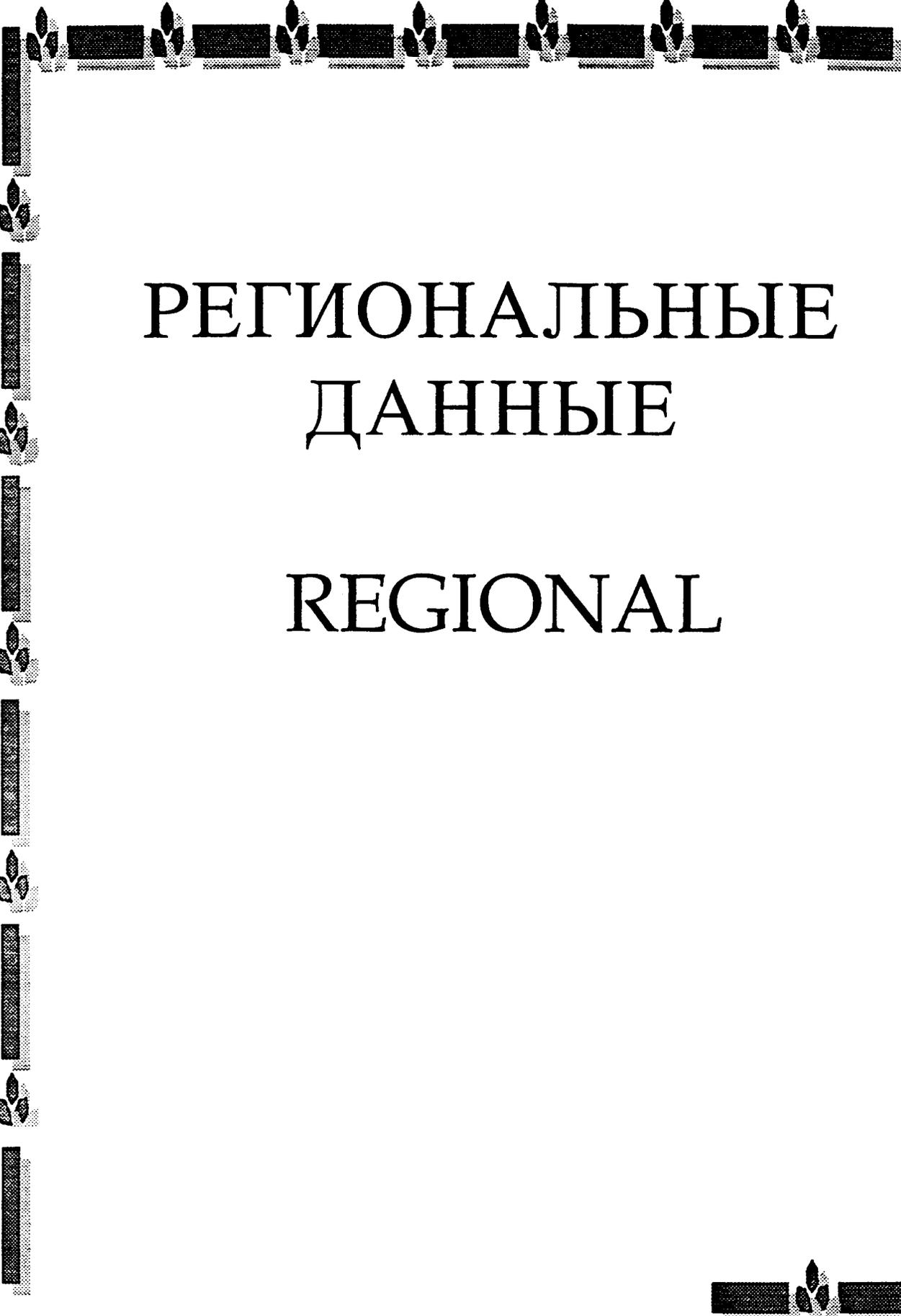
II.G. Finances

Financial data by chapter is available for Turkmenistan from 1984-1993 and for Kazakhstan from 1990-1993. None is available for Uzbekistan or Kyrgyzstan.

Limitations on analysis: only proportions to each chapter seem to have meaning, and even these confounded by inflation and budget releases at different times in year.

- No inflators are available, so per capita figures since roughly 1990 cannot be standardized.
- In 1993 (and 1994), only 4 chapters have been paid regularly: salaries and benefits, food, pharmacy. Other chapters sometimes made up at end of year, but not at inflation rate.
- In Turkmenistan, the currency was changed to manats in late 1993, and budget figures adjusted by an arbitrary exchange of 300 manats to rouble.
- In Kazakhstan, recent budgets have apparently been prepared using the proportions from previous years.

Expand discussion.



РЕГИОНАЛЬНЫЕ
ДАННЫЕ

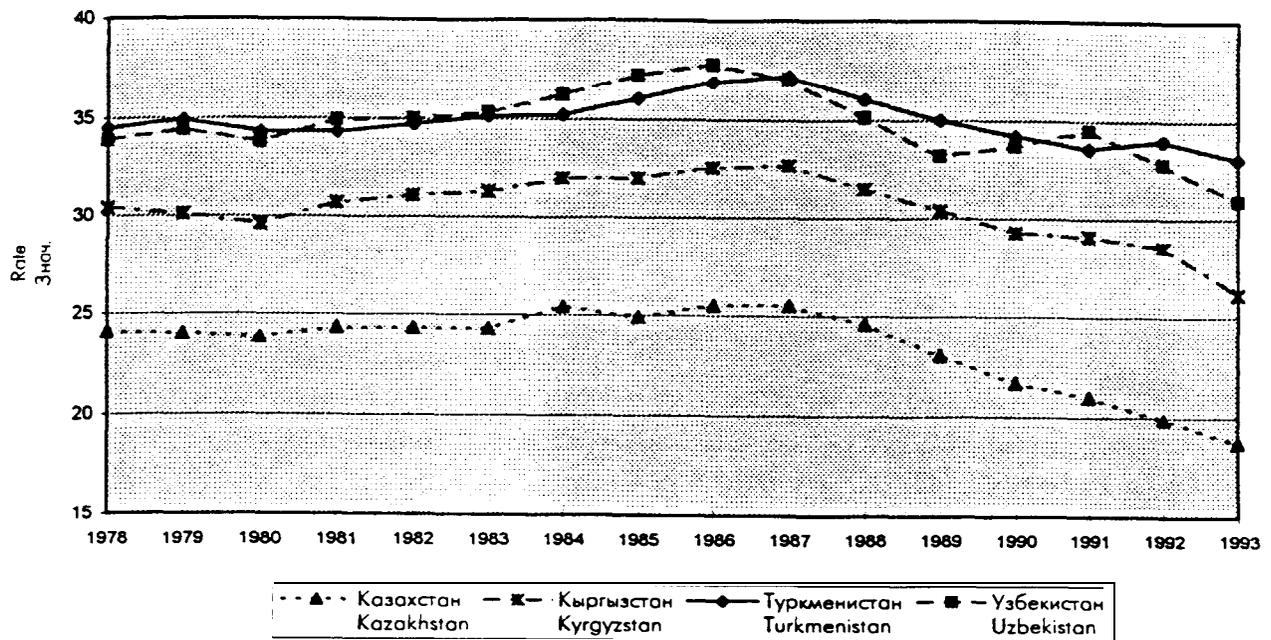
REGIONAL

ТЕНДЕНЦИИ РОЖДАЕМОСТИ

TRENDS IN CRUDE BIRTH RATES

Центральная Азия и Казахстан: 1978 - 1993

Central Asia Region: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казахстан																
Kazakhstan	24.1	24.0	23.8	24.3	24.3	24.3	25.4	24.9	25.5	25.5	24.6	23.0	21.7	21.0	19.9	18.7
Кыргызстан																
Kyrgyzstan	30.4	30.1	29.6	30.7	31.1	31.3	32.0	32.0	32.6	32.7	31.5	30.4	29.3	29.1	28.5	26.1
Туркменистан																
Turkmenistan	34.5	34.9	34.3	34.3	34.7	35.1	35.2	36.0	36.9	37.2	36.0	35.0	34.2	33.6	34.0	33.1
Узбекистан																
Uzbekistan	33.9	34.4	33.8	34.9	35.0	35.3	36.2	37.2	37.8	37.0	35.1	33.2	33.7	34.5	32.8	30.9

Рождаемость (P) – число родившихся на 1000 населения
 Crude Birth Rate (CBR) - births / 1000 population

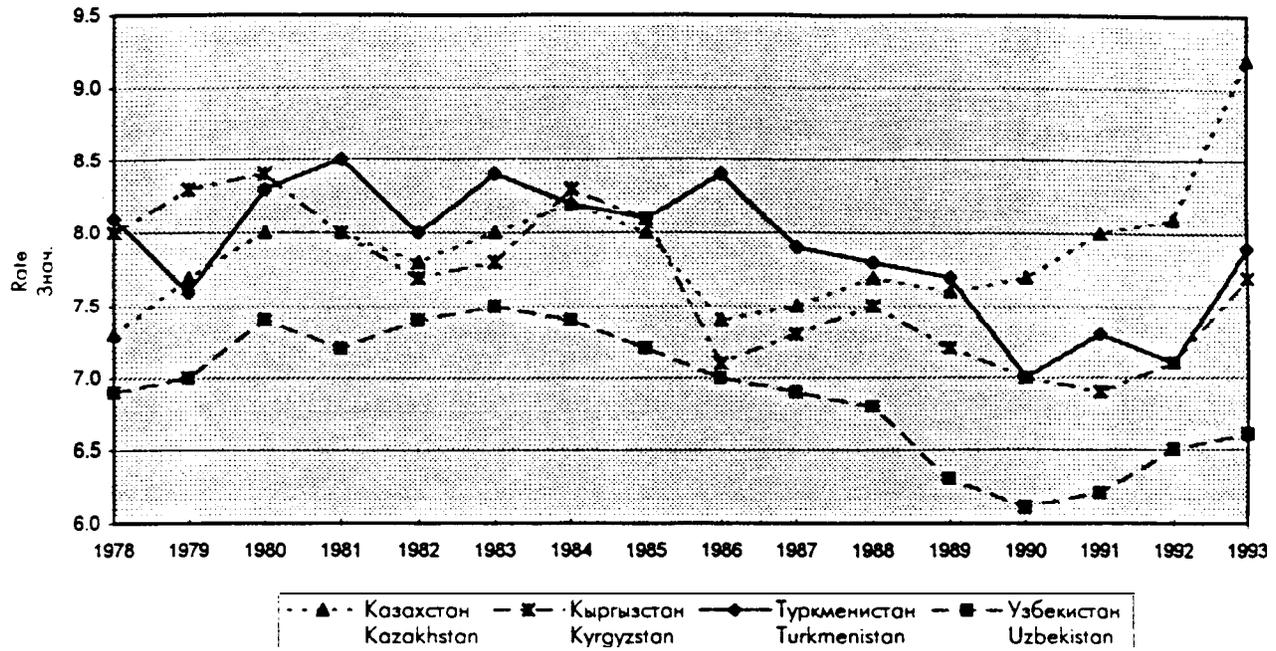
Все данные из годовых отчетов министерств здравоохранения Казахстана, Кыргызстана, Туркменистана и Узбекистана за 1978-1993

All data from Annual Reports of Kazakhstan, Kyrgyzstan, Turkmenistan, and Uzbekistan Ministries of Health, 1978 - 1993

ТЕНДЕНЦИИ СМЕРТНОСТИ

TRENDS IN CRUDE DEATH RATES

Центральная Азия и Казахстан: 1978 - 1993
Central Asia Region: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казахстан																
Kazakhstan	7.3	7.7	8.0	8.0	7.8	8.0	8.2	8.0	7.4	7.5	7.7	7.6	7.7	8.0	8.1	9.2
Кыргызстан																
Kyrgyzstan	8.0	8.3	8.4	8.0	7.7	7.8	8.3	8.1	7.1	7.3	7.5	7.2	7.0	6.9	7.1	7.7
Туркменистан																
Turkmenistan	8.1	7.6	8.3	8.5	8.0	8.4	8.2	8.1	8.4	7.9	7.8	7.7	7.0	7.3	7.1	7.9
Узбекистан																
Uzbekistan	6.9	7.0	7.4	7.2	7.4	7.5	7.4	7.2	7.0	6.9	6.8	6.3	6.1	6.2	6.5	6.6

Смертность (С) – число смерт. случаев на 1000 населения
 Crude Death Rate (CDR) - deahs / 1000 population

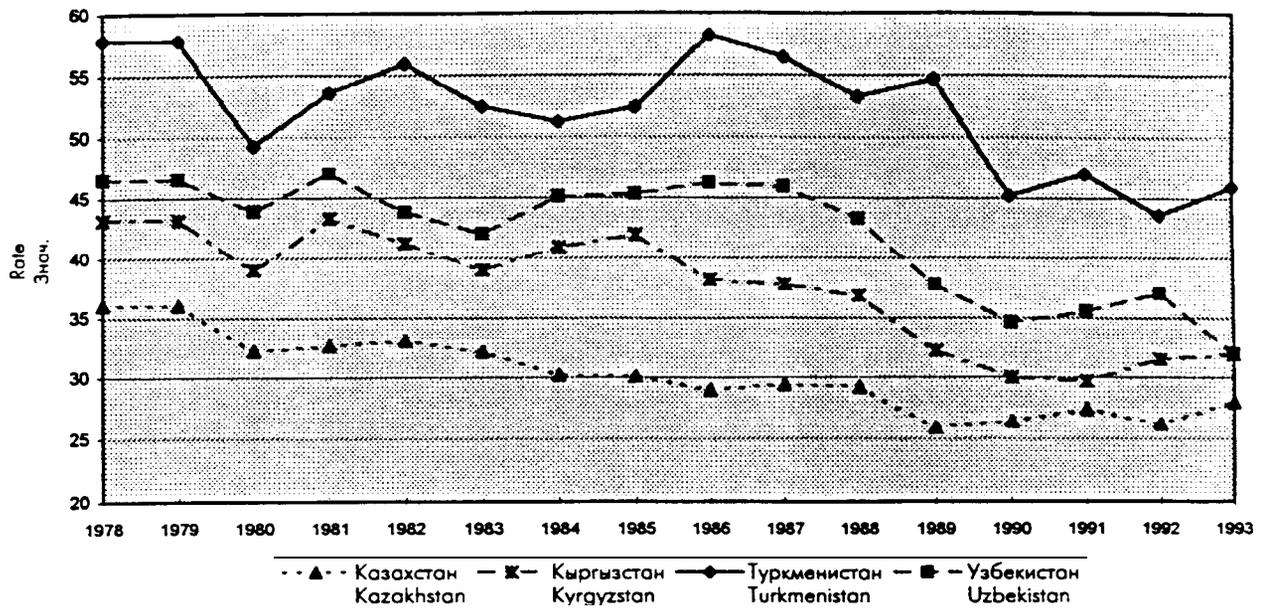
Все данные из годовых отчетов министерств здравоохранения Казахстана, Кыргызстана, Туркменистана и Узбекистана за 1978-1993
 All data from Annual Reports of Kazakhstan, Kyrgyzstan, Turkmenistan, and Uzbekistan Ministries of Health, 1978 - 1993

ТЕНДЕНЦИИ МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ

TRENDS IN INFANT MORTALITY RATES

Центральная Азия и Казахстан: 1978 - 1993

Central Asia Region: 1978 - 1993



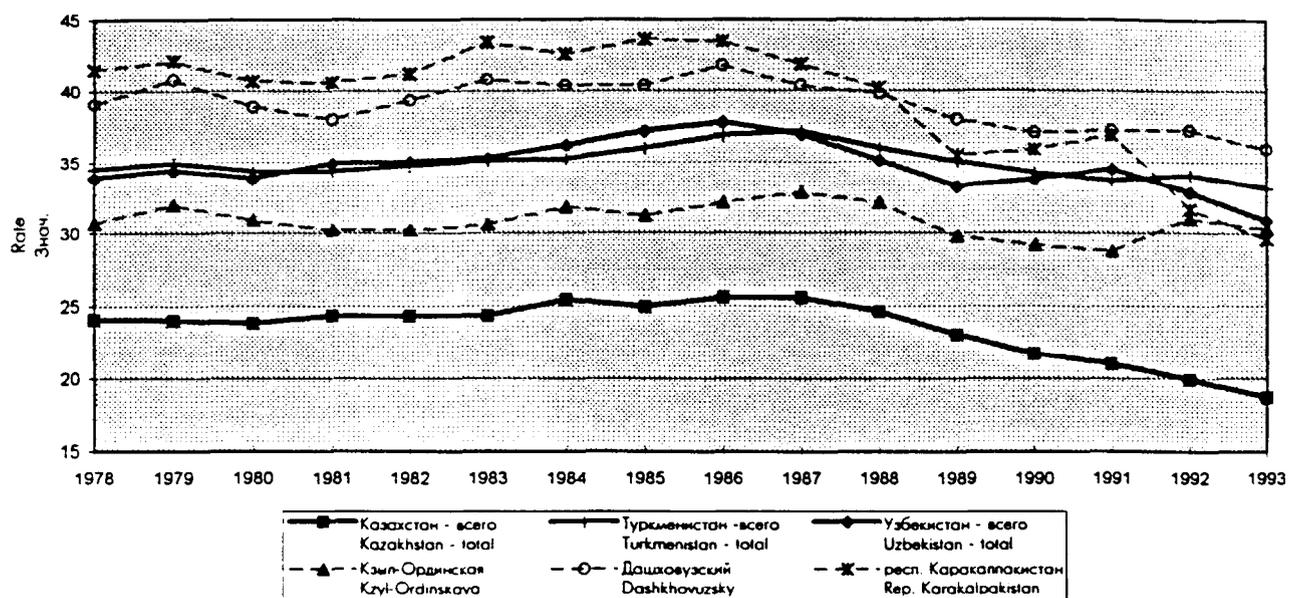
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казахстан Kazakhstan	36.0	36.0	32.2	32.7	33.1	32.1	30.2	30.1	29.0	29.4	29.2	25.9	26.4	27.4	26.2	28.0
Кыргызстан Kyrgyzstan	43.2	43.2	39.0	43.3	41.2	39.0	40.9	41.9	38.2	37.8	36.8	32.2	30.0	29.7	31.5	31.9
Туркменистан Turkmenistan	57.8	57.8	49.3	53.6	55.9	52.5	51.2	52.4	58.2	56.4	53.3	54.7	45.2	47.0	43.6	45.9
Узбекистан Uzbekistan	46.5	46.5	43.9	47.0	43.8	42.0	45.1	45.3	46.2	45.9	43.3	37.8	34.6	35.5	37.0	32.0

Младенческая смертность (МС)-число смертных случ. детей до 1г
на 1000, рожденных живыми
Infant Mortality Rate (IMR) - deaths under 1 year / 1000 live births

Все данные из годовых отчетов министерств здравоохранения Казахстана, Кыргызстана,
Туркменистана и Узбекистана за 1978-1993
All data from Annual Reports of Kazakhstan, Kyrgyzstan,
Turkmenistan, and Uzbekistan Ministries of Health, 1978 - 1993

РОЖДАЕМОСТЬ В РЕГИОНЕ АРАЛЬСКОГО МОРЯ

CRUDE BIRTH RATES IN ARAL SEA REGION

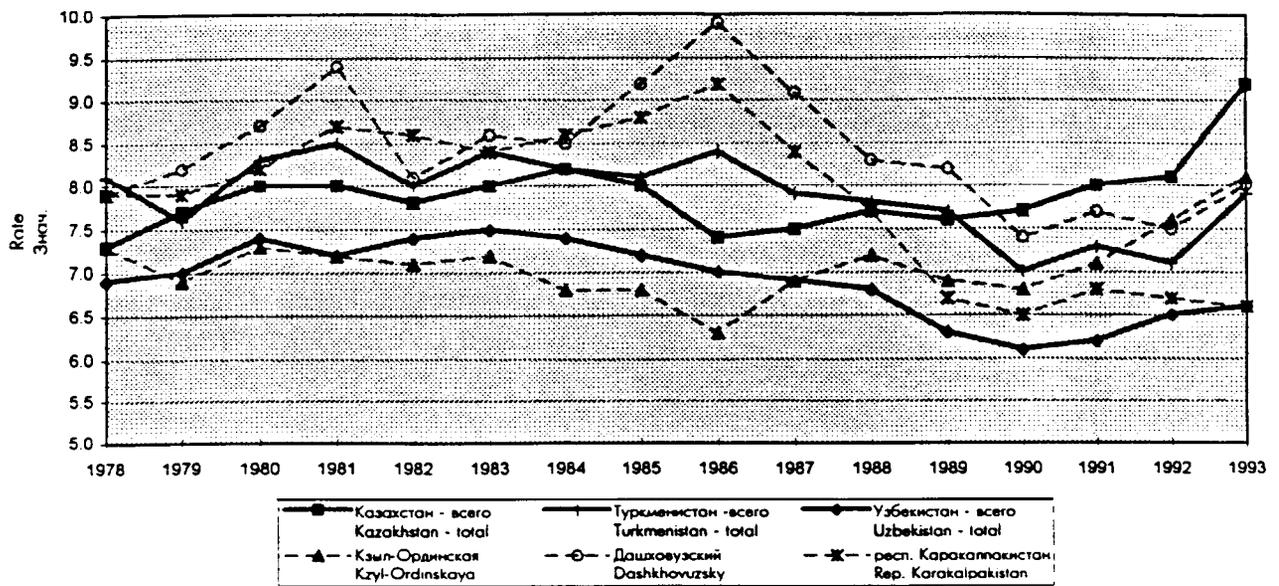


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казakhstan - всего Kazakhstan - total	24.1	24.0	23.8	24.3	24.3	24.3	25.4	24.9	25.5	25.5	24.6	23.0	21.7	21.0	19.9	18.7
Кзыл-Ординская Kzyl-Ordinskaya	30.7	32.0	30.9	30.2	30.2	30.6	31.8	31.2	32.1	32.8	32.1	29.8	29.2	28.8	31.0	30.3
Туркменистан - всего Turkmenistan - total	34.5	34.9	34.3	34.3	34.7	35.1	35.2	36.0	36.9	37.2	36.0	35.0	34.2	33.6	34.0	33.1
Дашкховузский Dashkhouvuzsky	39.1	40.8	38.9	38.0	39.3	40.8	40.4	40.4	41.8	40.4	39.8	38.0	37.1	37.3	37.3	36.0
Узбекистан - всего Uzbekistan - total	33.9	34.4	33.8	34.9	35.0	35.3	36.2	37.2	37.8	37.0	35.1	33.2	33.7	34.5	32.8	30.9
респ. Каракалпакстан Rep. Karakalpakstan	41.5	42.1	40.7	40.6	41.2	43.4	42.6	43.6	43.5	41.9	40.2	35.5	35.9	37.0	31.7	29.6

Тенденции по региону: Рис 2.11
Regional Trends: Chart 2.11

СМЕРТНОСТЬ В РЕГИОНЕ АРАЛЬСКОГО МОРЯ

CRUDE DEATH RATES IN ARAL SEA REGION

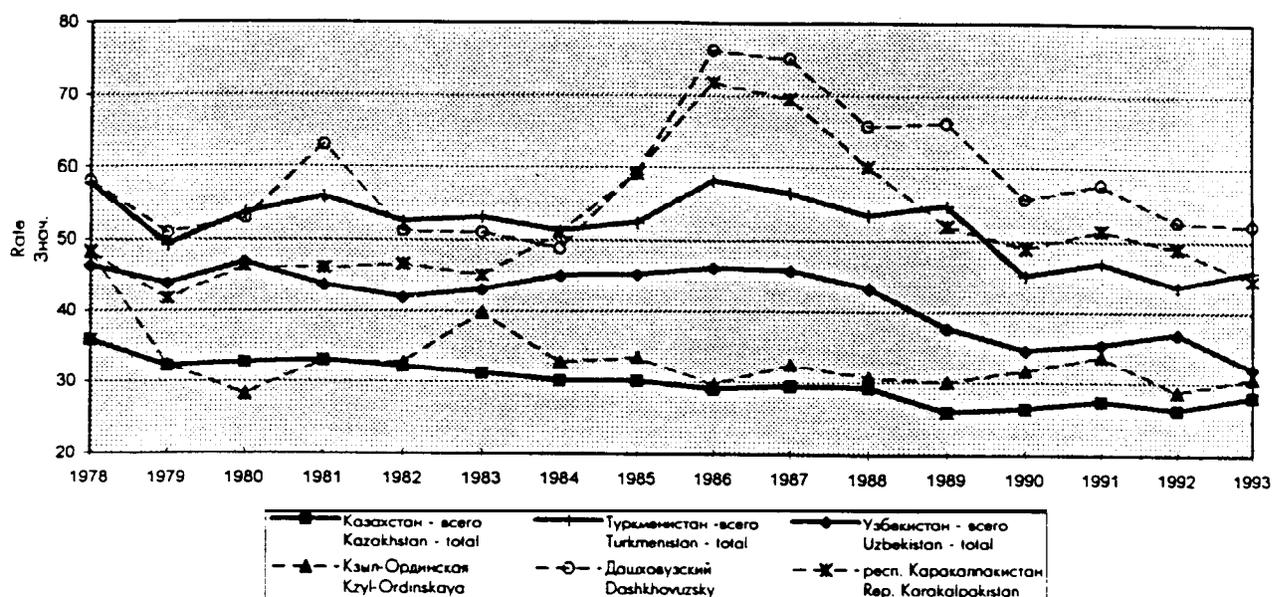


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казахстан - всего Kazakhstan - total	7.3	7.7	8.0	8.0	7.8	8.0	8.2	8.0	7.4	7.5	7.7	7.6	7.7	8.0	8.1	9.2
Кзыл-Ординская Kzyl-Ordinskaya	7.3	6.9	7.3	7.2	7.1	7.2	6.8	6.8	6.3	6.9	7.2	6.9	6.8	7.1	7.6	8.1
Туркменистан - всего Turkmenistan - total	8.1	7.6	8.3	8.5	8.0	8.4	8.2	8.1	8.4	7.9	7.8	7.7	7.0	7.3	7.1	7.9
Дашкховузский Dashkhouvuzsky	7.9	8.2	8.7	9.4	8.1	8.6	8.5	9.2	9.9	9.1	8.3	8.2	7.4	7.7	7.5	8.0
Узбекистан - всего Uzbekistan - total	6.9	7.0	7.4	7.2	7.4	7.5	7.4	7.2	7.0	6.9	6.8	6.3	6.1	6.2	6.5	6.6
респ. Каракалпакстан Rep. Karakalpakistan	7.9	7.9	8.2	8.7	8.6	8.4	8.6	8.8	9.2	8.4	7.7	6.7	6.5	6.8	6.7	6.6

Тенденции по региону: Рис 2.21
Regional Trends: Chart 2.21

**УРОВЕНЬ МЛАДЕНЧЕСКОЙ
СМЕРТНОСТИ
В РЕГИОНЕ АРАЛЬСКОГО МОРЯ**

**INFANT MORTALITY RATES
IN ARAL SEA REGION**

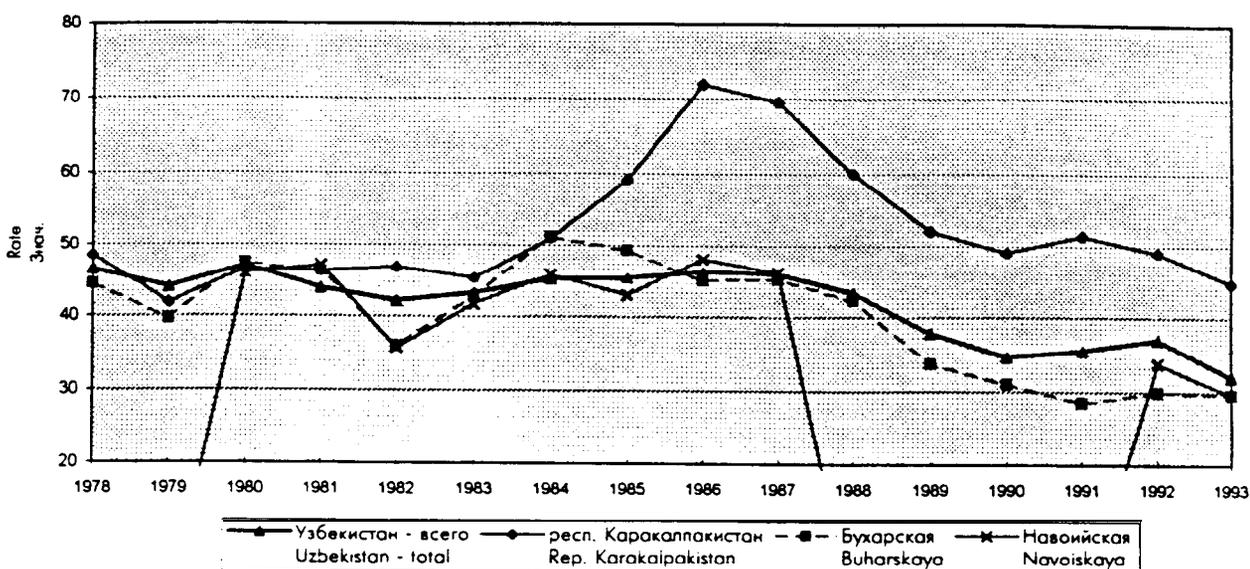


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Казakhstan - всего Kazakhstan - total	36.0	32.2	32.7	33.1	32.1	31.2	30.2	30.1	29.0	29.4	29.2	25.9	26.4	27.4	26.2	28.0
Кзыл-Ординская Kzyl-Ordinskaya	48.4	32.5	28.3	33.1	32.8	39.8	32.9	33.5	29.7	32.5	30.7	30.1	31.7	33.8	28.8	30.6
Туркменистан - всего Turkmenistan - total	57.8	49.3	53.6	55.9	52.5	53.1	51.2	52.4	58.2	56.4	53.3	54.7	45.2	47.0	43.6	45.9
Дашкховузский Dashkhouzsky	58.1	50.9	52.9	63.0	51.2	51.0	49.0	59.2	76.3	75.2	65.6	66.1	55.6	57.7	52.6	52.1
Узбекистан - всего Uzbekistan - total	46.5	43.9	47.0	43.8	42.0	43.1	45.1	45.3	46.2	45.9	43.3	37.8	34.6	35.5	37.0	32.0
респ. Каракалпакстан Rep. Karakalpakstan	48.5	41.8	46.5	46.2	46.8	45.2	51.0	59.2	72.0	69.6	60.1	52.0	49.1	51.4	49.1	44.6

Тенденции по региону: Рис 2.31
Regional Trends: Chart 2.31

**УРОВЕНЬ МЛАДЕНЧЕСКОЙ
СМЕРТНОСТИ РЕГИОНОВ АРАЛЬСКОГО МОРЯ
И АМУРДАРЬИ В УЗБЕКИСТАНЕ**

**INFANT MORTALITY RATES
ARAL SEA AND AMUDARYA REGIONS IN UZBEKISTAN**

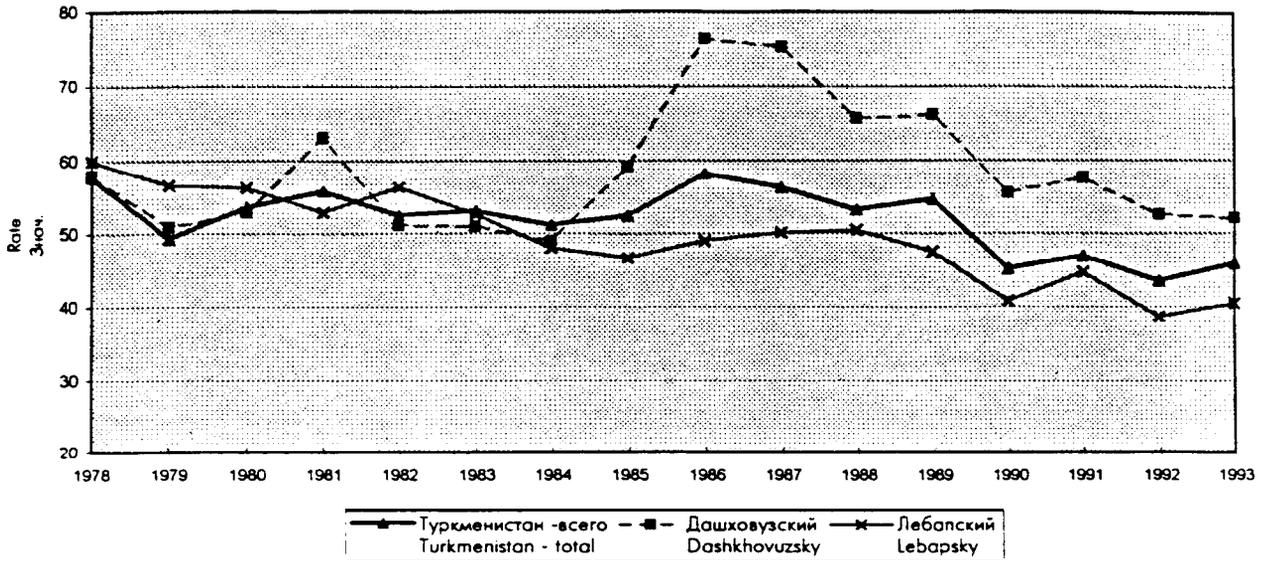


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Узбекистан - всего	46.5	43.9	47.0	43.8	42.0	43.1	45.1	45.3	46.2	45.9	43.3	37.8	34.6	35.5	37.0	32.0
Uzbekistan - total	46.5	43.9	47.0	43.8	42.0	43.1	45.1	45.3	46.2	45.9	43.3	37.8	34.6	35.5	37.0	32.0
Бухарская	44.4	39.7	47.4	46.2	36.0	42.6	51.2	49.3	45.0	45.1	42.3	33.7	31.0	28.6	29.9	29.7
Buharskaya	44.4	39.7	47.4	46.2	36.0	42.6	51.2	49.3	45.0	45.1	42.3	33.7	31.0	28.6	29.9	29.7
Навоийская	0.0	0.0	45.9	47.1	35.7	41.7	45.7	42.9	48.1	46.1	0.0	0.0	0.0	0.0	33.8	29.7
Navoiskaya	0.0	0.0	45.9	47.1	35.7	41.7	45.7	42.9	48.1	46.1	0.0	0.0	0.0	0.0	33.8	29.7
респ. Каракалпакстан	48.5	41.8	46.5	46.2	46.8	45.2	51.0	59.2	72.0	69.6	60.1	52.0	49.1	51.4	49.1	44.6
Rep. Karakalpakstan	48.5	41.8	46.5	46.2	46.8	45.2	51.0	59.2	72.0	69.6	60.1	52.0	49.1	51.4	49.1	44.6

Тенденции по региону: Рис 2.32
Regional Trends: Chart 2.32

**УРОВЕНЬ МЛАДЕНЧЕСКОЙ
СМЕРТНОСТИ РЕГИОНОВ АРАЛЬСКОГО МОРЯ
И АМУРДАРЬИ В ТУРКМЕНИСТАНЕ**

**INFANT MORTALITY RATES
ARAL SEA AND AMUDARYA REGIONS IN TURKMENISTAN**



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Туркменистан - всего Turkmenistan - total	57.8	49.3	53.6	55.9	52.5	53.1	51.2	52.4	58.2	56.4	53.3	54.7	45.2	47.0	43.6	45.9
Дашховузский Dashkhouvuzsky	58.1	50.9	52.9	63.0	51.2	51.0	49.0	59.2	76.3	75.2	65.6	66.1	55.6	57.7	52.6	52.1
Лебапский Lebapsky	60.0	56.7	56.4	52.9	56.5	52.7	48.1	46.7	49.1	50.2	50.5	47.6	40.8	44.8	38.7	40.5

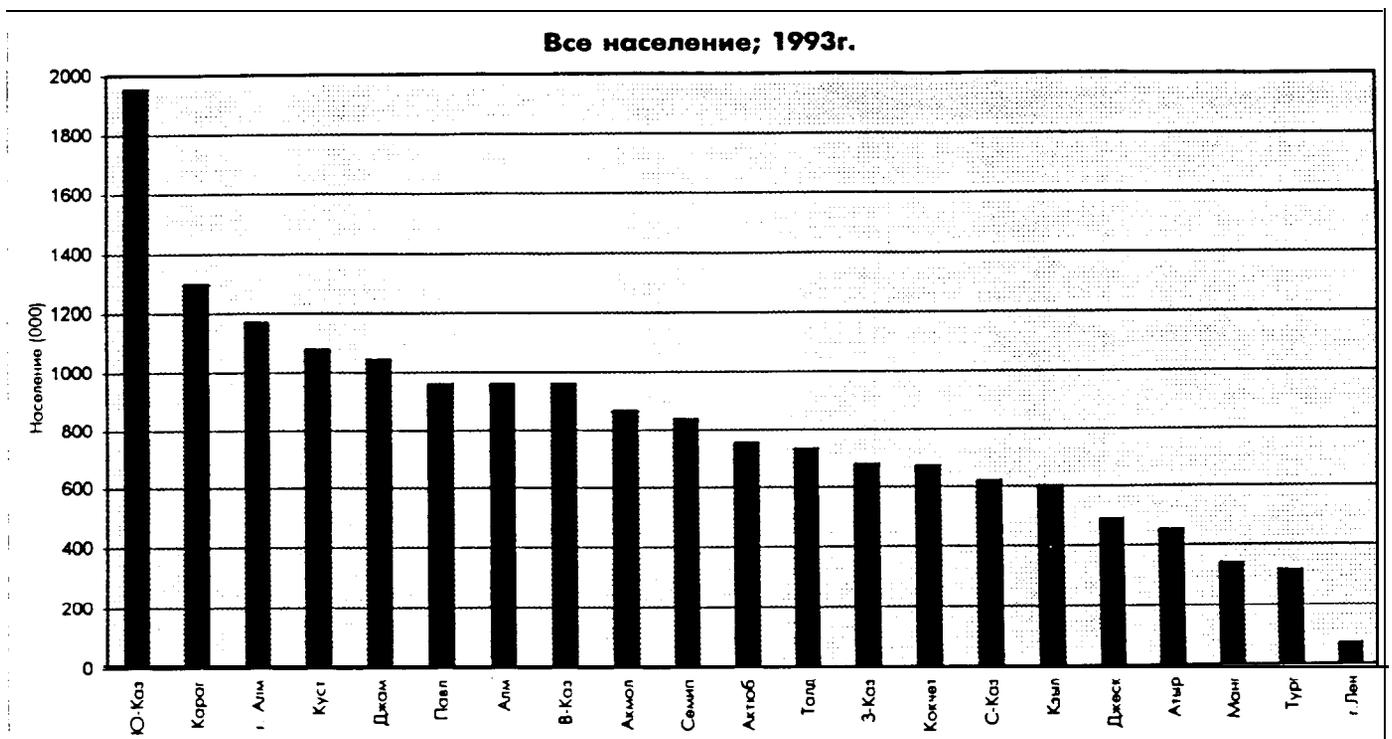
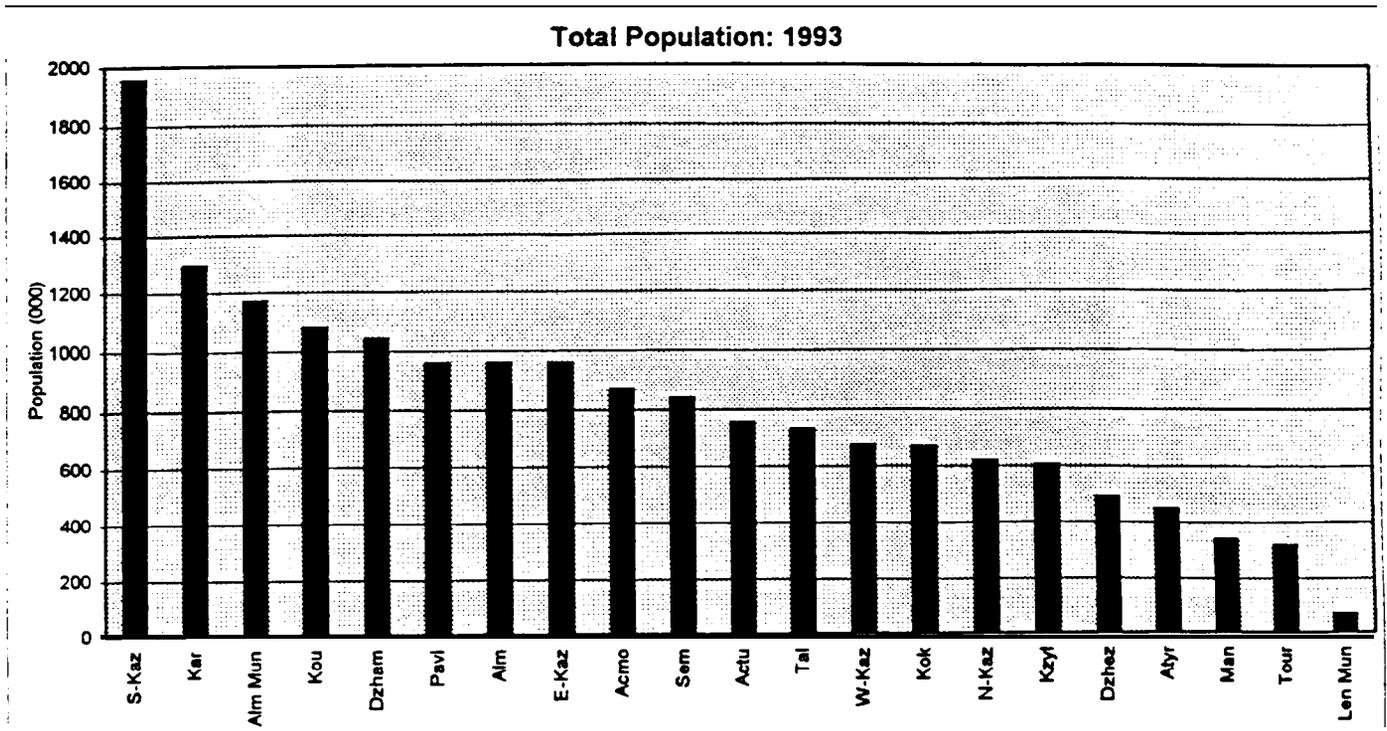
Тенденции по региону: Рис 2.33
Regional Trends: Chart 2.33



КАЗАХСТАН

KAZAKHSTAN

Республика Казахстан: Население; 1993г.
Republic of Kazakhstan: Population 1993



Казахстан: Демографические данные: Рис. 1
Kazakhstan Demographics: Chart 1

Республика Казахстан: Население; 1993г.
Republic of Kazakhstan: Population 1993

	Все население			Взрослые (>18лет)			Подростки (15-18 лет)			Дети (0-14 лет)			Женщины детородного возраста (15-49) Women of Childbearing age (15-49 years)		
	Total Population			Adults (>18 years)			Teens (15-18 years)			Children (0-14 years)			Women of Childbearing age (15-49 years)		
	x1000	Rank	% of Total	x1000	Rank	% of Oblast	x1000	Rank	% of Oblast	x1000	Rank	% of Oblast	x1000	Rank	% of Oblast
респ. Казахстан - всего Rep. Kazakhstan - total	16853.4			10598.9	63%		921.8	5%		5332.7	32%		4224.9	25%	
Акмолинская Astolinskaya	866.9	9	5%	570.0	9	66%	47.0	9	5%	249.9	11	29%	220.8	9	25%
Актюбинская Actubinskaya	753.8	11	4%	463.0	11	61%	42.0	12	6%	248.3	12	33%	186.1	11	25%
Алматинская Almatinskaya	960.4	7	6%	583.5	8	61%	54.4	4	6%	322.5	4	34%	227.0	8	24%
Атырауская Atyrauskaya	451.2	18	3%	263.1	18	58%	27.6	18	6%	160.5	18	36%	112.4	18	25%
Восточно-Казахстанская East Kazakhstanskaya	960.0	8	6%	648.8	5	68%	44.9	10	5%	266.3	9	28%	235.1	7	24%
Джамбыльская Dzhambylskaya	1043.6	5	6%	620.2	7	59%	61.7	3	6%	361.7	2	35%	246.9	6	24%
Джезказганская Dzhezkazganskaya	491.2	17	3%	299.8	17	61%	28.0	17	6%	163.4	17	33%	125.2	17	25%
Западно-Казахстанская West Kazakhstanskaya	673.5	13	4%	427.5	13	63%	36.6	14	5%	209.4	14	31%	163.2	13	24%
Карагандинская Karagandinskaya	1299.8	2	8%	884.1	2	68%	63.4	2	5%	352.3	3	27%	350.9	2	27%
Кзыл-Ординская Kzyl-Ordinskaya	603.0	16	4%	318.9	16	53%	41.4	13	7%	242.7	13	40%	138.7	16	23%
Кокчетавская Kokchetavskaya	668.0	14	4%	426.4	14	64%	36.2	15	5%	205.4	15	31%	160.2	14	24%
Кустанайская Koustaniskaya	1080.2	4	6%	717.8	4	66%	54.3	5	5%	308.1	5	29%	273.2	5	25%
Мангыстауская Mangystauskaya	339.5	19	2%	210.6	19	62%	17.7	20	5%	111.2	19	33%	86.3	19	25%
Павлодарская Pavlodarskaya	961.3	6	6%	622.9	6	65%	48.5	7	5%	289.9	6	30%	277.0	4	29%
Северно-Казахстанская North Kazakhstanskaya	619.6	15	4%	413.3	15	67%	30.2	16	5%	176.1	16	28%	151.0	15	24%
Семипалатинская Semipalatinskaya	838.1	10	5%	521.4	10	62%	47.8	8	6%	268.9	7	32%	207.5	10	25%
Талдыкурганская Taldykourganskaya	732.0	12	4%	438.1	12	60%	43.4	11	6%	250.5	10	34%	166.7	12	23%
Тургайская Tourgaiskaya	316.2	20	2%	193.9	20	61%	17.8	19	6%	104.5	20	33%	80.9	20	26%
Южно-Казахстанская South Kazakhstanskaya	1955.0	1	12%	1085.4	1	56%	125.3	1	6%	744.3	1	36%	451.6	1	23%
г. Алматы Almaty Municipality	1170.4	3	7%	853.6	3	73%	48.7	6	4%	268.1	8	23%	347.8	3	30%
г. Ленинск Leninsk Municipality	69.7	21	0%	36.1	21	52%	4.9	21	7%	28.7	21	41%	16.4	21	24%

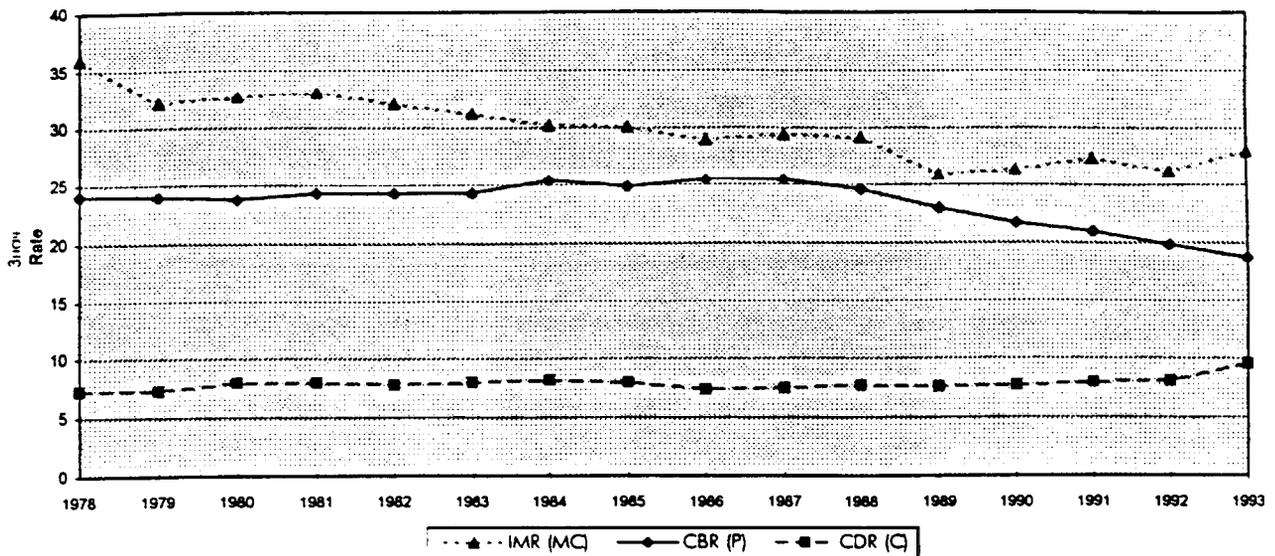
замечания: данные взяты из годового отчета за 1993г.; Табл.1
notes: data taken from 1993 Annual Report, Table 1

ТЕНДЕНЦИИ РОЖДАЕМОСТИ, СМЕРТНОСТИ И МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ

TRENDS IN CRUDE BIRTH AND DEATH RATES AND INFANT MORTALITY RATES

Казахстан : 1978 - 1993

Kazakhstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
IMR (MC)	36.0	32.2	32.7	33.1	32.1	31.2	30.2	30.1	29.0	29.4	29.2	25.9	26.4	27.4	26.2	28.0
CBR (P)	24.1	24.0	23.8	24.3	24.3	24.3	25.4	24.9	25.5	25.5	24.6	23.0	21.7	21.0	19.9	18.7
CDR (C)	7.3	7.3	8.0	8.0	7.8	8.0	8.2	8.0	7.4	7.5	7.7	7.6	7.7	8.0	8.1	9.5

замечания: Младенческая смертность (MC)-число смертных случ. детей до 1г на 1000, рожденных живыми
Рождаемость (P) -число родившихся на 1000 населения
Смертность (C) - число смерт. случаев на 1000 населения

notes: Infant Mortality Rate (IMR) - deaths under 1 year / 1000 live births
Crude Birth Rate (CBR) - births / 1000 population
Crude Death Rate (CDR) - deaths / 1000 population

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

Показатели смертности и рождаемости в 1993
1993 Outcomes

	Рождаемость на 1000 Crude Birth Rate					Смертность на 1000 Crude Death Rate					Млад. смертность Infant Mortality Rate						
	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank		
	1978 - 1983 - 1988 - 1993	1983 - 1988 - 1993	1988 - 1993			1978 - 1983 - 1988 - 1993	1983 - 1988 - 1993	1988 - 1993			1978 - 1983 - 1988 - 1993	1983 - 1988 - 1993	1988 - 1993				
респ. Казахстан - всего Rep. Kazakhstan - total	-22%	-23%	-24%	18.7				26%	15%	19%	9.2				-4%	-22%	28.0
Акмолинская Akmolinskaya	-30%	-33%	-31%	15.1	14	42%	17%	23%	9.5	7	-16%		-21%	23.4	16		
Актюбинская Actubinskaya	-17%	-23%	-24%	20.5	7	21%	12%	25%	8.6	15	11%		-29%	30.3	7		
Алматинская Almatinskaya	-23%	-25%	-29%	19.5	9	23%	12%	18%	8.6	16	-5%		-41%	22.9	17		
Атырауская Atyrauskaya	-9%	-15%	-22%	24.3	3	6%	2%	15%	9.1	12	-9%		-32%	33.6	4		
Восточно-Казахстанская East Kazakhstanskaya	-34%	-34%	-32%	13.4	19	30%	19%	28%	11.8	1	-1%		-15%	26.9	12		
Джамбылская Dzhambylskaya																	
Джезказганская Dzhezkazganskaya	-15%	-13%	-16%	22.8	4	48%	16%	15%	9.2	11	-1%		14%	37.6	2		
Западно-Казахстанская West Kazakhstanskaya	-19%	-20%	-25%	19.1	10	34%	27%	24%	9.4	8	-10%		-37%	23.8	15		
Карагандинская Karagandinskaya	-31%	-33%	-32%	12.9	20	49%	29%	29%	9.7	5	8%		-26%	24.6	14		
Кзыл-Ординская Kzyl-Ordinskaya	-1%	-1%	-6%	30.3	1	11%	13%	13%	8.1	18	0%		-37%	30.6	6		
Кокчетавская Kokchetauskaya	-32%	-28%	-31%	16.6	13	23%	13%	18%	9.7	6	1%		-19%	27.1	11		
Кустайская Koustaniskaya	-37%	-38%	-32%	13.9	17	25%	15%	19%	9.4	9	-10%		-38%	22.5	19		
Мавгыстауская Mangystauskaya	-18%	-22%	-16%	22.2	5	51%	28%	45%	6.8	20	28%		-12%	35.0	3		
Павлодарская Pavlodarskaya	-37%	-38%	-35%	14.6	15	36%	25%	29%	9.0	13	17%		1%	32.2	5		
Северно-Казахстанская North Kazakhstanskaya	-36%	-37%	-32%	14.1	16	20%	16%	19%	10.7	3	-10%		-24%	22.8	18		
Семипалатинская Semipalatinskaya	-27%	-28%	-28%	17.5	12	27%	16%	23%	10.0	4	-14%		-25%	29.3	9		
Талдыкурганская Taldykourganskaya	-19%	-20%	-26%	20.1	8	31%	19%	13%	9.4	10	-19%		0%	20.9	20		
Тургайская Tourgaiskaya	-29%	-24%	-19%	20.9	6	37%	22%	30%	8.2	17	29%		15%	41.8	1		
Южно-Казахстанская South Kazakhstanskaya	-6%	-5%	-9%	29.3	2	6%	1%	6%	7.5	19	-18%		-32%	29.6	8		
г. Алматы Almaty Municipality	-33%	-34%	-34%	11.6	21	27%	27%	36%	10.9	2	-12%		-24%	18.8	21		
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	13.6	18	#N/A	#N/A	#N/A	4.1	21	#N/A			28.9	10		

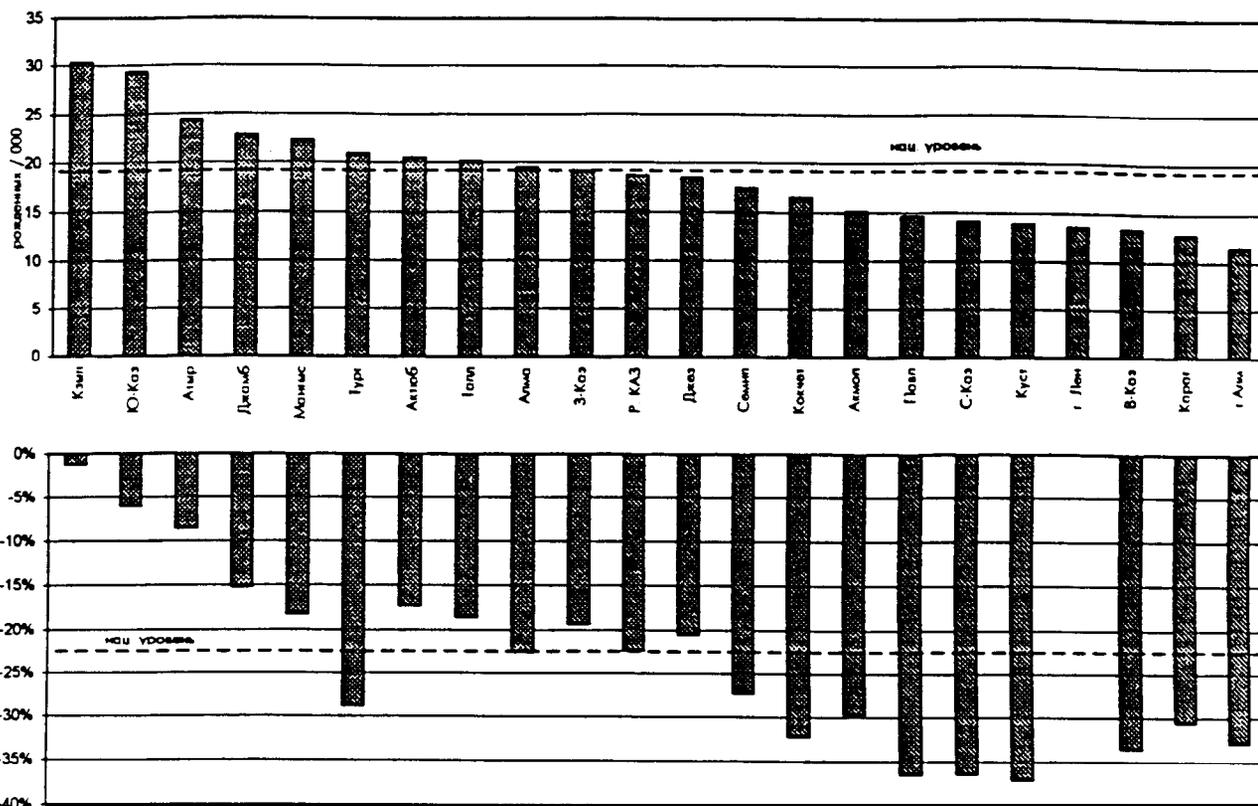
замечания: Младенческая смертность (МС)-число смертных случ. детей до 1г
на 1000, рожденных живыми
Рождаемость (Р) — число родившихся на 1000 населения
Смертность (С) — число смерт. случаев на 1000 населения

notes: Crude Birth Rate - births / 1000 population
Crude Death Rate - deaths / 1000 population
Infant Mortality Rate - deaths under 1 year / 1000 live births

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

Рождаемость

1993, по областям

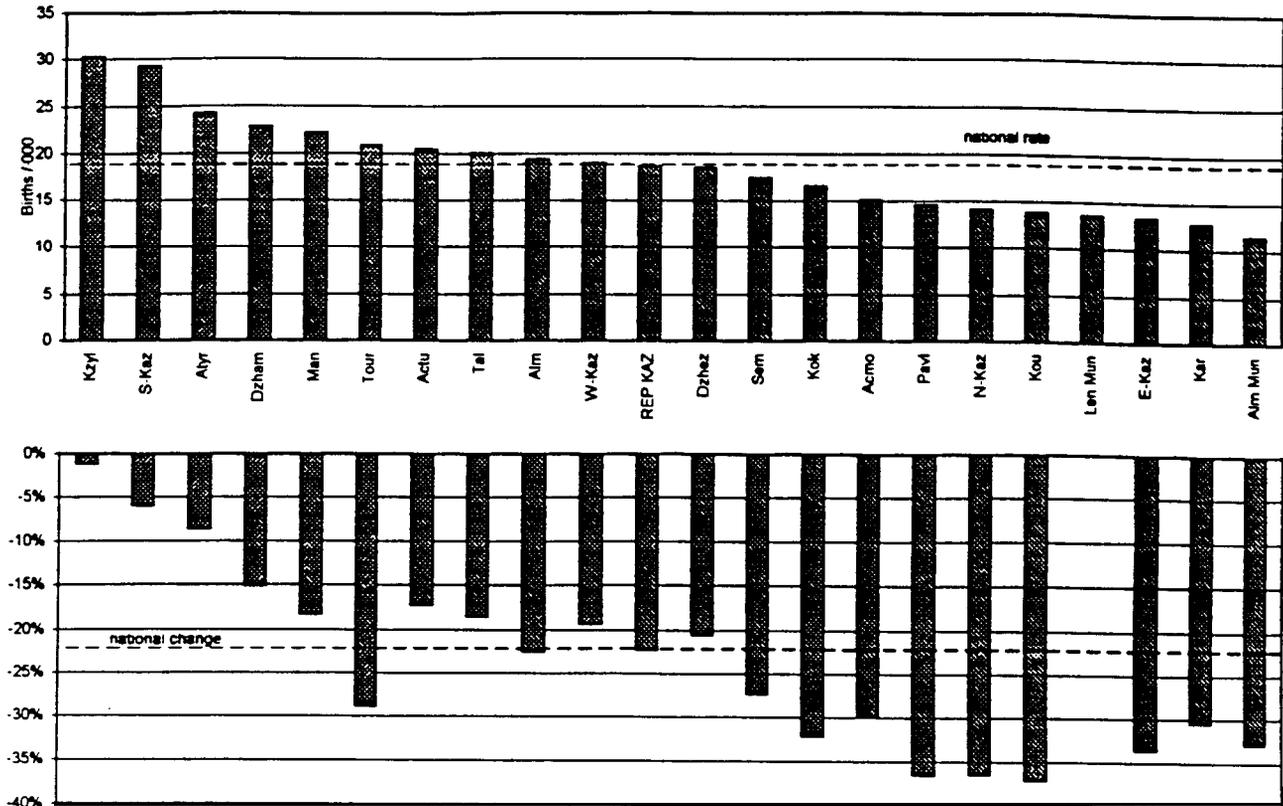


ИЗМЕНЕНИЕ РОЖДАЕМОСТИ В %; 1978 - 1993

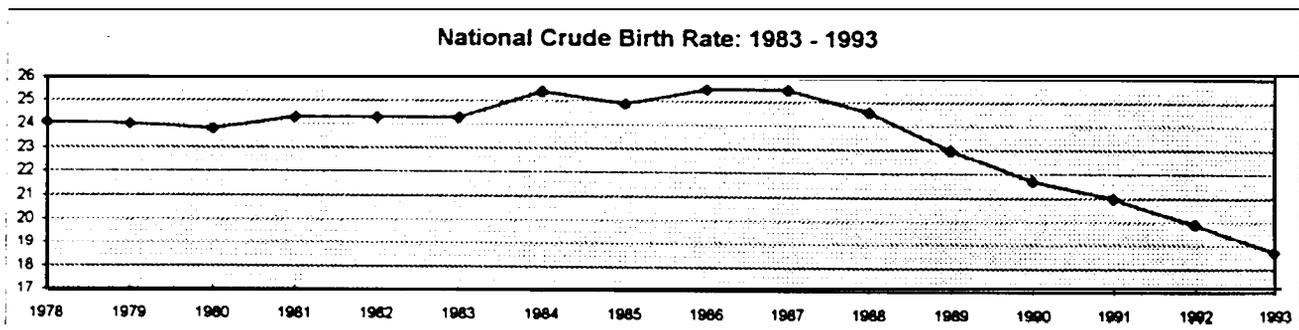


CRUDE BIRTH RATES

1993, by Oblast



% Change in Birth Rates: 1983 - 1993



Рождаемость на 1000 населения: 1978 - 1993
Crude Birth Rate: 1983 - 1993
 (births / 1000 population)

	Изменение % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	197
респ. Казахстан - всего Rep. Kazakhstan - total	-22%	-23%	-24%	18.7	19.9	21.0	21.7	23.0	24.6	25.5	25.5	24.8	25.4	24.3	24.3	24.3	23.8	24.0	24.
Акмолинская Akmolinskaya	-30%	-33%	-31%	15.1	16.8	18.2	19.8	21.3	21.9	22.7	23.0	22.8	23.7	22.7	22.8	22.5	21.6	21.8	21.
Актюбинская Actubinskaya	-17%	-23%	-24%	20.5	21.7	22.8	23.9	25.1	26.8	27.3	27.7	27.1	27.2	26.5	25.9	26.2	25.5	28.2	24.
Алматинская Almatinskaya	-23%	-25%	-29%	19.5	21.1	22.6	23.1	24.7	27.6	28.0	28.0	26.7	27.4	28.1	26.6	26.3	25.5	24.8	25.
Атырауская Atyrauskaya	-9%	-15%	-22%	24.3	25.6	26.8	26.4	27.8	31.1	31.6	30.6	29.4	28.8	28.7	27.4	28.2	27.3	28.9	28.
Восточно-Казахстанская East Kazakhstanskaya	-34%	-34%	-32%	13.4	15.2	16.0	17.1	18.9	19.7	20.6	20.8	20.5	21.4	20.3	20.2	20.0	19.9	20.5	20
Джамбыльская Dzhambylskaya	-15%	-13%	-16%	22.8	23.6	23.4	23.8	25.1	27.3	28.1	28.8	28.4	28.3	26.1	27.2	26.4	26.2	25.0	26
Джезказганская Dzhezkazganskaya	-21%	-25%	-25%	18.5	19.0	20.1	21.0	22.1	24.6	25.6	25.3	25.2	25.9	24.6	24.2	24.0	23.2	24.0	23
Западно-Казахстанская West Kazakhstanskaya	-19%	-20%	-25%	19.1	20.3	22.3	29.9	24.0	25.3	26.4	26.1	25.2	25.1	23.9	22.8	23.6	23.4	23.6	23
Карагандинская Karagandinskaya	-31%	-33%	-32%	12.9	14.0	15.0	16.2	17.5	19.1	20.6	20.2	19.8	20.3	19.2	19.5	19.5	18.5	19.0	18
Кзыл-Ординская Kyzyl-Ordinskaya	-1%	-1%	-6%	30.3	31.0	28.8	29.2	29.8	32.1	32.8	32.1	31.2	31.8	30.6	30.2	30.2	30.9	32.0	30.
Кокчетавская Kokchetauskaya	-32%	-28%	-31%	16.6	17.8	18.8	19.8	22.2	23.9	24.8	24.4	24.4	24.2	23.2	23.9	23.7	23.4	23.4	24.
Кустанайская Koustaniskaya	-37%	-38%	-32%	13.9	15.6	16.7	19.0	20.1	20.4	22.0	22.1	22.1	23.2	22.3	22.5	22.7	21.6	22.0	22.
Мангыстауская Mangystauskaya	-18%	-22%	-16%	22.2	23.3	24.6			26.5	27.3	28.3	27.3	28.3	28.6	27.5	28.1	27.3	26.5	27.
Павлодарская Pavlodarskaya	-37%	-38%	-35%	14.6	16.1	17.7	18.9	21.0	22.6	23.8	24.7	23.8	24.6	23.5	23.6	23.3	22.7	23.4	23
Северно-Казахстанская North Kazakhstanskaya	-36%	-37%	-32%	14.1	15.8	17.3	18.4	19.7	20.6	21.6	21.3	21.1	22.4	22.3	21.7	22.1	21.3	21.5	22.

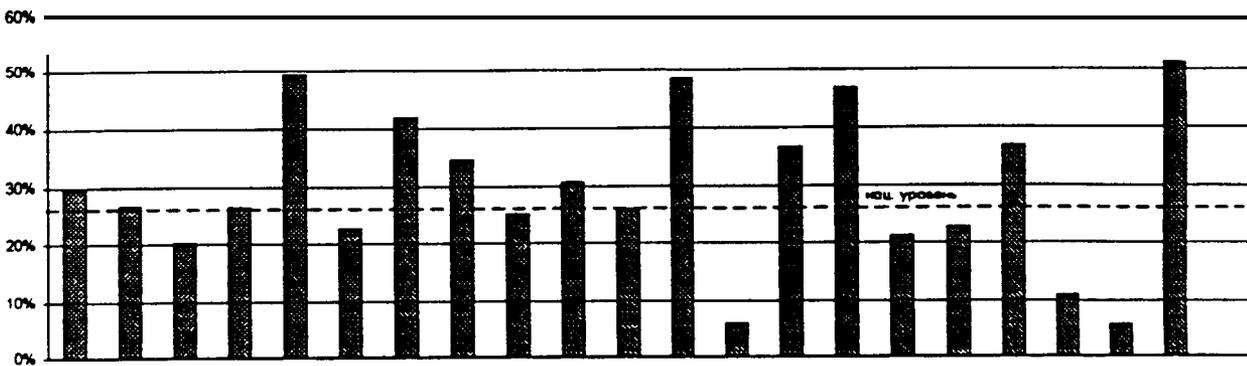
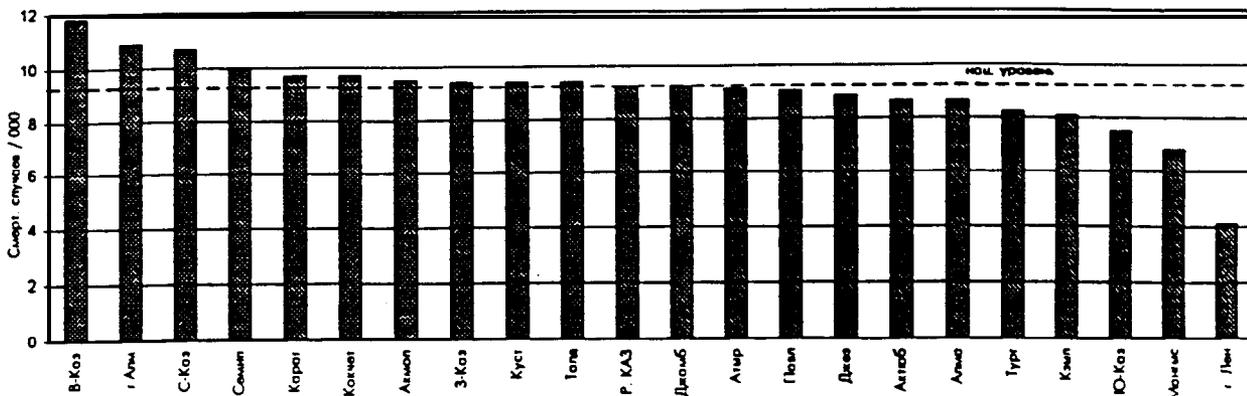
Рождаемость на 1000 населения: 1978 - 1993
Crude Birth Rate: 1983 - 1993
 (births / 1000 population)

	Изменение % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
Семипалатинская Semipalatinskaya	-27%	-28%	-28%	17.5	18.4	20.1	20.9	22.4	24.2	24.7	24.9	24.3	24.9	24.4	23.7	23.9	23.9	24.3	24.1
Талдыкурганская Taldykourganskaya	-19%	-20%	-26%	20.1	21.5	22.9	22.8	24.2	27.0	27.4	27.2	26.9	26.7	25.2	25.4	24.5	26.0	24.7	24.7
Тургайская Tourgaiskaya	-29%	-24%	-19%	20.9	21.5	23.9			25.7	26.9	26.4	26.1	26.6	27.6	28.6	28.3	27.6	28.7	29.4
Южно-Казахстанская South Kazakhstanskaya	-6%	-5%	-9%	29.3	29.9	30.3	29.9	31.0	32.2	33.2	33.3	32.2	32.1	30.7	30.7	30.2	29.6	29.4	31.2
г. Алматы Almaty Municipality	-33%	-34%	-34%	11.6	13.4	14.8	15.8	16.5	17.5	18.4	17.9	17.7	18.6	17.5	17.5	18.6	17.8	17.3	17.3
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	13.6	14.3														

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

УРОВЕНЬ СМЕРТНОСТИ

1993, по областям

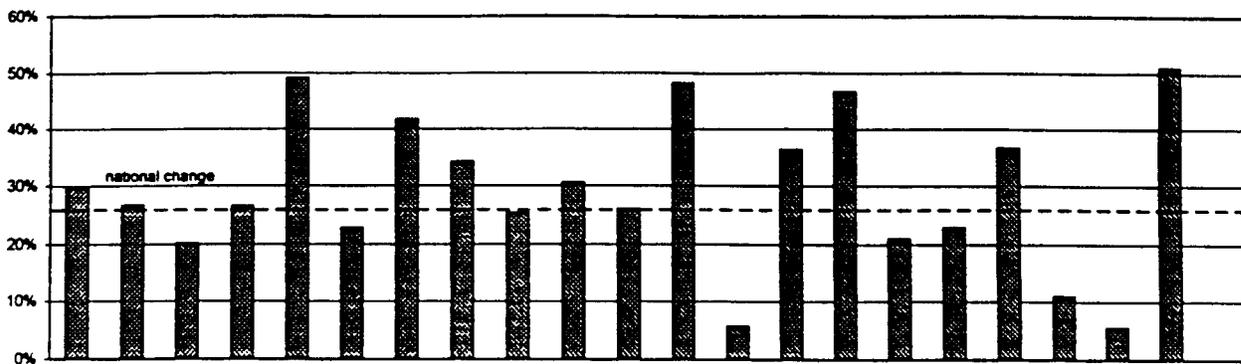
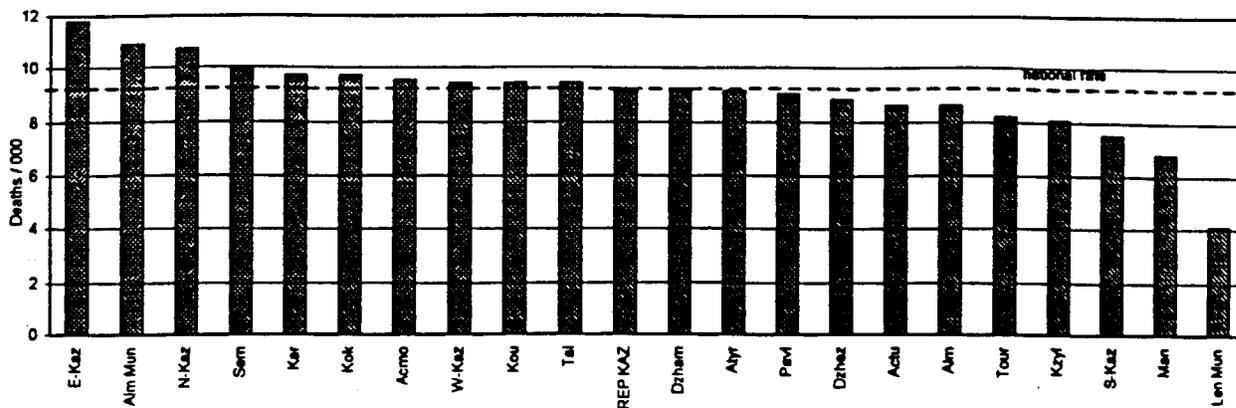


Изменение уровня смертности в %; 1978 - 1993

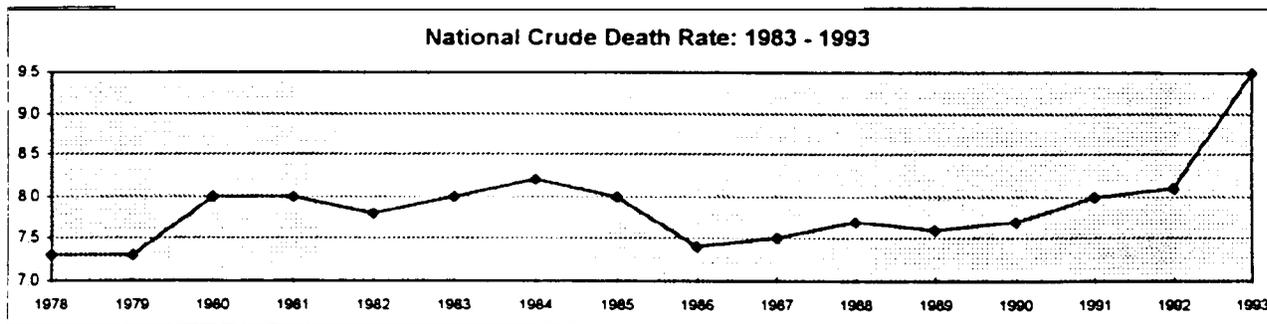


CRUDE DEATH RATES

1993, by Oblast



% Change in Death Rates: 1983 - 1993



Смертность на 1000 чел. 1978 - 1993
Crude Death Rate: 1978 - 1993
(deaths / 1000 population)

	Изменение % % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
респ. Казахстан - всего Rep. Kazakhstan - total	26%	15%	19%	9.2	8.1	8.0	7.7	7.6	7.7	7.5	7.4	8.0	8.2	8.0	7.8	8.0	8.0	7.7	7.3
Акмолинская Akmolinskaya	42%	17%	23%	9.5	8.3	8.1	7.6	7.5	7.7	7.2	7.2	8.0	8.4	8.1	8.1	7.8	7.5	7.3	6.7
Актюбинская Actubinskaya	21%	12%	25%	8.6	7.6	7.3	6.9	6.8	6.9	6.9	6.8	7.3	7.7	7.7	7.8	8.5	7.5	8.2	7.1
Алматинская Almatinskaya	23%	12%	18%	8.6	7.8	7.4	7.1	7.3	7.3	7.3	7.2	7.8	8.1	7.7	7.5	7.7	7.7	7.1	7.0
Атырауская Atyrauskaya	6%	2%	15%	9.1	8.1	8.0	6.6	6.6	7.9	8.2	8.1	8.9	9.2	8.9	8.6	8.9	9.4	8.9	8.6
Восточно-Казахстанская East Kazakhstanskaya	30%	19%	28%	11.8	10.2	9.9	9.7	9.5	9.2	8.8	8.9	9.9	10.7	9.9	9.5	9.5	9.9	9.3	9.1
Джамбылская Ozhambylskaya	48%	16%	15%	9.2	7.8	7.9	7.7	7.6	8.0	7.4	7.6	8.2	8.1	7.9	7.9	8.0	7.6	7.7	6.2
Джезказганская Ozhezkazganskaya	47%	11%	16%	8.8	7.7	7.4	7.3	7.3	7.6	7.4	7.3	8.3	8.4	7.9	7.3	7.4	7.3	6.8	6.0
Западно-Казахстанская West Kazakhstanskaya	34%	27%	24%	9.4	8.3	8.6	8.2	7.9	7.6	7.9	7.7	8.0	8.2	7.4	7.5	7.6	8.1	7.4	7.0
Карагандинская Karagandinskaya	49%	29%	29%	9.7	8.2	8.1	7.9	7.6	7.5	7.0	6.8	7.5	7.6	7.5	7.3	7.3	7.1	7.1	6.5
Кзыл-Ординская Kzyl-Ordinskaya	11%	13%	13%	8.1	7.6	7.1	6.8	6.9	7.2	6.9	6.3	6.8	6.8	7.2	7.1	7.2	7.3	6.9	7.3
Кокчетавская Kokchetavskaya	23%	13%	18%	9.7	8.4	8.3	8.1	7.9	8.2	8.0	7.8	8.3	8.6	8.6	8.5	8.4	8.7	8.4	7.9
Кустанайская Koustaninskaya	25%	15%	19%	9.4	8.5	8.0	7.7	7.9	7.9	7.9	7.6	8.3	8.5	8.2	8.1	8.5	8.2	7.9	7.5
Мангыстауская Mangystauskaya	51%	28%	45%	6.8	5.9	6.0			4.7	4.9	4.8	5.0	5.2	5.3	5.0	5.0	5.0	4.3	4.5
Павлодарская Pavlodar'skaya	36%	25%	29%	9.0	7.9	7.5	7.2	7.0	7.0	6.8	6.3	7.0	7.8	7.2	7.1	7.0	7.0	7.2	6.6
Северно-Казахстанская North Kazakhstanskaya	20%	16%	19%	10.7	9.5	9.5	9.2	9.3	9.0	8.9	8.9	9.5	9.9	9.2	9.3	9.4	9.7	9.3	8.9
Семипалатинская Semipalatinskaya	27%	16%	23%	10.0	8.3	8.3	8.1	7.7	8.1	7.9	8.1	8.4	8.9	8.6	8.2	8.7	8.6	8.3	7.9
Талдыкурганская Taldykourganskaya	31%	19%	13%	9.4	8.4	8.2	7.9	7.9	8.3	8.0	7.9	8.4	8.7	7.9	7.2	7.2	8.2	7.6	7.2

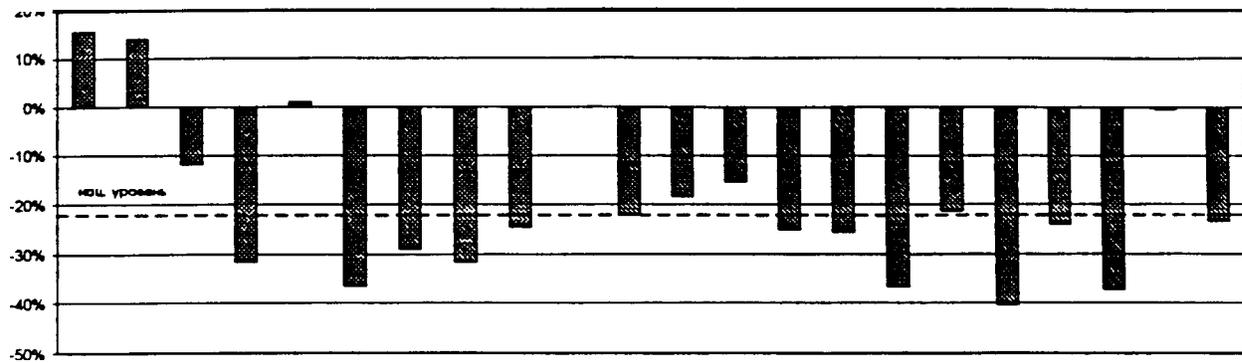
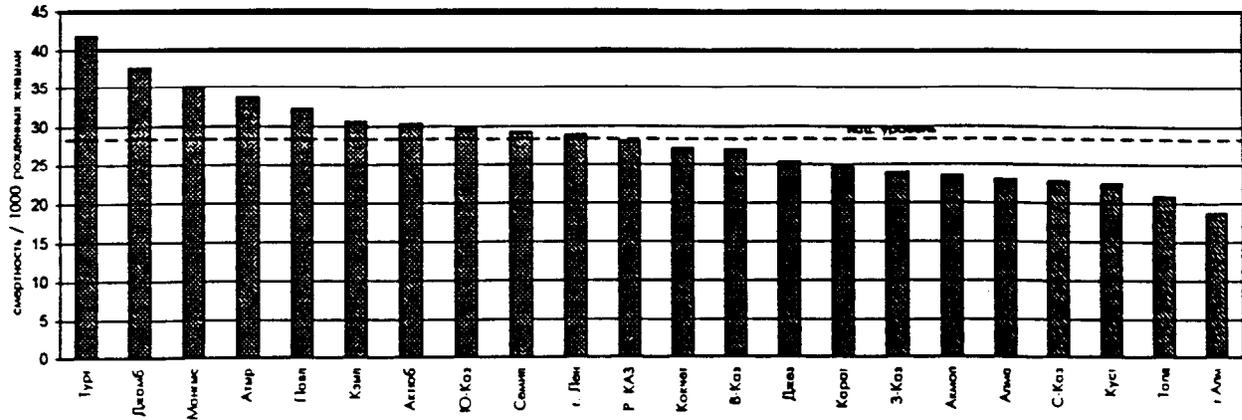
Смертность на 1000 чел. 1978 - 1993
Crude Death Rate: 1978 - 1993
(deaths / 1000 population)

	Изменение % % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	Тургайская Tourgaiskaya	37%	22%	30%	8.2	7.0	7.0			6.3	6.1	6.3	6.3	6.7	6.7	6.9	6.9	7.0	6.1
Южно-Казахстанская South Kazakhstanskaya	6%	1%	6%	7.5	6.9	7.0	6.7	6.8	7.1	6.8	7.0	7.4	7.5	7.4	7.4	7.2	7.4	7.0	7.1
г. Алматы Almaty Municipality	27%	27%	36%	10.9	9.1	8.8	8.6	8.3	8.0	8.1	7.9	8.4	8.0	8.6	8.4	9.0	9.1	9.1	8.6
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	4.1	3.0														

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

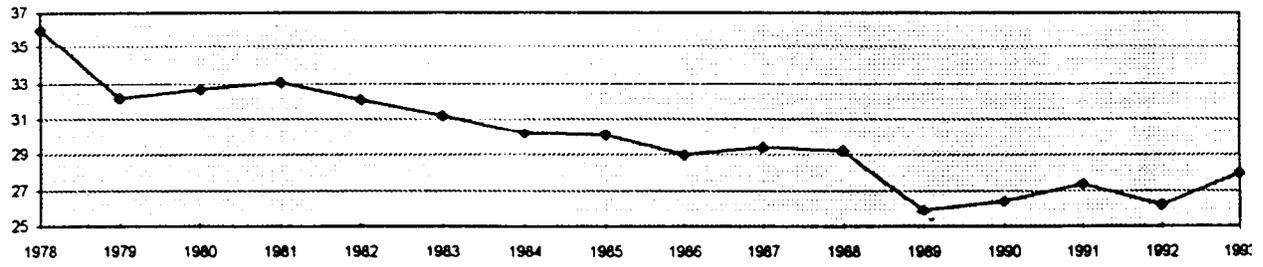
УРОВЕНЬ МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ

1993, по областям



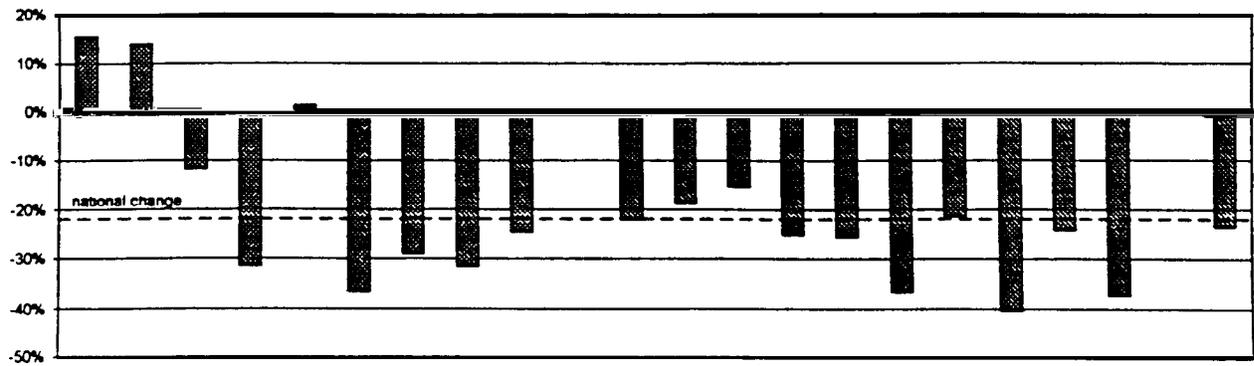
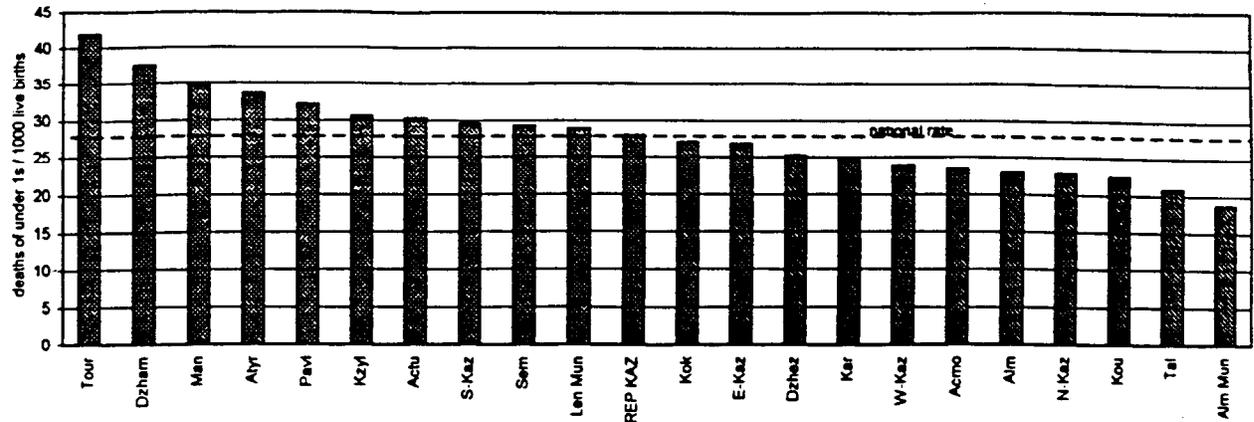
Изменения уровня МС в %; 1978 - 1993гг

Изменение национального уровня младенческой смертности; 1978 - 1993

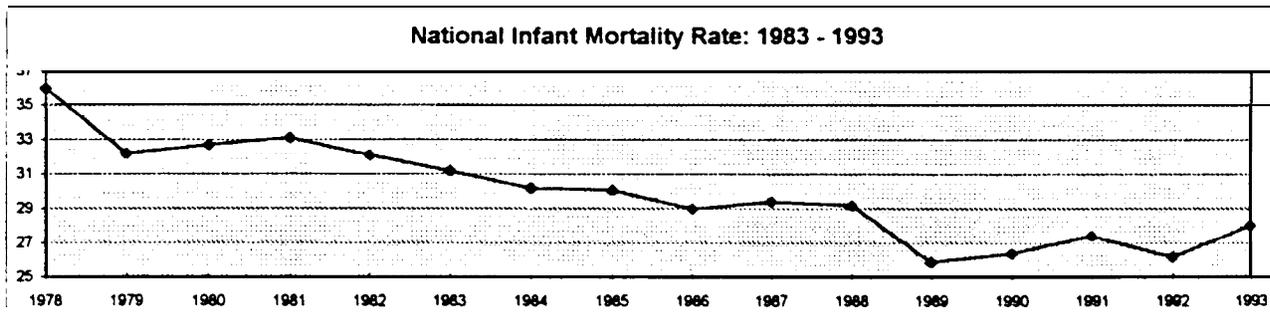


INFANT MORTALITY RATES

1993, by Oblast



% Change in IMR: 1983 - 1993



Младенческая смертность на 1000 рожденных живыми. 1978 - 1993
Infant Mortality Rate: 1978 - 1993
 (deaths of under 1s / 1000 live births)

	Изменение % % Change																				
	1978 - 1993	1983 - 1993	1988 - 1993	1983 - 1988	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Казахстан - всего Rep. Kazakhstan - total	-22%	-10%	-4%	-6%	28.0	26.2	27.4	26.4	25.9	29.2	29.4	29.0	30.1	30.2	31.2	32.1	33.1	32.7	32.2	36.0	
Акмолинская Acmolinskaya	-21%	-27%	-16%	-14%	23.4	22.3	23.6	23.4	21.2	27.7	25.0	22.9	27.0	30.0	32.2	35.0	28.9	28.5	31.4	29.8	
Актюбинская Actubinskaya	-29%	-10%	11%	-19%	30.3	29.1	26.3	26.6	25.2	27.2	28.3	27.5	28.4	28.5	33.7	33.6	41.5	36.2	40.8	42.7	
Алматинская Almatinskaya	-41%	-17%	-5%	-13%	22.9	22.8	23.7	25.5	24.1	24.1	30.4	29.1	33.0	27.4	27.7	31.6	30.4	30.2	31.5	38.5	
Атырауская Atyrauskaya	-32%	-19%	-9%	-11%	33.6	34.1	33.4	32.3	30.6	37.0	35.0	36.5	37.0	38.8	41.7	41.7	49.9	55.6	49.3	49.1	
Восточно-Казахстанская East Kazakhstanskaya	-15%	-24%	-1%	-23%	26.9	21.6	26.3	26.3	25.7	27.3	28.3	25.9	27.6	34.3	35.4	32.8	31.8	32.3	31.2	31.8	
Джамбыльская Dzhambylskaya	14%	2%	-1%	3%	37.6	33.5	31.9	31.9	29.8	38.1	35.6	35.8	38.7	36.6	37.0	36.4	36.2	33.8	33.5	33.0	
Джезказганская Dzhezkazganskaya	-25%	-12%	-8%	-5%	25.3	23.9	24.7	24.7	25.1	27.4	25.5	29.2	28.2	29.2	28.7	29.0	31.9	29.0	28.7	33.8	
Западно-Казахстанская West Kazakhstanskaya	-37%	-27%	-10%	-19%	23.8	24.1	26.2	25.3	25.3	26.4	31.0	33.1	33.3	35.9	32.5	33.5	31.4	38.0	38.0	37.7	
Карагандинская Karagandinskaya	-26%	13%	8%	5%	24.6	19.9	22.2	24.3	20.8	22.8	22.8	21.1	26.0	23.1	21.8	29.5	26.8	26.7	27.7	33.1	
Кзыл-Ординская Kzyl-Ordinskaya	-37%	-23%	0%	-23%	30.6	28.8	33.8	31.7	30.1	30.7	32.5	29.7	33.5	32.9	39.8	32.8	33.1	28.3	32.5	48.4	
Кокчетавская Kokchetauskaya	-19%	-2%	1%	-3%	27.1	23.6	25.6	23.6	22.2	26.7	22.7	23.1	24.8	28.7	27.6	30.5	32.7	37.8	32.7	33.3	
Кустанайская Koustaninskaya	-38%	-17%	-10%	-8%	22.5	23.3	25.3	23.3	23.5	24.9	25.9	25.2	24.2	24.8	27.1	27.0	35.7	34.3	29.8	36.0	
Мангыстауская Mangystauskaya	-12%	-9%	28%	-28%	35.0	41.0	33.4			27.4	32.6	30.6	34.3	35.2	38.3	34.6	35.4	32.0	31.9	39.7	
Павлодарская Pavlodarskaya	1%	18%	17%	1%	32.2	25.5	24.5	26.7	23.3	27.5	27.9	25.2	24.6	26.0	27.3	27.9	29.2	32.1	33.8	31.8	
Северно-Казахстанская North Kazakhstanskaya	-24%	-10%	-10%	0%	22.8	21.0	28.5	20.5	17.3	25.4	23.5	26.5	25.3	26.5	25.4	26.3	31.0	32.3	26.4	30.1	

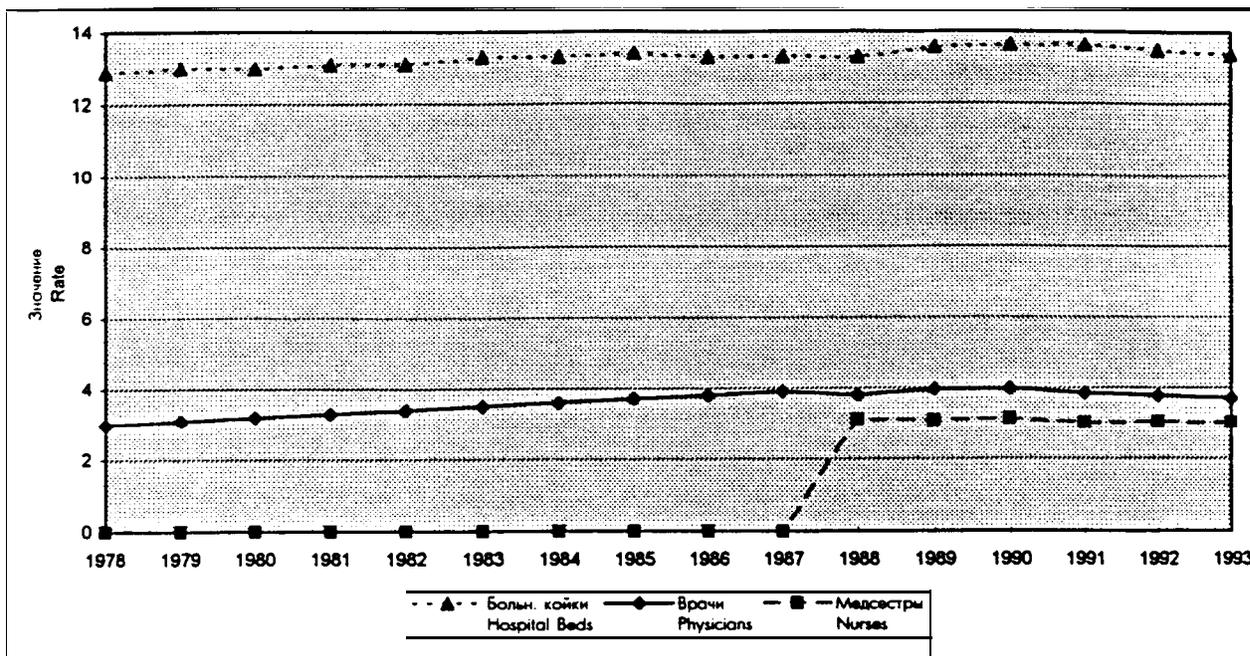
Младенческая смертность на 1000 рожденных живыми. 1978 - 1993
Infant Mortality Rate: 1978 - 1993
(deaths of under 1s / 1000 live births)

	Изменение % % Change				1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993	1983 - 1988																
Семипалатинская Semipalatinskaya	-25%	-5%	-14%	10%	29.3	25.2	28.0	28.7	28.2	34.0	30.9	30.3	30.6	28.8	31.0	31.1	36.7	35.7	33.8	38.9
Талдыкурганская Taldykourganskaya	0%	-14%	-19%	7%	20.9	21.9	24.5	21.9	23.4	25.9	24.6	23.3	22.8	22.2	24.3	21.7	23.2	23.1	20.3	21.0
Тургайская Tourgaiskaya	15%	7%	29%	-17%	41.8	31.7	32.2			32.4	35.8	38.4	32.5	36.4	39.0	43.1	43.2	38.3	33.3	36.2
Южно-Казахстанская South Kazakhstanskaya	-32%	-11%	-18%	8%	29.6	29.4	30.8	28.9	30.6	36.1	33.7	34.3	34.4	33.0	33.4	33.1	32.8	34.7	33.9	43.3
г. Алматы Almaty Municipality	-24%	-36%	-12%	-27%	18.8	17.9	22.0	22.9	19.5	21.3	26.6	24.4	30.4	31.6	29.3	34.4	35.0	25.1	24.3	24.6
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	#N/A	28.9	30.2														

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

ТЕНДЕНЦИИ РЕСУРСОВ ЗДРАВООХРАНЕНИЯ
TRENDS IN INFRASTRUCTURE CAPACITY
ВРАЧИ, МЕДСЕСТРЫ И БОЛЬНИЧНЫЕ КОЙКИ
PHYSICIANS, NURSES, AND HOSPITAL BEDS

Казахстан: 1978 - 1993
Kazakhstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Врачи Physicians	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.8	3.9	4.0	3.9	3.8	3.7
Медсестры Nurses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	3.1	3.0	3.0	3.0
Больн. койки Hospital Beds	12.9	13.0	13.0	13.1	13.1	13.3	13.3	13.4	13.3	13.3	13.3	13.6	13.6	13.6	13.5	13.4

замечания: Врачи - врачи/1000 населения
 Медсестры - число медсестер/число врачей
 Больничные койки - число коек/1000 населения

notes: Physicians - physicians / 1000 population
 Nurses - nurses / physician
 Hospital Beds - beds / 1000 population

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

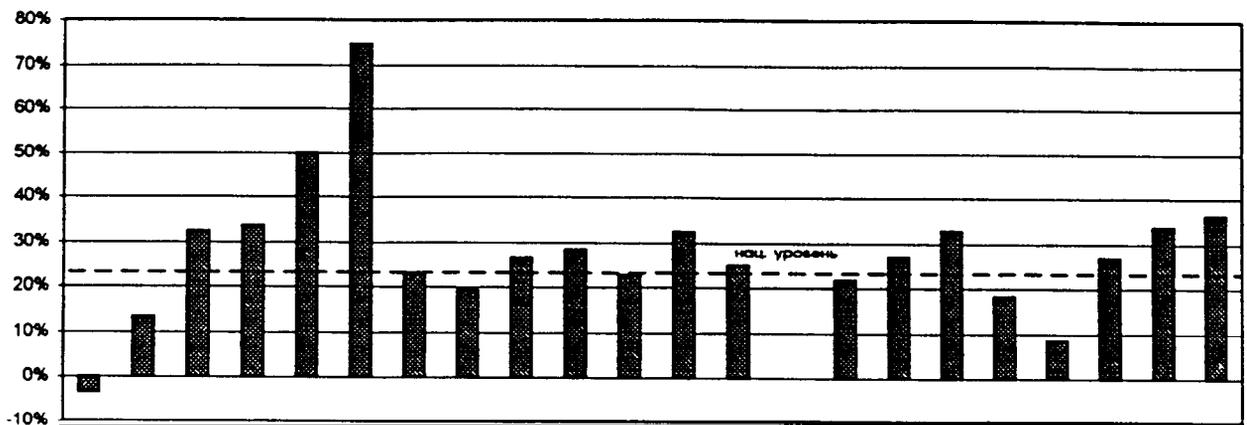
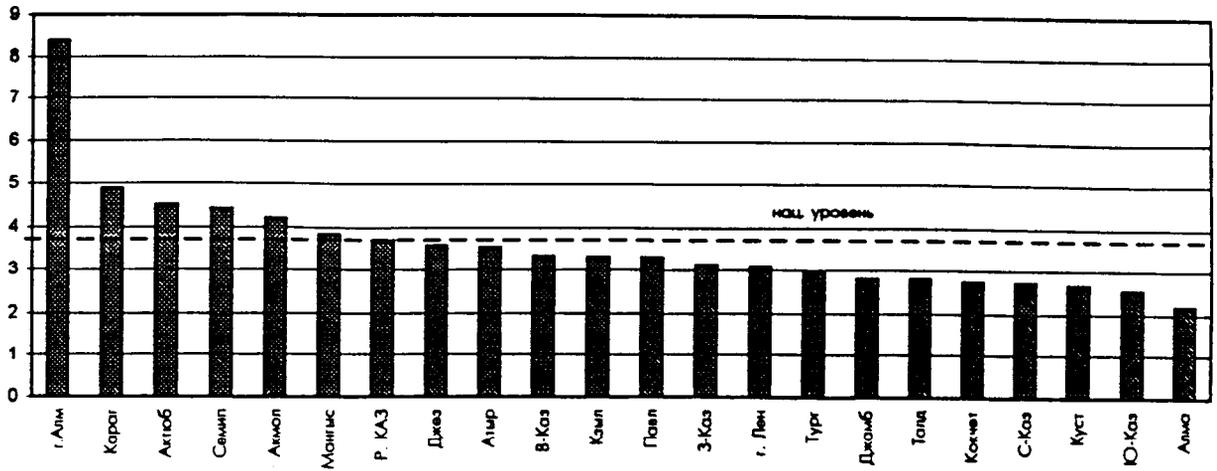
Ресурсы Инфраструктуры; 1993г
1993 Infrastructure Capacity

	Число врачей/1000 населения Physicians / 1000 population					Кол. медсестер на одного врача Ratio nurses to physicians					Число больн. коек/1000 населения Hospital beds / 1000 population				
	Изменение в % % Change			Зачт. Ratio	Ранг Rank	Изменение в % % Change			Зачт. Ratio	Ранг Rank	Изменение в % % Change			Зачт. Ratio	Ранг Rank
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993		
респ. Казахстан - всего Rep. Kazakhstan - total	23%	5%	-3%	3.7		#N/A	#N/A	-3%	3.0		4%	1%	1%	13.4	
Акмолинская Akmolinskaya	50%	24%	20%	4.2	5	#N/A	#N/A	-12%	2.6	16	20%	17%	27%	15.9	3
Актюбинская Aktubinskaya	32%	15%	5%	4.5	3	#N/A	#N/A	-7%	2.4	19	3%	3%	3%	13.0	11
Алматинская Almatinskaya	36%	-9%	-23%	2.2	21	#N/A	#N/A	17%	3.9	3	9%	-4%	-10%	10.3	20
Атырауская Atyrauskaya	26%	-2%	2%	3.5	8	#N/A	#N/A	-1%	3.2	14	-15%	-15%	3%	12.8	13
Восточно-Казахстанская East Kazakhstanskaya	28%	8%	8%	3.3	9	#N/A	#N/A	-15%	3.6	11	6%	1%	0%	13.5	10
Джамбылская Dzhambylskaya	27%	7%	-5%	2.8	15	#N/A	#N/A	8%	3.9	4	7%	-1%	-2%	12.8	14
Джезказганская Dzhezkazganskaya	19%	-3%	-10%	3.6	7	#N/A	#N/A	1%	3.7	8	19%	9%	3%	16.6	1
Западно-Казахстанская West Kazakhstanskaya	25%	1%	-7%	3.1	12	#N/A	#N/A	-7%	3.3	13	-11%	-16%	-17%	11.4	18
Карагандинская Karagandinskaya	13%	0%	-2%	4.9	2	#N/A	#N/A	-8%	2.4	18	10%	8%	13%	16.2	2
Кзыл-Ординская Kyzyl-Ordinskaya	23%	0%	-11%	3.3	10	#N/A	#N/A	14%	4.4	1	15%	11%	7%	14.8	5
Кокчетавская Kokchetavskaya	18%	-3%	-6%	2.7	17	#N/A	#N/A	0%	4.0	2	13%	10%	4%	14.7	6
Кустанайская Koustanskaya	27%	-1%	-13%	2.7	19	#N/A	#N/A	1%	3.8	7	-1%	-1%	-3%	12.9	12
Мангыстауская Mangystauskaya	75%	48%	#N/A	3.8	6	#N/A	#N/A	#N/A	2.9	15	49%	51%	#N/A	15.1	4
Павлодарская Pavlodarskaya	32%	10%	-3%	3.3	11	#N/A	#N/A	0%	3.4	12	13%	4%	6%	14.5	8
Северо-Казахстанская North Kazakhstanskaya	8%	-10%	-9%	2.7	18	#N/A	#N/A	-1%	3.6	10	11%	5%	-2%	14.5	7
Семипалатинская Semipalatinskaya	34%	10%	5%	4.4	4	#N/A	#N/A	-3%	2.5	17	-5%	-12%	-14%	11.9	17
Талдыкурганская Taldykourganskaya	33%	3%	-8%	2.8	16	#N/A	#N/A	-6%	3.7	9	1%	-2%	-4%	12.0	16
Тургайская Tourgaiskaya	22%	-9%	#N/A	2.9	14	#N/A	#N/A	#N/A	3.9	5	1%	-5%	#N/A	13.7	9
Южно-Казахстанская South Kazakhstanskaya	34%	6%	-1%	2.5	20	#N/A	#N/A	-4%	3.9	6	0%	-2%	-2%	11.0	19
г. Алматы Almaty Municipality	-4%	-4%	-8%	8.4	1	#N/A	#N/A	-14%	1.5	21	-28%	-19%	-13%	12.8	15
г. Лесной Leninsk Municipality	#N/A	#N/A	#N/A	3.1	13	#N/A	#N/A	#N/A	2.3	20	#N/A	#N/A	#N/A	5.9	21

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

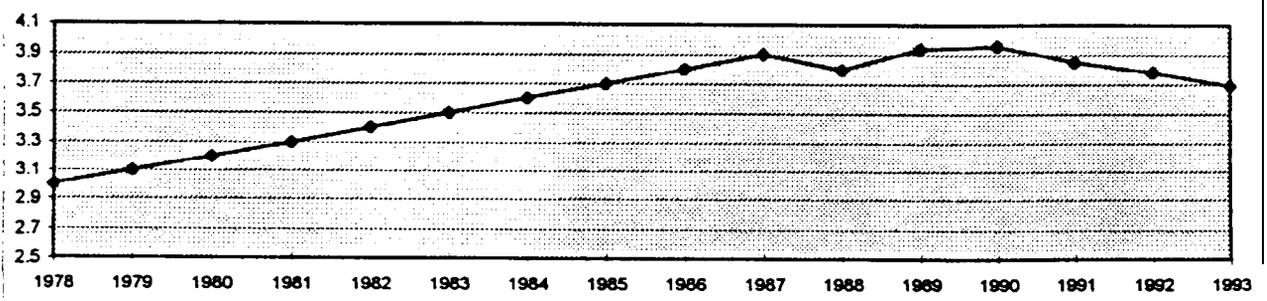
ЧИСЛО ВРАЧЕЙ НА 1000 НАСЕЛЕНИЯ

1993, по областям



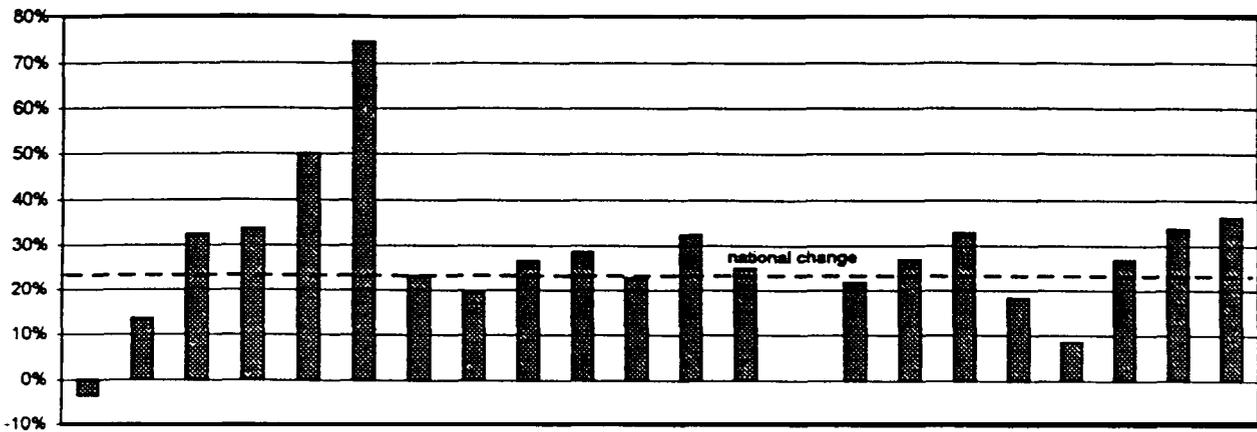
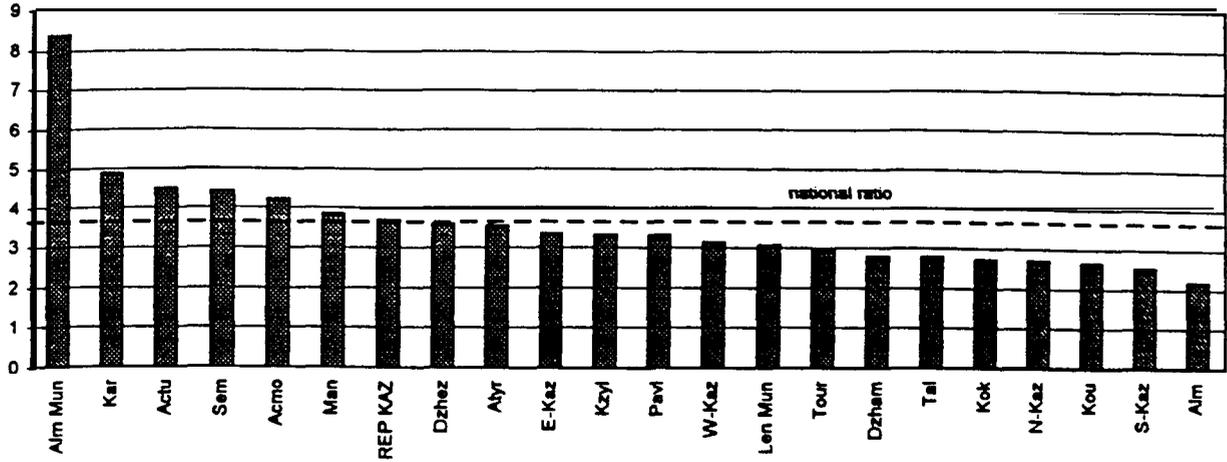
Изменение уровня за период 1978 - 1993г.г. в %

Тенденции по стране; 1978 - 1993г.г.

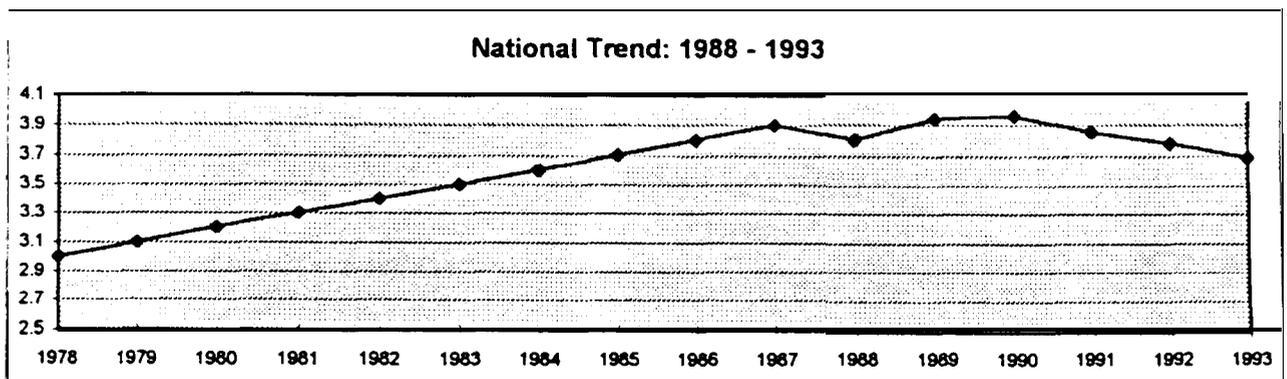


PHYSICIANS / 1000 POPULATION

1993, by Oblast



% Change in Ratio: 1988 - 1993



National Trend: 1988 - 1993

Врачи; 1978-1993г.г.
(число врачей/1000 населения)
Physicians: 1978-1993
(physicians / 1000 population)

	Изменение в %																			
	% Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Казахстан - всего Rep. Kazakhstan - total	23%	5%	-3%	3.7	3.8	3.9	4.0	3.9	3.8	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	
Акмолинская Astolinskaya	50%	24%	20%	4.2	4.3	4.4	3.9	3.6	3.5	3.7	3.6	3.6	3.5	3.4	3.3	3.2	3.1	2.9	2.8	
Актюбинская Actubinskaya	32%	15%	5%	4.5	4.6	4.7	4.6	4.5	4.3	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.6	3.4	
Алматинская Almatinskaya	36%	-9%	-23%	2.2	2.8	2.8	3.5	2.9	2.8	2.8	2.6	2.6	2.5	2.4	2.3	2.2	2.1	1.7	1.6	
Атырауская Atyrauskaya	26%	-2%	2%	3.5	3.8	4.0	4.1	3.7	3.5	4.0	3.9	3.9	3.7	3.6	3.5	3.4	3.2	3.0	2.8	
Восточно-Казахстанская East Kazakhstanskaya	28%	8%	8%	3.3	3.4	3.6	3.3	3.3	3.1	3.3	3.2	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.6	
Джамбыльская Dzhambylskaya	27%	7%	-5%	2.8	2.8	3.0	3.0	3.0	2.9	3.0	2.9	2.9	2.8	2.6	2.4	2.4	2.3	2.3	2.2	
Джезказганская Dzhezkazganskaya	19%	-3%	-10%	3.6	3.7	3.8	4.0	4.1	4.0	4.0	4.0	3.8	3.8	3.7	3.6	3.4	3.3	3.2	3.0	
Западно-Казахстанская West Kazakhstanskaya	25%	1%	-7%	3.1	3.2	3.4	3.5	3.5	3.4	3.5	3.5	3.4	3.2	3.1	2.9	2.8	2.7	2.5	2.5	
Карагандинская Karagandinskaya	13%	0%	-2%	4.9	4.9	5.0	5.3	5.2	5.0	5.1	5.1	5.0	4.9	4.9	4.6	4.6	4.5	4.3	4.3	
Кзыл-Ординская Kyzyl-Ordinskaya	23%	0%	-11%	3.3	3.4	3.0	3.3	4.2	3.7	3.7	3.6	3.5	3.4	3.3	3.2	2.9	2.9	2.8	2.7	
Кокчетавская Kokchetauskaya	18%	-3%	-6%	2.7	2.7	2.9	3.0	3.0	2.9	3.0	3.0	2.9	2.8	2.8	2.5	2.6	2.5	2.3	2.3	
Кустанайская Koustaniskaya	27%	-1%	-13%	2.7	2.7	2.8	3.2	3.2	3.1	2.9	2.9	2.8	2.7	2.7	2.5	2.4	2.4	2.3	2.1	
Мангыстауская Mangystauskaya	75%	48%	#N/A	3.8	4.5	4.3	3.0			2.9	2.8	2.7	2.7	2.6	2.5	2.4	2.5	2.3	2.2	
Павлодарская Pavlodarskaya	32%	10%	-3%	3.3	3.4	3.5	3.7	3.6	3.4	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	

Казахстан: Инфраструктура: Табл. 5.2
Kazakhstan Infrastructure: Table 5.2

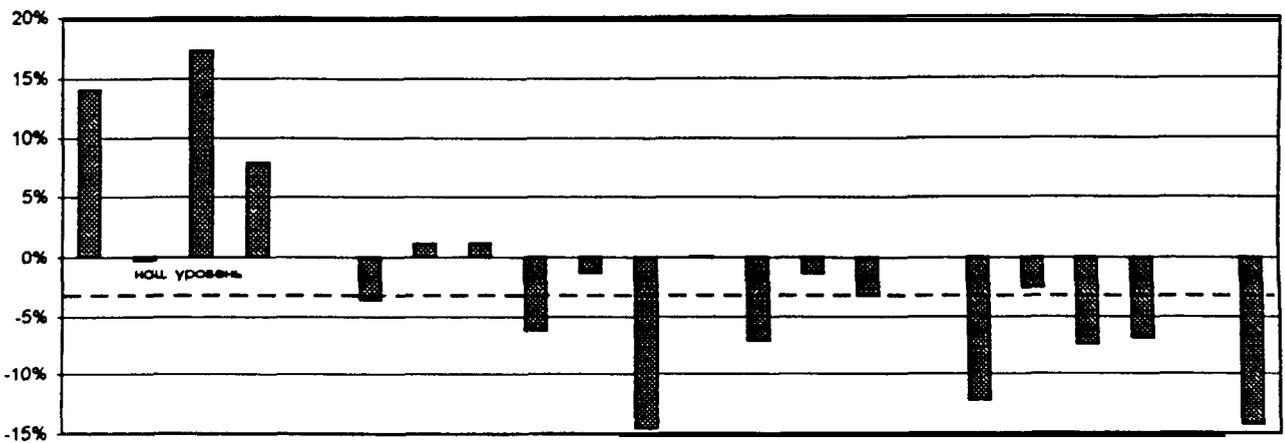
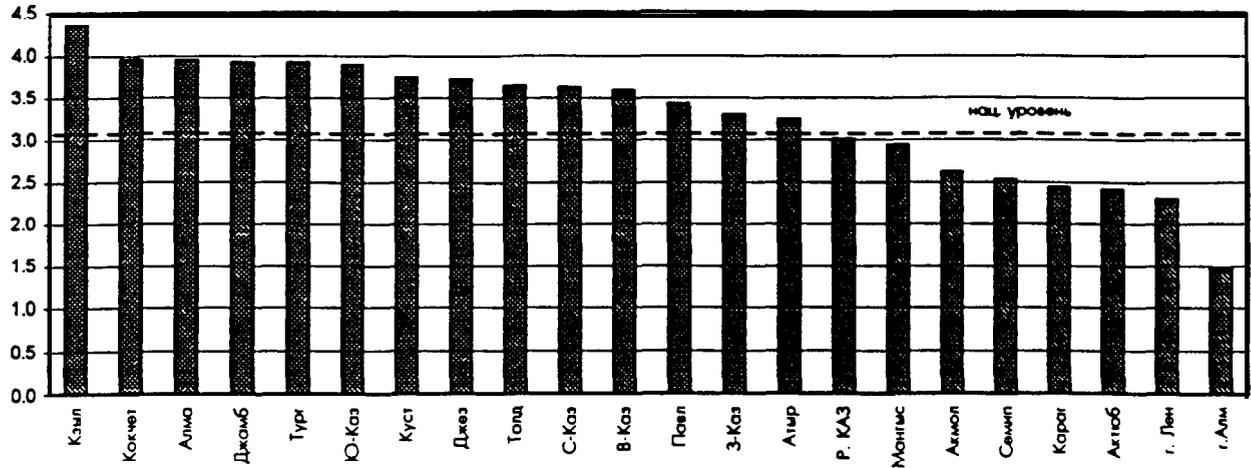
Врачи; 1978-1993г.г.
 (число врачей/1000 населения)
Physicians: 1978-1993
 (physicians / 1000 population)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Северно-Казахстанская North Kazakhstanskaya	8%	-10%	-9%	2.7	2.8	3.0	3.1	3.1	3.0	3.2	3.1	3.1	3.0	3.0	2.8	2.7	2.6	2.6	2.5	
Семипалатинская Semipalatinskaya	34%	10%	5%	4.4	4.6	4.6	4.5	4.4	4.2	4.4	4.3	4.2	4.1	4.0	3.8	3.6	3.5	3.4	3.3	
Талдыкурганская Taldykourganskaya	33%	3%	-8%	2.8	3.1	2.9	3.1	3.0	3.0	3.1	3.1	3.0	2.8	2.7	2.6	2.5	2.3	2.2	2.1	
Тургайская Tourgaiskaya	22%	-9%	#N/A	2.9	3.0	3.2	3.1			3.7	3.6	3.2	3.2	3.2	3.1	3.0	2.9	2.7	2.4	
Южно-Казахстанская South Kazakhstanskaya	34%	6%	-1%	2.5	2.6	2.7	2.8	2.7	2.6	2.7	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.1	1.9	
г. Алматы Almaty Municipality	-4%	-4%	-8%	8.4	8.1	8.1	9.2	9.4	9.1	9.0	9.2	9.0	8.9	8.7	8.2	8.2	8.1	8.6	8.7	
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	3.1	3.2	3.8														

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

Число сред. медперсонала/Число врачей

1993, по областям



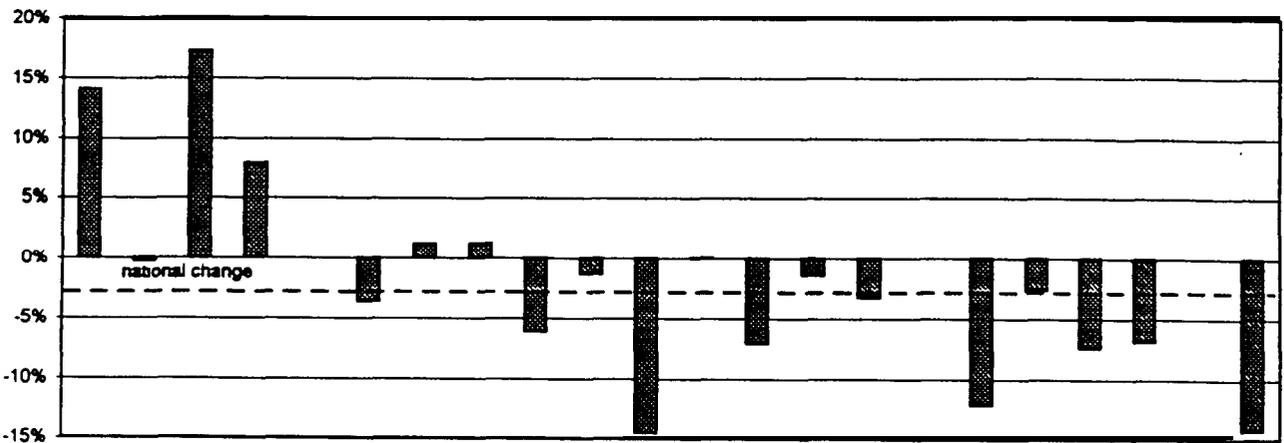
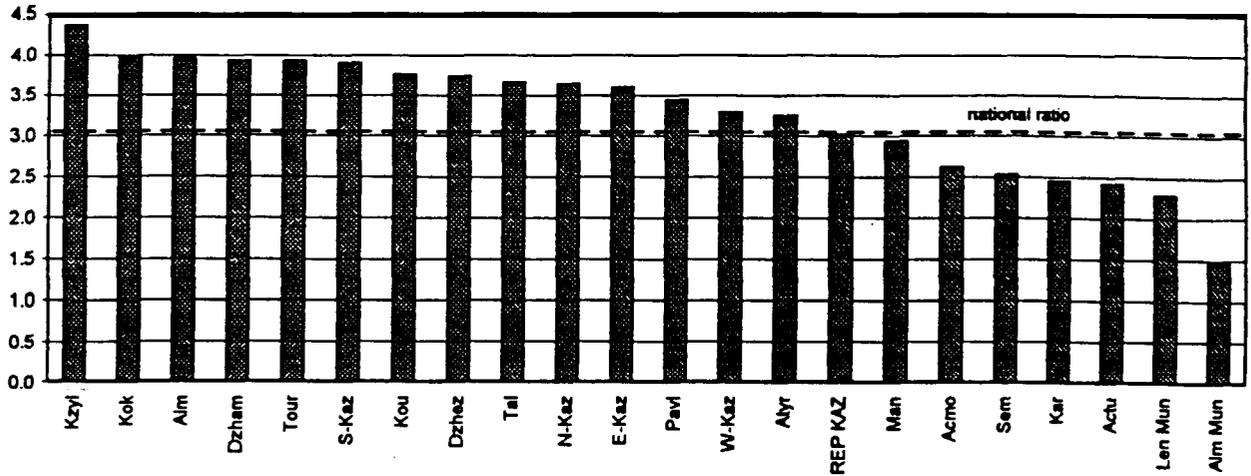
% изменения уровня за 1978 - 1993г.г.



Тенденции по стране за 1978 - 1993г.г.

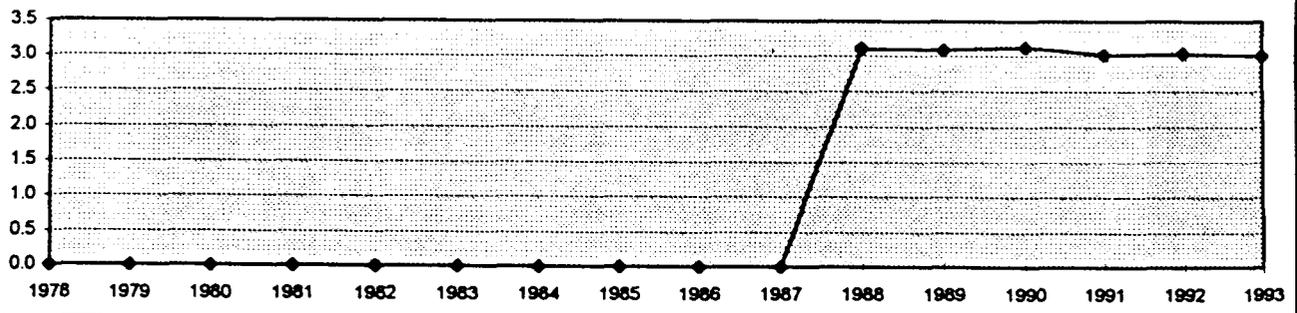
NURSES / PHYSICIAN

1993, by Oblast



% Change in Ratio: 1988 - 1993

National Trend: 1988 - 1993



Средний мед. персонал; 1978-1993

(число медсестер/число врачей)

Nurses: 1978-1993

(nurses / physician)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Казахстан - всего Rep. Kazakhstan - total	#N/A	#N/A	-3%	3.0	3.0	3.0	3.1	3.1	3.1											
Акмолинская Acmolinskaya	#N/A	#N/A	-12%	2.6	2.7	2.6	2.6	3.0	3.0											
Актюбинская Actubinskaya	#N/A	#N/A	-7%	2.4	2.4	2.3	2.5	2.5	2.6											
Алматинская Almatinskaya	#N/A	#N/A	17%	3.9	3.5	3.5	2.8	3.4	3.4											
Атырауская Atyrauskaya	#N/A	#N/A	-1%	3.2	3.2	3.2	4.0	3.2	3.3											
Восточно-Казахстанская East Kazakhstanskaya	#N/A	#N/A	-15%	3.6	3.7	3.5	3.9	4.2	4.2											
Джамбыльская Dzhambylskaya	#N/A	#N/A	8%	3.9	3.7	3.7	3.7	3.6	3.6											
Джезказганская Dzhezkazganskaya	#N/A	#N/A	1%	3.7	3.6	3.7	3.5	3.5	3.7											
Западно-Казахстанская West Kazakhstanskaya	#N/A	#N/A	-7%	3.3	3.2	3.3	3.5	3.5	3.5											
Карагандинская Karagandinskaya	#N/A	#N/A	-8%	2.4	2.5	2.5	2.5	2.6	2.6											
Кзыл-Ординская Kzyl-Ordinskaya	#N/A	#N/A	14%	4.4	4.4	4.3	4.2	3.9	3.8											
Кокчетавская Kokshetauskaya	#N/A	#N/A	0%	4.0	4.2	3.9	3.8	3.8	4.0											
Кустанайская Koustaninskaya	#N/A	#N/A	1%	3.8	3.8	3.7	3.7	3.7	3.7											
Мангыстауская Mangystauskaya	#N/A	#N/A	#N/A	2.9	2.7	2.8	2.9													
Павлодарская Pavlodarskaya	#N/A	#N/A	0%	3.4	3.4	3.4	3.6	3.5	3.4											

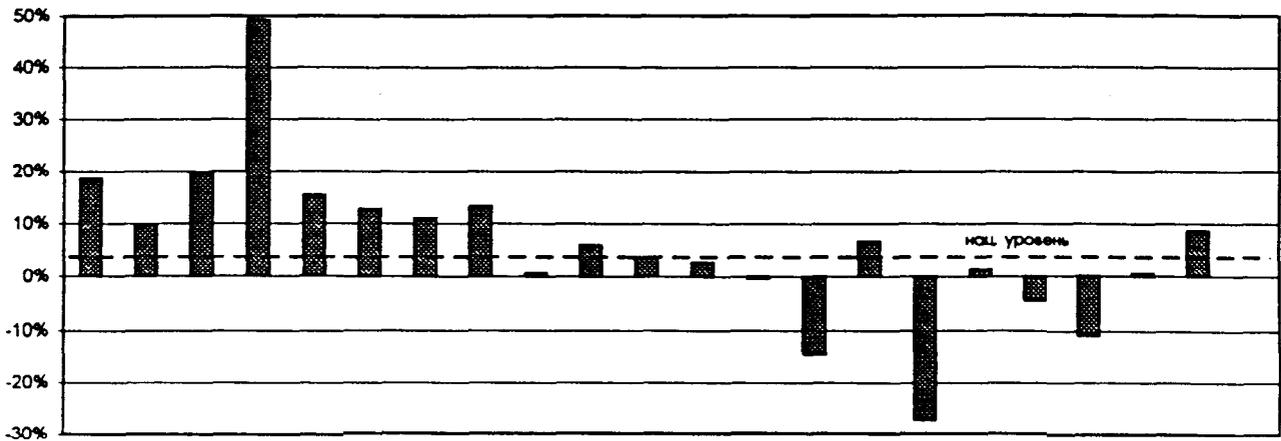
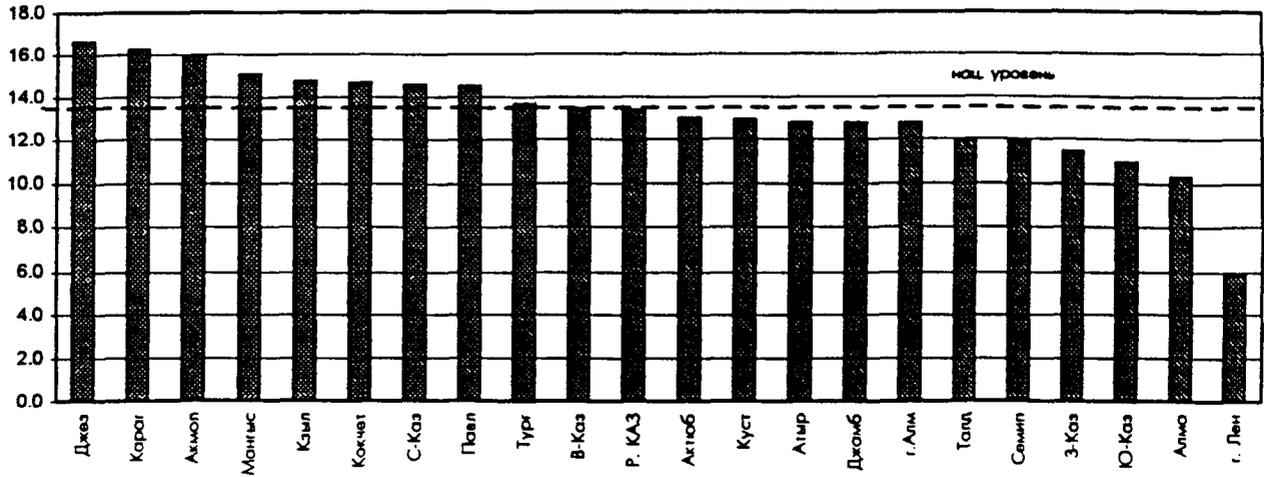
Средний мед. персонал; 1978-1993
 (число медсестер/число врачей)
Nurses: 1978-1993
 (nurses / physician)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Северно-Казахстанская North Kazakhstanskaya	#N/A	#N/A	-1%	3.6	3.7	3.4	3.4	3.7	3.7											
Семипалатинская Semipalatinskaya	#N/A	#N/A	-3%	2.5	2.4	2.5	2.6	2.6	2.6											
Талдыкурганская Taldykourganskaya	#N/A	#N/A	-6%	3.7	3.6	3.8	3.9	4.0	3.9											
Тургайская Tourgaiskaya	#N/A	#N/A	#N/A	3.9	4.0	3.9	4.0													
Южно-Казахстанская South Kazakhstanskaya	#N/A	#N/A	-4%	3.9	4.1	3.9	3.7	3.9	4.0											
г. Алматы Almaty Municipality	#N/A	#N/A	-14%	1.5	1.5	1.7	1.7	1.7	1.7											
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	2.3	2.2	1.9														

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

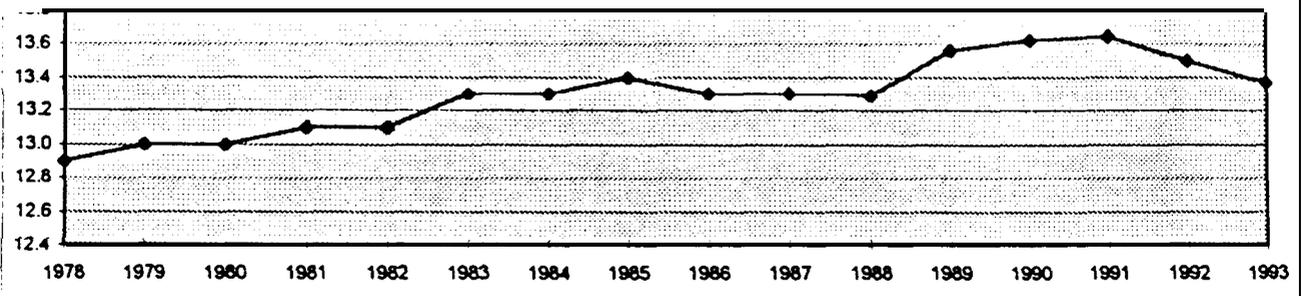
ЧИСЛО БОЛЬНИЧНЫХ КОЕК / 1000 НАСЕЛЕНИЯ

1993, по областям



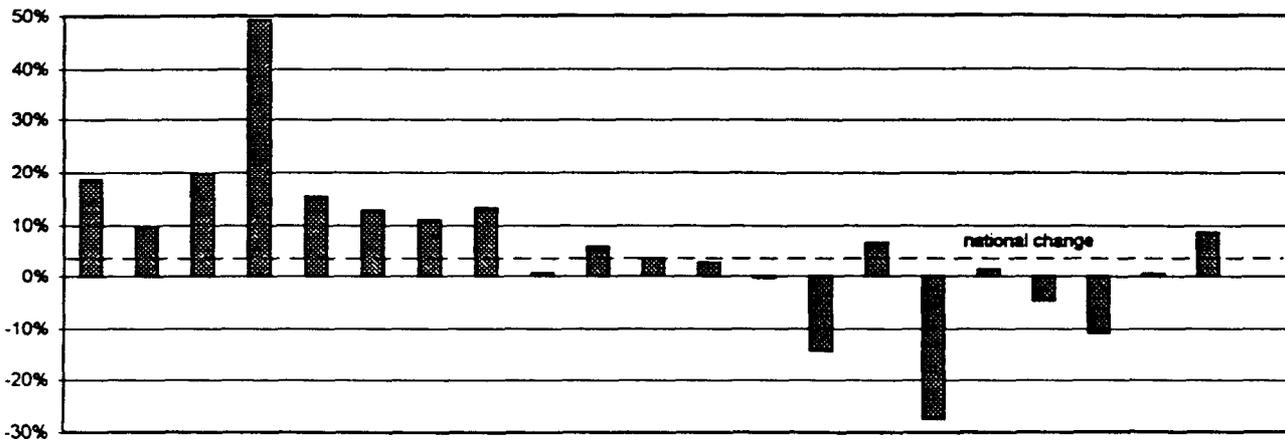
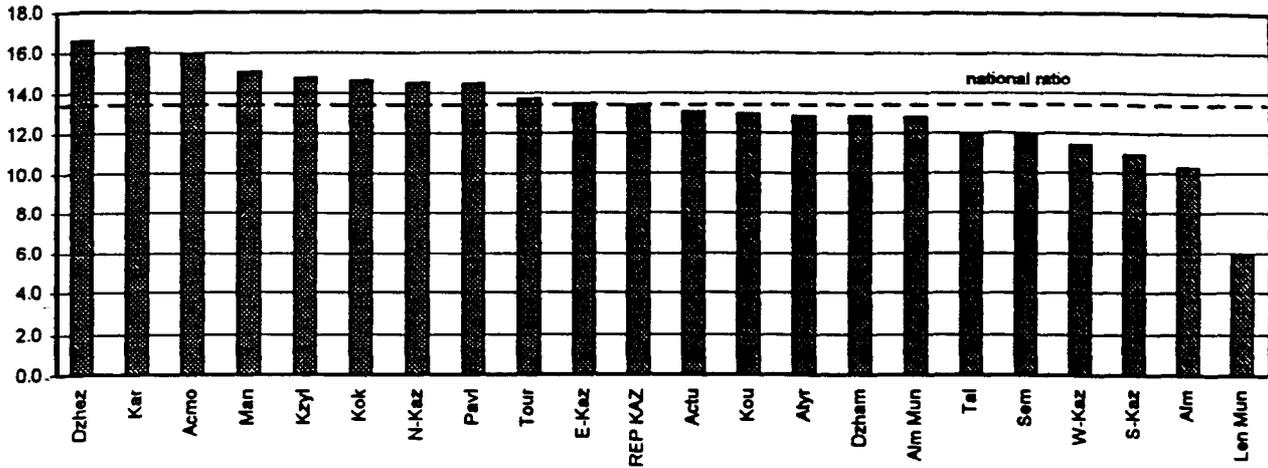
Изменение уровня за 1978 - 1993г.г. в %

Тенденции по стране за 1978 - 1993г.г.

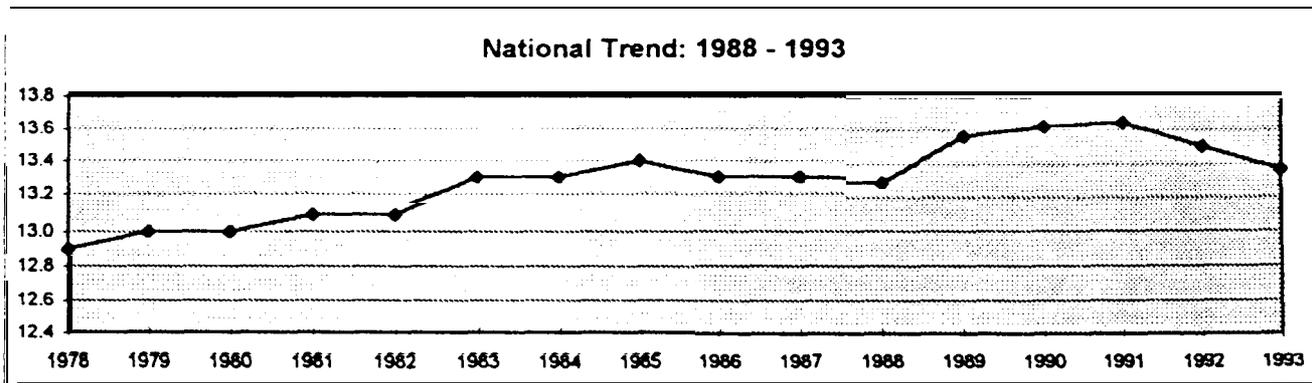


HOSPITAL BEDS / 1000 POPULATION

1993, by Oblast



% Change in Ratio: 1988 - 1993



Больничные койки; 1978-1993г.г.

(число коек/1000 населения)

Hospital Beds: 1978-1993

(beds / 1000 population)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Казахстан - всего Rep. Kazakhstan - total	4%	1%	1%	13.4	13.5	13.6	13.6	13.6	13.3	13.3	13.3	13.4	13.3	13.3	13.1	13.1	13.0	13.0	12.9	
Акмолинская Acmolinskaya	20%	17%	27%	15.9	15.9	15.9	13.8	13.7	12.5	13.4	13.5	13.6	13.6	13.6	13.7	13.7	13.5	13.6	13.3	
Актюбинская Actubinskaya	3%	3%	3%	13.0	13.0	13.1	12.9	12.9	12.7	12.9	12.9	12.5	12.6	12.7	12.5	12.7	12.4	12.6	12.7	
Алматинская Almatinskaya	9%	-4%	-10%	10.3	11.3	11.5	11.0	11.1	11.5	11.6	11.3	11.4	10.9	10.8	10.8	10.7	10.8	9.7	9.5	
Атырауская Atyrauskaya	-15%	-15%	3%	12.8	12.9	13.8	13.8	12.6	12.5	14.3	14.7	15.2	15.0	15.1	15.1	15.0	15.9	15.3	15.0	
Восточно-Казахстанская East Kazakhstanskaya	6%	1%	0%	13.5	13.4	14.2	13.8	13.9	13.4	13.5	13.5	13.5	13.4	13.3	13.4	13.0	12.9	12.7	12.7	
Джамбыльская Dzhambylskaya	7%	-1%	-2%	12.8	12.8	13.2	13.0	13.0	13.1	13.0	13.1	13.3	13.2	12.9	12.6	12.3	12.2	12.2	12.0	
Джезказганская Dzhezkazganskaya	19%	9%	3%	16.6	16.6	16.6	16.6	16.3	16.0	16.0	15.5	15.4	15.6	15.2	14.3	14.3	14.2	14.1	14.0	
Западно-Казахстанская West Kazakhstanskaya	-11%	-16%	-17%	11.4	12.5	13.7	14.0	13.9	13.7	13.9	14.0	14.1	13.8	13.5	13.3	13.3	12.9	12.9	12.8	
Карагандинская Karagandinskaya	10%	8%	13%	16.2	15.4	14.9	15.0	14.8	14.4	14.3	14.4	14.6	14.8	15.0	15.1	15.2	14.8	14.9	14.8	
Кзыл-Ординская Kzyl-Ordinskaya	15%	11%	7%	14.8	15.1	15.0	13.4	15.6	13.8	13.8	13.5	13.6	13.3	13.3	13.2	12.9	12.7	12.8	12.8	
Кокчетавская Kokchetauskaya	13%	10%	4%	14.7	14.5	14.5	14.5	14.4	14.1	14.0	14.1	13.9	13.5	13.3	13.2	13.0	13.0	13.1	13.0	
Кустанайская Koustaniskaya	-1%	-1%	-3%	12.9	13.0	13.0	13.0	13.7	13.3	12.8	12.7	12.8	12.9	13.0	13.1	13.3	13.1	13.1	13.0	
Мангыстауская Mangystauskaya	49%	51%	#N/A	15.1	13.5	12.8	10.9			10.3	10.2	10.1	10.0	10.0	10.5	10.6	10.3	10.4	10.1	
Павлодарская Pavlodarskaya	13%	4%	6%	14.5	14.5	14.6	14.5	14.1	13.7	13.7	13.4	13.5	14.0	13.9	13.6	13.6	13.7	12.9	12.8	

Больничные койки; 1978-1993г.г.

(число коек/1000 населения)

Hospital Beds: 1978-1993

(beds / 1000 population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
Северно-Казахстанская North Kazakhstanskaya	11%	5%	-2%	14.5	14.5	14.8	15.3	15.2	14.9	14.6	14.6	14.1	13.8	13.8	13.3	13.2	13.0	13.1	13.1
Семипалатинская Semipalatinskaya	-5%	-12%	-14%	11.9	13.7	14.0	14.1	13.9	13.8	13.9	13.9	13.8	13.5	13.5	13.1	12.8	12.8	12.7	12.5
Талдыкурганская Taldykourganskaya	1%	-2%	-4%	12.0	12.2	12.1	12.2	12.4	12.5	12.7	12.6	12.7	12.4	12.2	12.1	12.0	12.0	12.0	11.8
Тургайская Tourgaiskaya	1%	-5%	#N/A	13.7	15.0	15.0	15.3			14.3	14.6	14.7	14.5	14.4	14.7	14.4	14.4	13.7	13.6
Южно-Казахстанская South Kazakhstanskaya	0%	-2%	-2%	11.0	11.2	11.5	11.6	11.4	11.1	11.2	11.2	11.3	11.2	11.2	11.1	11.0	11.0	11.1	10.9
г. Алматы Almaty Municipality	-28%	-19%	-13%	12.8	12.6	14.0	16.0	16.1	14.7	14.9	15.4	15.6	16.0	15.8	15.4	15.6	16.0	17.2	17.6
г. Ленинск Leninsk Municipality	#N/A	#N/A	#N/A	5.9	5.0	4.6	4.6												

Все данные из годовых отчетов Минздрава Казахстана 1978-1993
All data from Annual Reports of Kazakhstan Ministry of Health, 1978-1993

ТЕНДЕНЦИИ ИСПОЛЬЗОВАНИЯ БОЛЬНИЧНЫХ РЕСУРСОВ

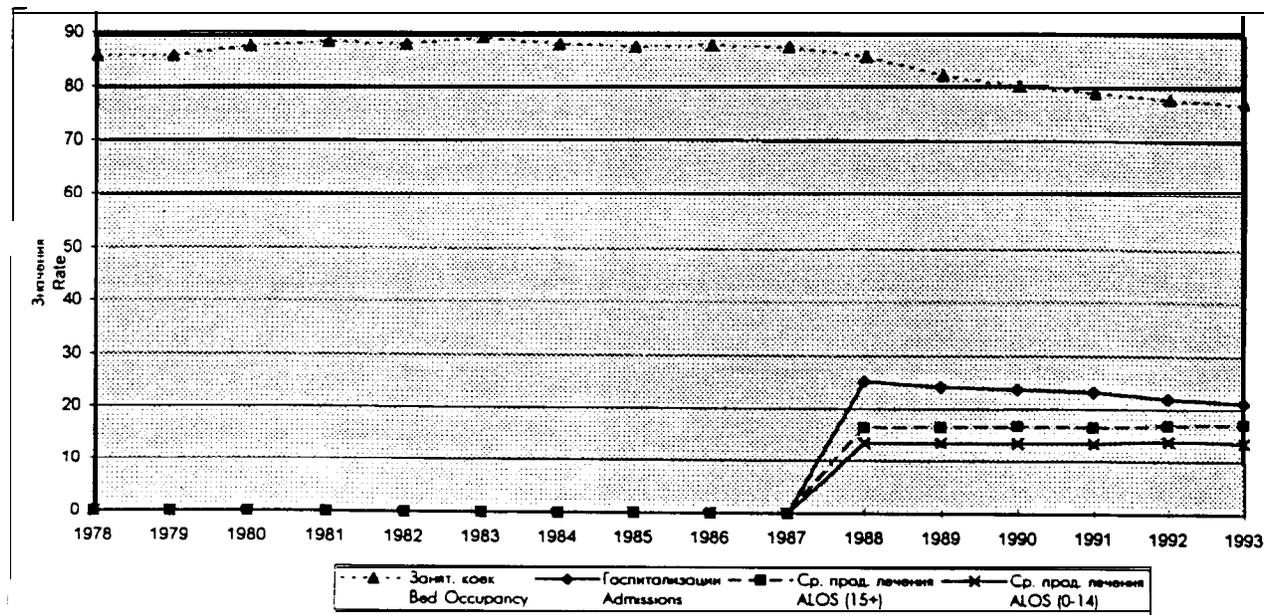
TRENDS IN HOSPITAL UTILIZATION

УРОВЕНЬ ГОСПИТАЛИЗАЦИИ, ЗАНЯТОСТЬ КОЕК И СРЕДНЯЯ ПРОДОЛЖИТЕЛЬНОСТЬ ЛЕЧЕНИЯ

ADMISSIONS, BED OCCUPANCY RATE, AND AVERAGE LENGTH OF STAY

Казахстан : 1978 - 1993

Kazakhstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Госпитализации																
Admissions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.1	24.1	23.6	23.1	22.0	21.2
Занят. коек																
Bed Occupancy	86	86	87	88	88	89	88	87	88	87	86	82	80	79	78	77
Ср. прод. лечения																
ALOS (15+)	0	0	0	0	0	0	0	0	0	0	16.4	16.6	16.8	16.6	16.9	17.1
Ср. прод. лечения																
ALOS (0-14)	0	0	0	0	0	0	0	0	0	0	13.4	13.5	13.4	13.4	13.9	13.5

замечания: Госпитализации- число госпитализаций на 100 чел. населения
 Занят. коек- % времени в год, в которое койка занята пациентами
 Ср. прод. лечения- средняя продолжительность госпитализации

notes: Admissions - hospital admissions / 100 population
 Bed Occupancy - days bed occupied in year / 365
 Average Length of Stay (ALOS) - average days in hospital per admission

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993

Использование больничных ресурсов в 1993г
1993 Hospital Utilization

	Число госпитализаций (% насел.) Admissions (as % population)					Занятость койки (%) Occupancy Rate					Сред. продолжительность лечения (дней) Average Length of Stay (in days)												
	Изменение в % % Change			Знач. Rate	Ранг Rank	Изменение в % % Change			Знач. Rate	Ранг Rank	>14 years old			0-14 years old									
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993	Знач. Rate	Ранг Rank	1978 - 1993	1983 - 1993	1988 - 1993	ALoS	Ранг Rank			
респ. Казахстан - всего Rep. Kazakhstan - total	#N/A	#N/A	-16%	21.2					77%			#N/A	#N/A	4%	17.1			#N/A	4%	1%	13.5		
Акмолинская Akmolinskaya	#N/A	#N/A	2%	24.6	2	0%	-6%	-5%	78%	8	#N/A	#N/A	5%	16.2	15	#N/A	5%	7%	12.4	18			
Актюбинская Actubinskaya	#N/A	#N/A	-18%	19.1	18	-15%	-15%	-16%	73%	17	#N/A	#N/A	2%	17.0	10	#N/A	2%	-4%	13.0	13			
Алматинская Almatinskaya	#N/A	#N/A	-15%	19.7	14	-7%	-9%	-7%	78%	10	#N/A	#N/A	-1%	15.6	17	#N/A	-1%	0%	13.4	9			
Атырауская Atyrauskaya	#N/A	#N/A	-10%	19.7	15	6%	-3%	-8%	79%	7	#N/A	#N/A	4%	18.3	3	#N/A	4%	-2%	14.0	8			
Восточно-Казахстанская East Kazakhstanskaya	#N/A	#N/A	-21%	20.8	12	-7%	-11%	-6%	80%	6	#N/A	#N/A	11%	17.8	6	#N/A	11%	9%	14.0	6			
Джамбылская Dzhambylskaya	#N/A	#N/A	-11%	21.9	7	-11%	-13%	-9%	78%	9	#N/A	#N/A	1%	16.0	16	#N/A	1%	1%	13.6	8			
Джезказганская Dzhezkazganskaya	#N/A	#N/A	-13%	25.8	1	-5%	-15%	-10%	79%	6	#N/A	#N/A	7%	17.9	4	#N/A	7%	10%	15.7	1			
Западно-Казахстанская West Kazakhstanskaya	#N/A	#N/A	-22%	19.0	19	-3%	-5%	-3%	82%	3	#N/A	#N/A	15%	21.1	1	#N/A	15%	1%	12.9	14			
Карагандинская Karagandinskaya	#N/A	#N/A	-7%	23.6	4	-9%	-11%	-9%	77%	12	#N/A	#N/A	2%	17.9	5	#N/A	2%	-1%	14.1	4			
Кзыл-Ординская Kzyl-Ordinskaya	#N/A	#N/A	-9%	22.3	6	-14%	-8%	-7%	83%	2	#N/A	#N/A	2%	19.5	2	#N/A	2%	-1%	14.6	2			
Кокчетавская Kokchetavskaya	#N/A	#N/A	-17%	21.3	9	-19%	-20%	-17%	68%	21	#N/A	#N/A	4%	17.0	11	#N/A	4%	-9%	11.5	20			
Кустанайская Koustaniskaya	#N/A	#N/A	-17%	21.5	8	-16%	-19%	-12%	75%	15	#N/A	#N/A	2%	16.4	14	#N/A	2%	2%	13.1	11			
Мангыстауская Mangystauskaya	#N/A	#N/A	#N/A	15.2	20	-6%	-14%	#N/A	71%	19	#N/A	#N/A	#N/A	17.5	7	#N/A	#N/A	#N/A	11.2	21			
Павлодарская Pavlodarskaya	#N/A	#N/A	-18%	22.3	8	-13%	-16%	-14%	73%	18	#N/A	#N/A	9%	17.3	8	#N/A	9%	0%	13.4	10			
Северно-Казахстанская North Kazakhstanskaya	#N/A	#N/A	-13%	24.3	3	-15%	-16%	-9%	76%	13	#N/A	#N/A	2%	17.0	12	#N/A	2%	3%	13.1	12			
Семипалатинская Semipalatinskaya	#N/A	#N/A	-24%	19.5	16	-14%	-15%	-13%	78%	11	#N/A	#N/A	-1%	17.3	9	#N/A	-1%	-9%	14.3	3			
Талдыкорганская Taldykorganskaya	#N/A	#N/A	-26%	20.3	13	-15%	-18%	-19%	72%	18	#N/A	#N/A	1%	15.1	18	#N/A	1%	-1%	12.5	17			
Тургайская Tourgaiskaya	#N/A	#N/A	#N/A	21.2	10	-13%	-14%	#N/A	70%	20	#N/A	#N/A	#N/A	16.7	13	#N/A	#N/A	#N/A	13.9	7			
Южно-Казахстанская South Kazakhstanskaya	#N/A	#N/A	-14%	21.1	11	-9%	-9%	-10%	81%	4	#N/A	#N/A	7%	15.6	16	#N/A	7%	4%	12.8	16			

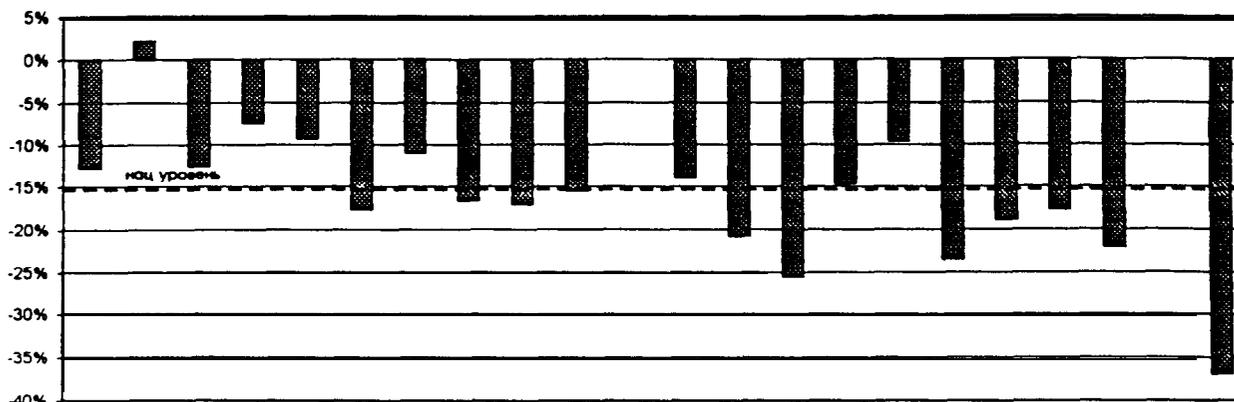
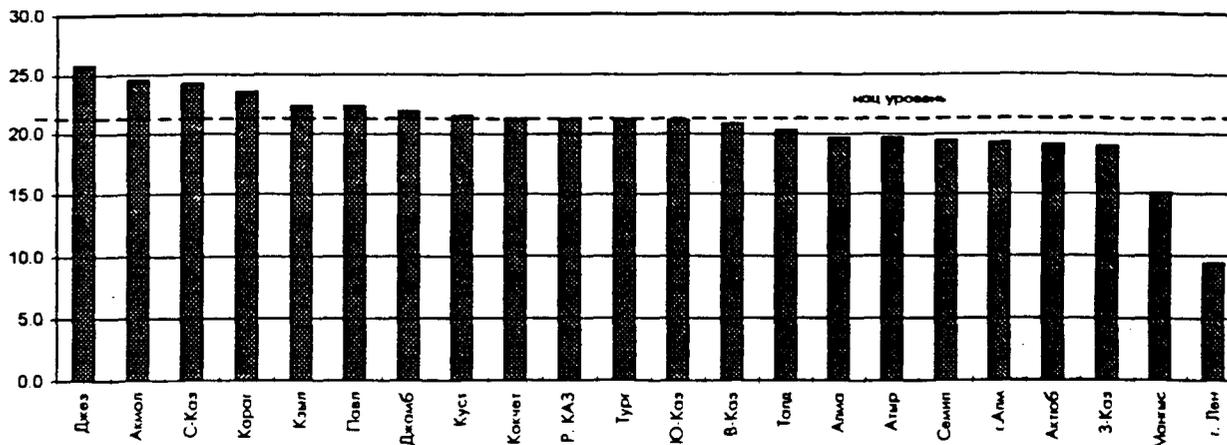
Использование больничных ресурсов в 1993г
1993 Hospital Utilization

	Число госпитализаций (% насел.) Admissions (as % population)					Занятость койки (%) Occupancy Rate					Сред. продолжительность лечения (дней) Average Length of Stay (in days)									
	Изменение в % % Change			Знач. Rate	Ранг Rank	Изменение в % % Change			Знач. Rate	Ранг Rank	>14 years old			0-14 years old						
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993	Знач. Rate	Ранг Rank	1978 - 1993	1983 - 1993	1988 - 1993	ALoS	Ранг Rank
г. Алматы Almaty Municipality	#N/A	#N/A	-19%	19.3	17	0%	-4%	3%	85%	1	#N/A	#N/A	-5%	14.1	20	#N/A	-5%	-14%	11.7	19
г. Ленинск Leninsk Municipality	#N/A	#N/A	-37%	9.4	21	#N/A	#N/A	-6%	76%	14	#N/A	#N/A	43%	12.7	21	#N/A	43%	2%	12.9	15

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993

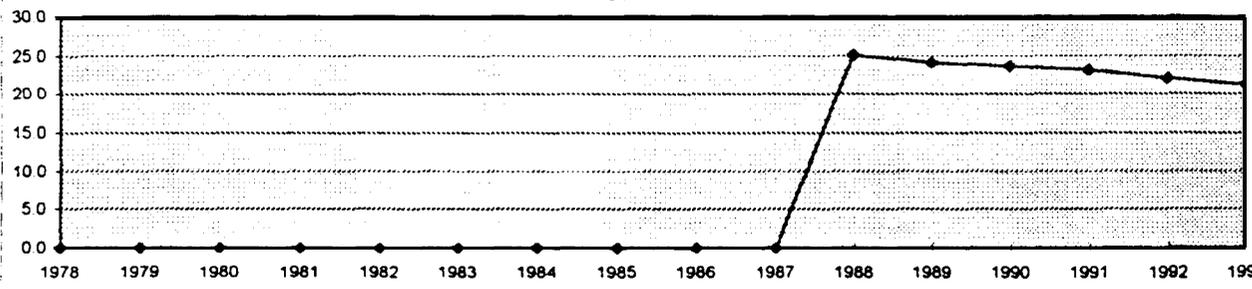
ОТНОШЕНИЕ ЧИСЛА ГОСПИТАЛИЗАЦИЙ К ЧИСЛЕННОСТИ НАСЕЛЕНИЯ (%)

1993, по областям



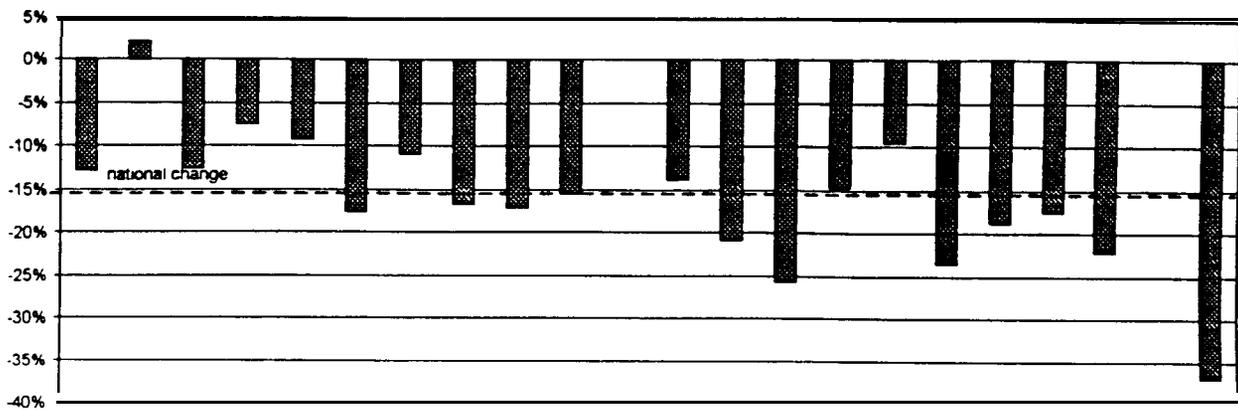
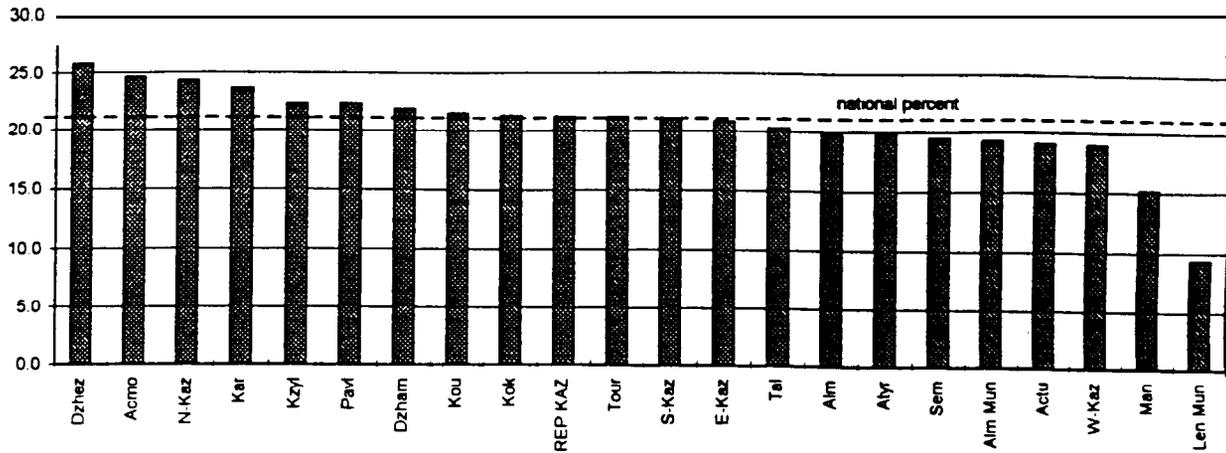
% Изменения: 1978 - 1993

Изменения национального уровня госпитализаций; 1978 - 1993



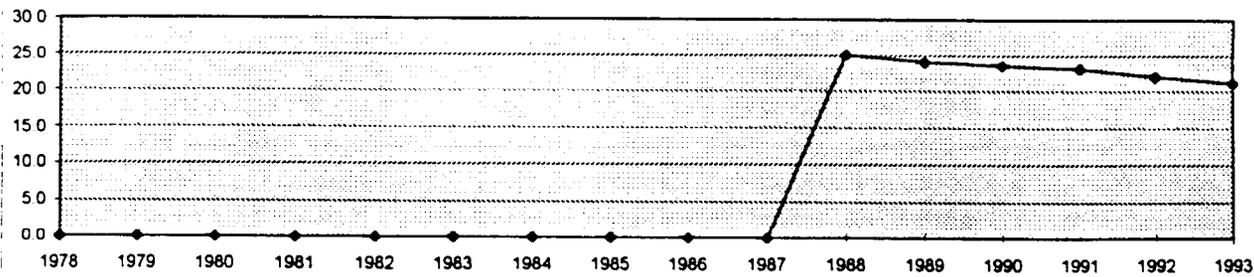
ADMISSIONS as % of POPULATION

1993, by Oblast



% Change: 1988 - 1993

National Trend: 1978 - 1993



Число госпитализаций в 1978 - 1993гг
 (% от численности населения)
Admissions: 1978-1993
 (as % of population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
респ. Казахстан - всего Rep. Kazakhstan - total	#N/A	#N/A	-16%	21.2	22.0	23.1	23.6	24.1	25.1										
Акмолинская Akmolinskaya	#N/A	#N/A	2%	24.6	25.0	22.4	22.1	22.9	24.1										
Актюбинская Actubinskaya	#N/A	#N/A	-18%	19.1	20.0	21.1	21.8	22.5	23.2										
Алматинская Almatinskaya	#N/A	#N/A	-15%	19.7	20.4	21.5	20.9	21.4	23.1										
Атырауская Atyrauskaya	#N/A	#N/A	-10%	19.7	20.7	21.5	21.4	20.8	21.8										
Восточно-Казахстанская East Kazakhstanskaya	#N/A	#N/A	-21%	20.8	21.7	22.7	24.1	24.9	26.3										
Джамбыльская Dzhambylskaya	#N/A	#N/A	-11%	21.9	21.9	23.3	23.3	23.7	24.6										
Джезказганская Dzhezkazganskaya	#N/A	#N/A	-13%	25.8	26.6	28.6	28.7	28.8	29.6										
Западно-Казахстанская West Kazakhstanskaya	#N/A	#N/A	-22%	19.0	19.0	21.7	21.9	23.6	24.4										
Карагандинская Karagandinskaya	#N/A	#N/A	-7%	23.6	23.7	24.1	24.4	24.8	25.5										
Кзыл-Ординская Kzyl-Ordinskaya	#N/A	#N/A	-9%	22.3	22.8	23.7	24.0	24.1	24.6										
Кокчетавская Kokchetauskaya	#N/A	#N/A	-17%	21.3	22.3	23.9	23.4	23.7	25.7										
Кустанайская Koustaniskaya	#N/A	#N/A	-17%	21.5	22.2	23.2	24.2	25.1	25.8										
Мангыстауская Mangystauskaya	#N/A	#N/A	#N/A	15.2	16.4	22.3	18.2												
Павлодарская Pavlodarskaya	#N/A	#N/A	-18%	22.3	23.2	24.6	25.5	26.2	27.1										

Казахстан: Использование больничных ресурсов: Табл. 6.2
Kazakhstan Hospital Utilization: Table 6.2

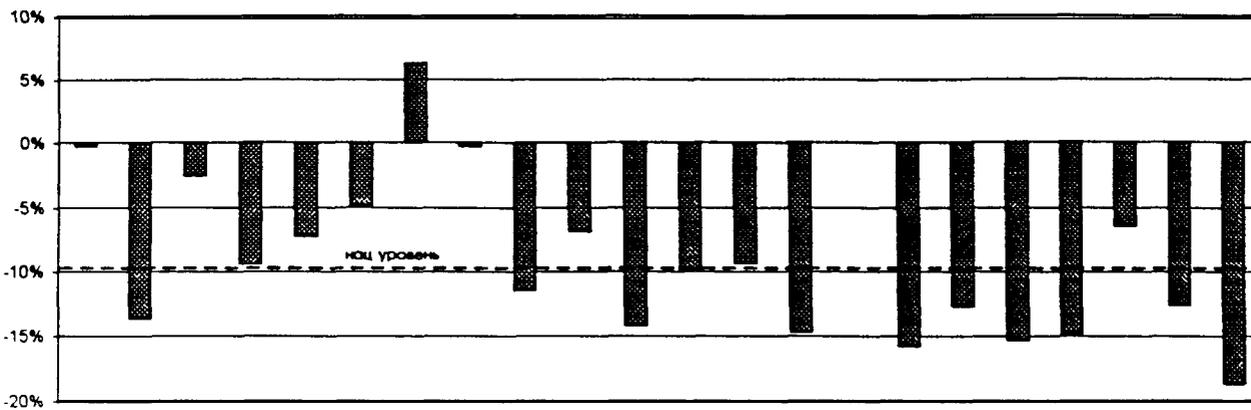
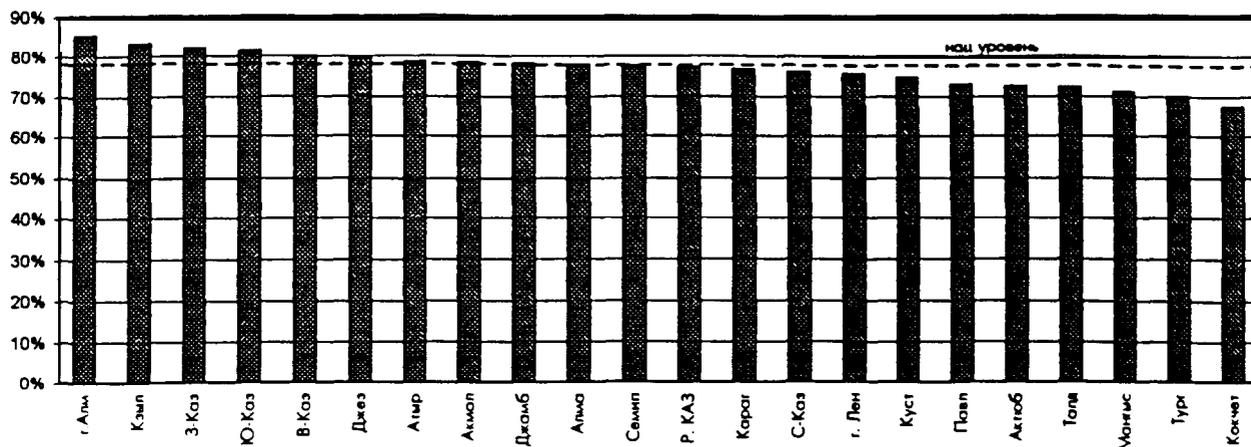
Число госпитализаций в 1978 - 1993гг
 (% от численности населения)
Admissions: 1978-1993
 (as % of population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
Северно-Казахстанская North Kazakhstanskaya	#N/A	#N/A	-13%	24.3	24.5	25.9	26.4	27.5	27.8										
Семипалатинская Semipalatinskaya	#N/A	#N/A	-24%	19.5	21.1	23.1	23.7	24.5	25.5										
Талдыкурганская Taldykourganskaya	#N/A	#N/A	-26%	20.3	23.0	24.3	25.9	26.9	27.3										
Тургайская Tourgaiskaya	#N/A	#N/A	#N/A	21.2	23.2	25.3	26.2												
Южно-Казахстанская South Kazakhstanskaya	#N/A	#N/A	-14%	21.1	21.7	22.9	23.6	23.9	24.5										
г. Алматы Almaty Municipality	#N/A	#N/A	-19%	19.3	20.0	21.5	22.2	22.8	23.8										
г. Ленииск Leninsk Municipality	#N/A	#N/A	-37%	9.4	10.0	10.7	11.6	14.6	14.9										

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993

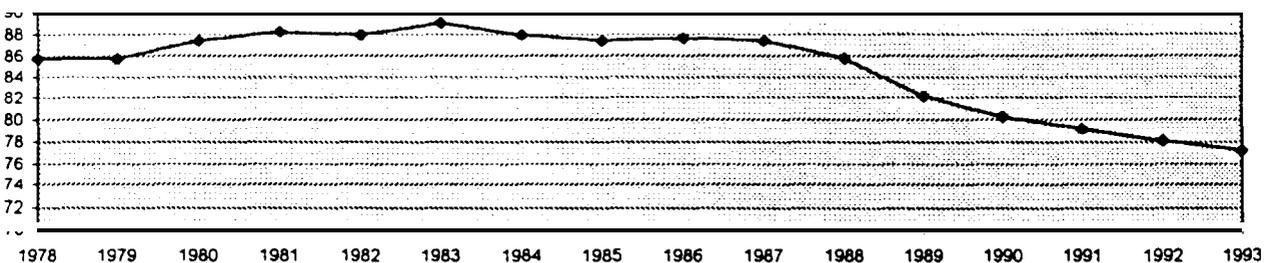
УРОВЕНЬ ЗАНЯТОСТИ КОЕК

1993, по областям



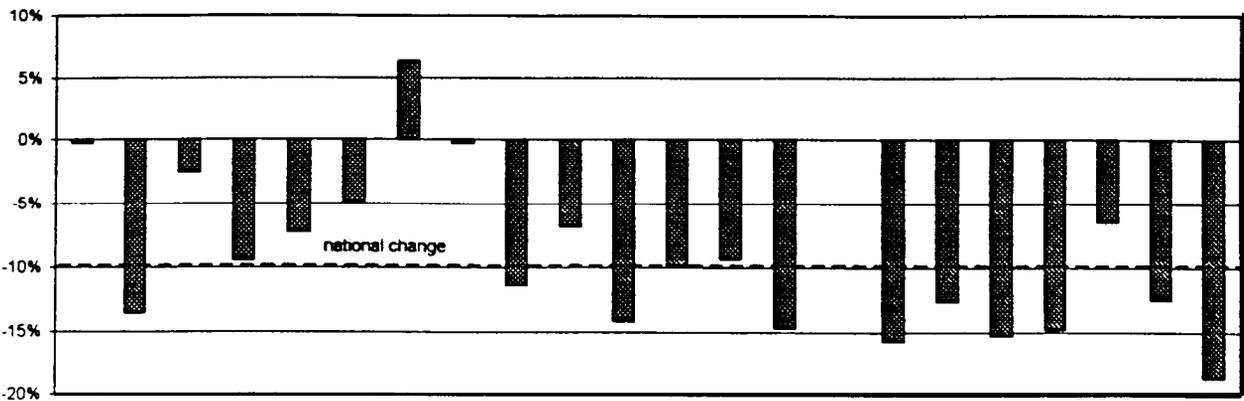
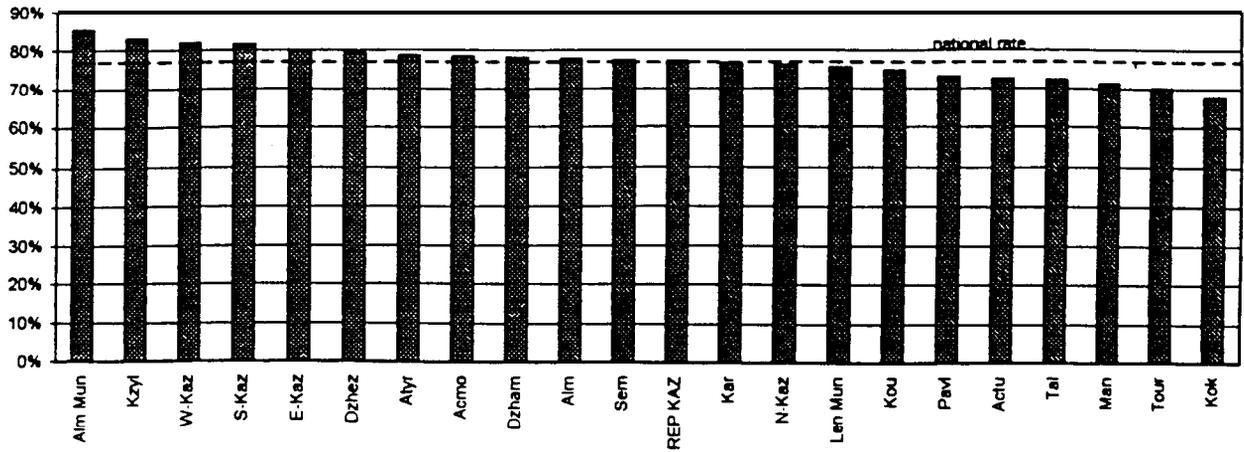
% Изменения: 1978 - 1993

Изменения национального уровня: 1978 - 1993



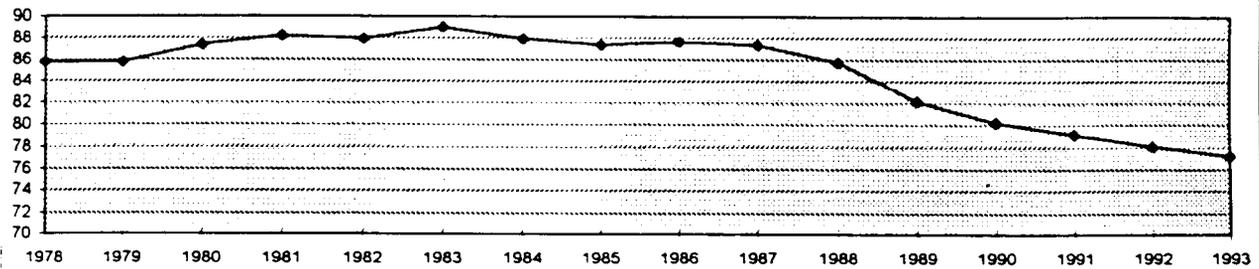
BED OCCUPANCY RATE

1993, by Oblast



% Change since 1988

National Trend: 1978 - 1993



Занятость коек в 1978 -1993гг
(средний % времени, в которое койка занята пациентом)
Bed Occupancy Rate: 1978-1993
(average % of time bed occupied)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
респ. Казахстан - всего Rep. Kazakhstan - total	-10%	-12%	-10%	77%	78%	79%	80%	82%	86%	87%	88%	87%	88%	89%	88%	88%	87%	86%	86%
Акмолинская Akmolinskaya	0%	-6%	-5%	78%	77%	78%	79%	78%	82%	86%	85%	86%	87%	88%	83%	84%	83%	70%	79%
Актюбинская Actubinskaya	-15%	-15%	-16%	73%	76%	78%	81%	83%	87%	88%	89%	90%	88%	87%	85%	86%	88%	86%	86%
Алматинская Almatinskaya	-7%	-9%	-7%	78%	79%	78%	79%	82%	83%	86%	87%	84%	84%	87%	85%	86%	85%	84%	84%
Атырауская Atyrauskaya	6%	-3%	-8%	79%	79%	76%	75%	80%	85%	87%	87%	84%	83%	84%	81%	79%	78%	77%	74%
Восточно-Казахстанская East Kazakhstanskaya	-7%	-11%	-6%	80%	79%	78%	79%	81%	85%	86%	88%	88%	90%	89%	90%	89%	89%	89%	86%
Джамбылская Dzhambylskaya	-11%	-13%	-9%	78%	79%	81%	83%	83%	85%	88%	86%	86%	86%	90%	89%	90%	89%	87%	88%
Джезказганская Dzhezkazganskaya	-5%	-15%	-10%	79%	83%	86%	86%	87%	88%	90%	91%	92%	91%	93%	93%	92%	89%	84%	84%
Западно-Казахстанская West Kazakhstanskaya	-3%	-5%	-3%	82%	72%	74%	75%	81%	84%	86%	84%	86%	88%	88%	86%	87%	86%	85%	84%
Карагандинская Karagandinskaya	-9%	-11%	-9%	77%	79%	79%	79%	81%	84%	85%	85%	88%	87%	86%	86%	88%	87%	85%	85%
Кзыл-Ординская Kzyl-Ordinskaya	-14%	-8%	-7%	83%	84%	85%	84%	87%	90%	92%	92%	91%	90%	91%	90%	90%	91%	94%	96%
Кокчетавская Kokchetavskaya	-19%	-20%	-17%	68%	69%	73%	73%	74%	81%	83%	81%	81%	83%	85%	84%	87%	86%	83%	83%
Кустанайская Koustaniskaya	-16%	-19%	-12%	75%	77%	78%	80%	81%	85%	88%	87%	88%	90%	91%	92%	92%	91%	88%	89%
Мангыстауская Mangystauskaya	-6%	-14%	#N/A	71%	77%	79%	80%	#N/A	#N/A	87%	92%	90%	87%	91%	83%	88%	82%	77%	76%
Павлодарская Pavlodarskaya	-13%	-16%	-14%	73%	75%	80%	79%	81%	85%	86%	87%	88%	88%	88%	87%	85%	85%	84%	84%
Северно-Казахстанская North Kazakhstanskaya	-15%	-16%	-9%	76%	76%	76%	79%	81%	83%	85%	87%	88%	91%	90%	91%	92%	92%	89%	89%
Семипалатинская Semipalatinskaya	-14%	-15%	-13%	78%	77%	80%	82%	86%	89%	89%	92%	92%	90%	93%	91%	92%	92%	90%	90%

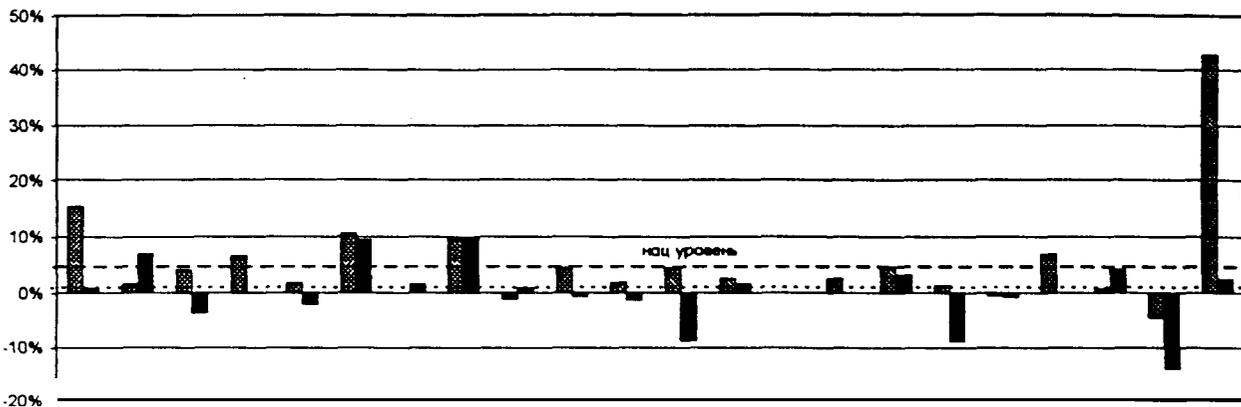
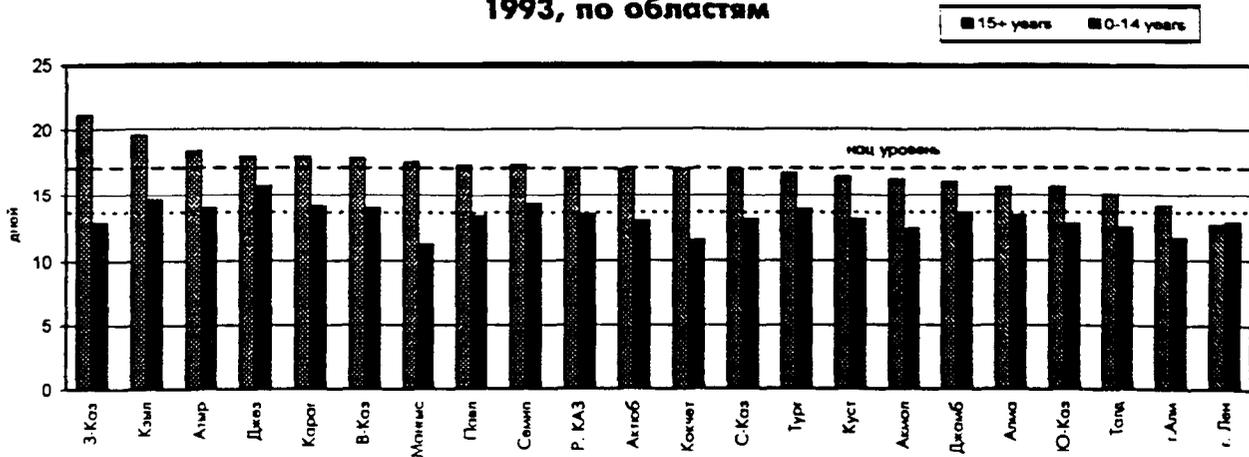
Занятость коек в 1978 -1993гг
 (средний % времени, в которое койка занята пациентом)
Bed Occupancy Rate: 1978-1993
 (average % of time bed occupied)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Талдыкурганская Taldykourganskaya	-15%	-18%	-19%	72%	76%	78%	85%	90%	89%	90%	90%	91%	90%	91%	88%	88%	86%	84%	85%	
Тургайская Tourgaiskaya	-13%	-14%	#N/A	70%	67%	71%	71%	#N/A	#N/A	82%	84%	81%	84%	83%	82%	84%	82%	81%	80%	
Южно-Казахстанская South Kazakhstanskaya	-9%	-9%	-10%	81%	82%	84%	85%	87%	90%	90%	90%	89%	89%	92%	89%	90%	89%	88%	90%	
г. Алматы Almaty Municipality	0%	-4%	3%	85%	88%	79%	76%	75%	83%	83%	82%	87%	89%	88%	89%	87%	87%	88%	85%	
г. Ленинск Leninsk Municipality	#N/A	#N/A	-6%	76%	68%	66%	72%	79%	81%	82%	#N/A									

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993

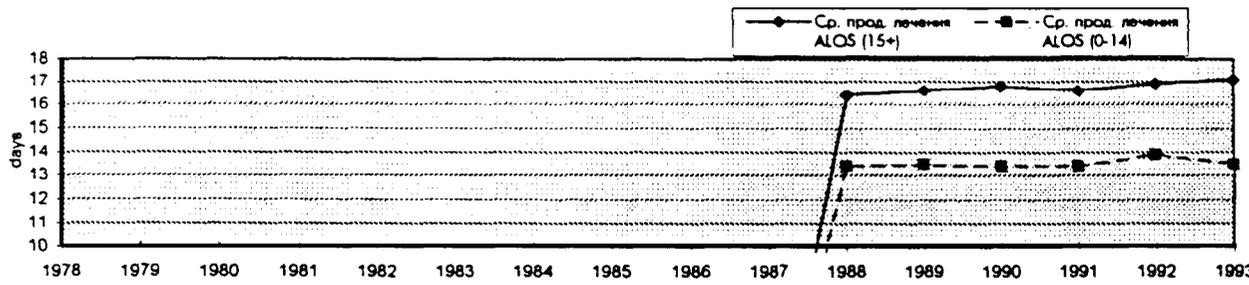
СРЕДНЯЯ ПРОДОЛЖИТЕЛЬНОСТЬ ЛЕЧЕНИЯ

1993, по областям



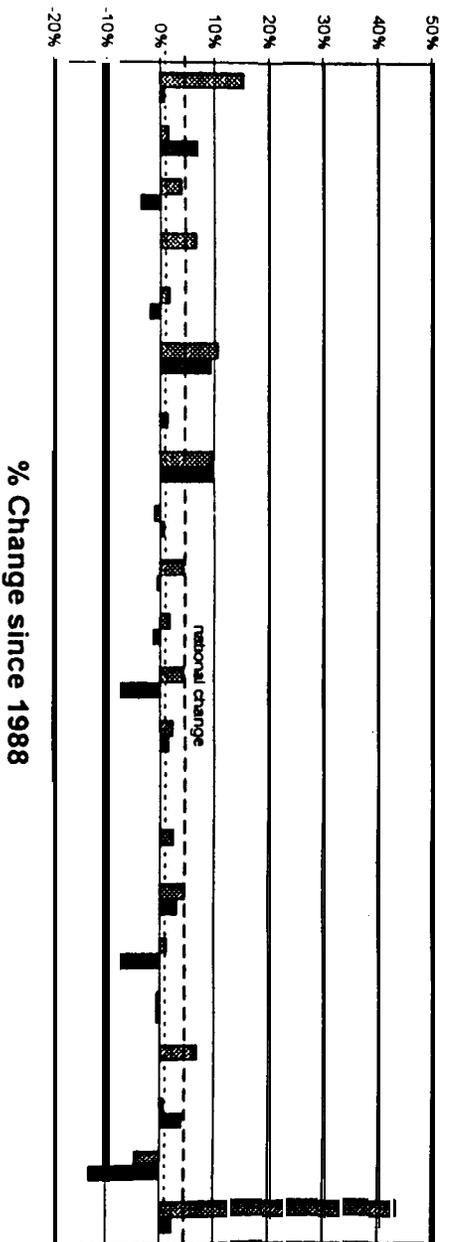
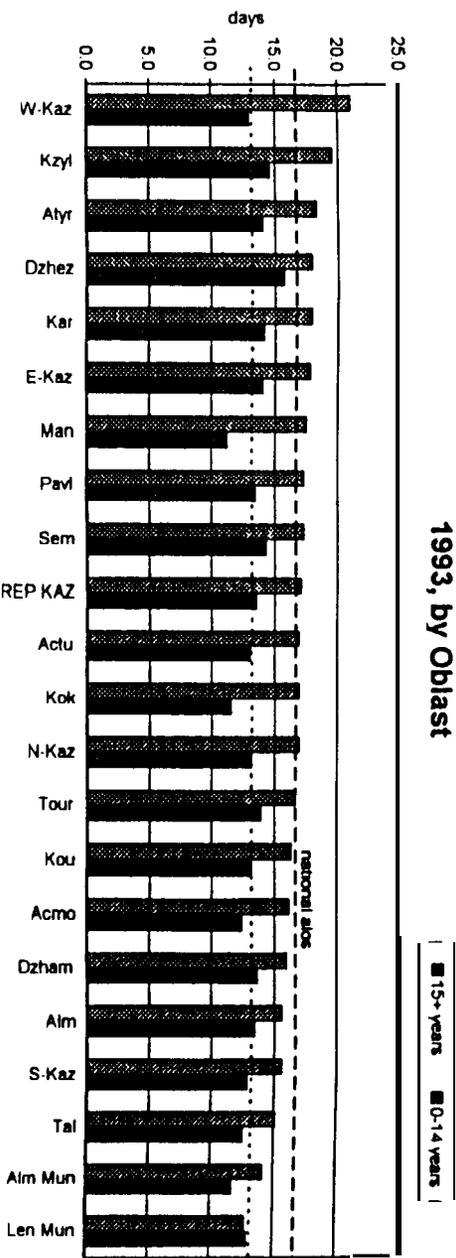
% Изменения: 1978 - 1993

Изменения национального уровня: 1978 - 1993

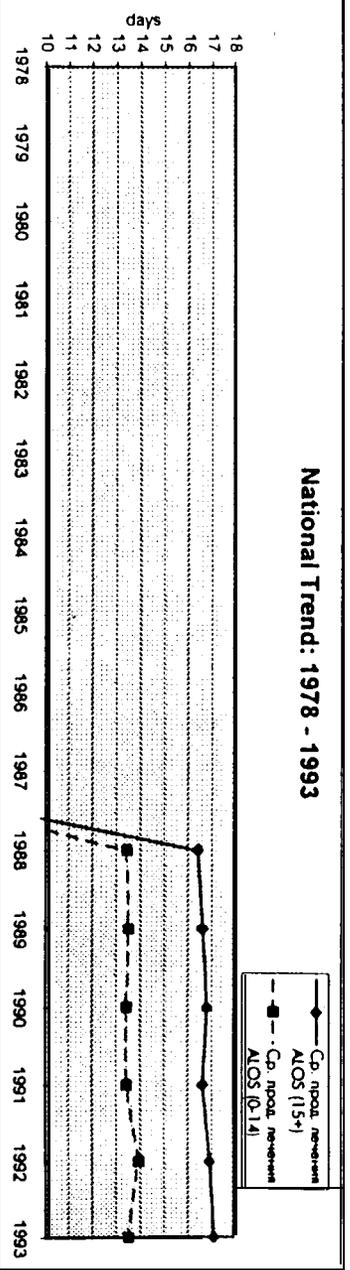


AVERAGE LENGTH OF STAY

1993, by Oblast



National Trend: 1978 - 1993



Средняя продолжительность лечения в 1978-1993гг
Average Length of Stay: 1978-1993
 (average days in hospital per admission)

	Изменение в % % Change																						
	1978 - 1993		1993 - 1993		1988 - 1993		1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
	18+ years	0-14	18+ years	0-14	18+ years	0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	15+ 0-14	
республика Казахстан - всего Rep. Kazakhstan - total	#N/A	###	#N/A	###	4%	1%	17.1 13.5	16.9 13.9	16.6 13.4	16.8 13.4	16.6 13.5	16.4 13.4											
Акмолинская Akmolinskaya	#N/A	###	#N/A	###	5%	7%	16.2 12.4	16.0 11.9	15.3 12.7	16.5 12.5	15.9 11.8	15.5 11.6											
Актюбинская Actubinskaya	#N/A	###	#N/A	###	2%	-4%	17.0 13.0	16.9 13.8	16.4 13.0	16.7 13.4	16.7 13.2	16.7 13.5											
Алматинская Almatinskaya	#N/A	###	#N/A	###	-1%	0%	15.6 13.4	16.4 14.5	15.3 12.6	15.5 13.0	15.4 13.6	15.7 13.4											
Атырауская Atyrauskaya	#N/A	###	#N/A	###	4%	-2%	18.3 14.0	17.9 14.3	17.3 14.0	17.8 13.5	18.1 13.6	17.6 14.3											
Восточно-Казахстанская East Kazakhstanskaya	#N/A	###	#N/A	###	11%	9%	17.8 14.0	17.3 13.7	17.0 12.7	17.0 12.6	16.7 12.9	16.1 12.8											
Джамбылская Dzhambylskaya	#N/A	###	#N/A	###	1%	1%	16.0 13.6	15.9 13.8	16.3 13.4	15.9 14.1	15.9 13.0	15.8 13.4											
Джезказганская Dzhezkazganskaya	#N/A	###	#N/A	###	7%	10%	17.9 15.7	18.0 15.8	16.3 14.6	17.3 14.7	17.0 14.2	16.8 14.3											
Западно-Казахстанская West Kazakhstanskaya	#N/A	###	#N/A	###	15%	1%	21.1 12.9	18.6 12.7	18.3 12.8	18.4 13.2	18.4 13.4	18.3 12.8											
Карагандинская Karagandinskaya	#N/A	###	#N/A	###	2%	-1%	17.9 14.1	18.4 14.9	17.8 14.7	18.0 14.6	17.7 14.7	17.6 14.2											
Кзыл-Ординская Kzyl-Ordinskaya	#N/A	###	#N/A	###	2%	-1%	19.5 14.6	19.5 15.1	18.6 14.4	19.2 15.1	19.3 14.9	19.2 14.8											
Кокчетавская Kokchetavskaya	#N/A	###	#N/A	###	4%	-9%	17.0 11.5	16.5 13.2	16.2 12.0	16.4 12.2	16.1 12.5	16.3 12.6											
Кустанайская Kustanayskaya	#N/A	###	#N/A	###	2%	2%	16.4 13.1	16.4 13.3	16.1 12.0	16.2 12.6	16.7 13.2	16.0 12.9											
Мангистауская Mangystauskaya	#N/A	###	#N/A	###	#N/A	#N/A	17.5 11.2	17.1 13.3	17.0 14.4	17.0 13.9													
Павлодарская Pavlodarskaya	#N/A	###	#N/A	###	9%	0%	17.3 13.4	17.1 14.4	16.5 13.1	16.5 13.0	16.1 13.4	15.8 13.4											
Северно-Казахстанская North Kazakhstanskaya	#N/A	###	#N/A	###	2%	3%	17.0 13.1	16.9 13.7	16.3 12.8	16.7 13.2	16.7 13.0	16.6 12.7											
Семипалатинская Semipalatinskaya	#N/A	###	#N/A	###	-1%	-9%	17.3 14.3	17.4 14.7	17.1 14.0	17.6 13.6	17.4 14.2	17.5 15.7											
Талдыкорганская Taldykorganskaya	#N/A	###	#N/A	###	1%	-1%	15.1 12.5	14.8 13.2	15.6 12.5	14.6 12.5	13.8 12.4	15.0 12.6											
Тургайская Turgaiskaya	#N/A	###	#N/A	###	#N/A	#N/A	16.7 13.9	15.9 14.3	15.2 13.3	15.2 13.3													
Южно-Казахстанская South Kazakhstanskaya	#N/A	###	#N/A	###	7%	4%	15.8 12.8	15.4 12.9	15.4 12.4	15.4 12.5	15.1 12.9	14.6 12.3											
г. Алматы Almaty Municipality	#N/A	###	#N/A	###	-5%	-14%	14.1 11.7	14.7 12.4	14.9 13.7	14.4 12.4	14.4 12.9	14.8 13.6											
г. Ленинск Leninsk Municipality	#N/A	###	#N/A	###	43%	2%	12.7 12.9	11.4 12.5	9.9 11.2	9.5 11.7	8.6 11.5	8.9 12.6											

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
 All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993

ТЕНДЕНЦИИ БОЛЬНИЧНЫХ РЕСУРСОВ И ИХ ИСПОЛЬЗОВАНИЯ

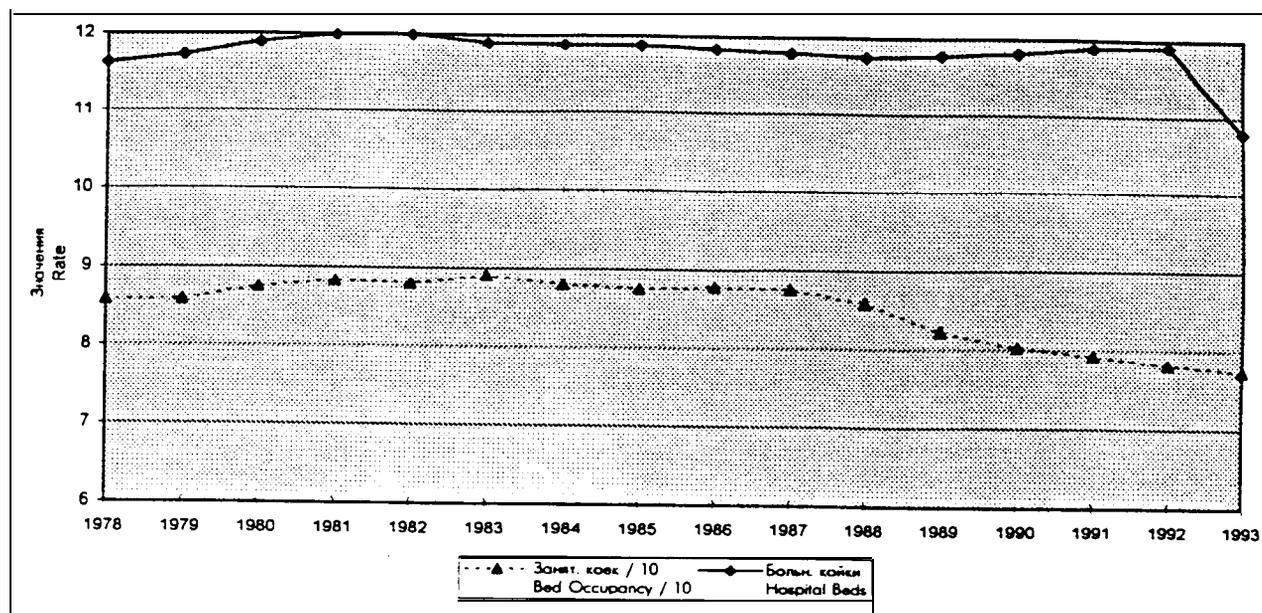
TRENDS IN HOSPITAL CAPACITY AND UTILIZATION

ОБЕСПЕЧЕННОСТЬ КОЙКАМИ И ЗАНЯТОСТЬ КОЕК

BED CAPACITY AND BED OCCUPANCY RATE

Казахстан : 1978 - 1993

Kazakhstan: 1978 - 1993

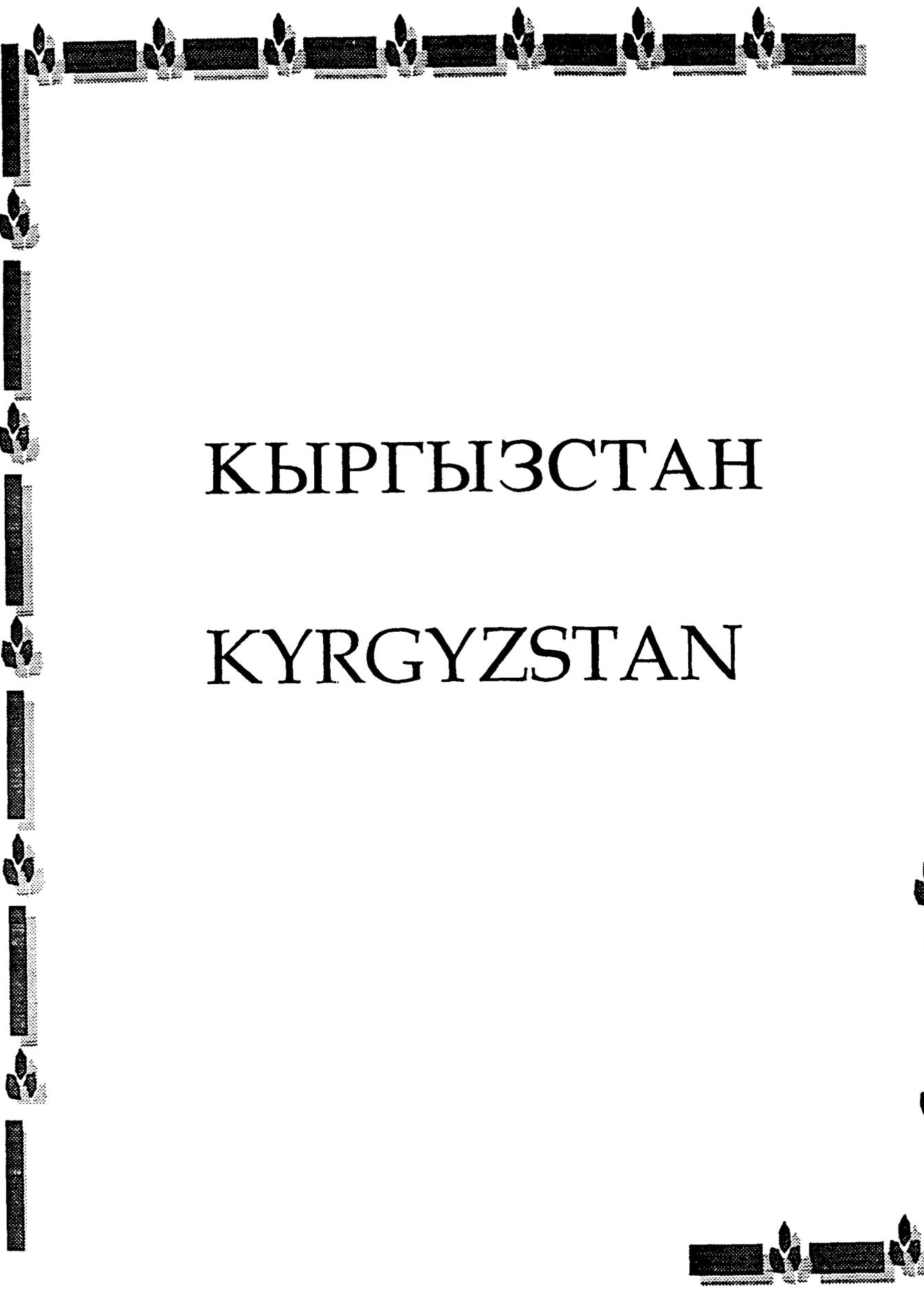


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
БОЛЬН. КОЙКИ Hospital Beds	11.6	11.7	11.9	12	12	11.9	11.9	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	10.8
Занят. коек / 10 Bed Occupancy / 10	8.58	8.58	8.74	8.82	8.79	8.9	8.79	8.74	8.77	8.74	8.6	8.2	8.0	7.9	7.8	7.7

замечания: Больничные койки - число коек/1000 населения
Занят. коек- % времени в год, в которое койка занята пациентами

notes: Hospital Beds - beds / 1000 population
Bed Occupancy - days bed occupied in year / 365

Все данные из годовых отчетов Минздрава Казахстана 1984-1993
All data from Annual Reports of Kazakhstan Ministry of Health, 1984-1993



КЫРГЫЗСТАН

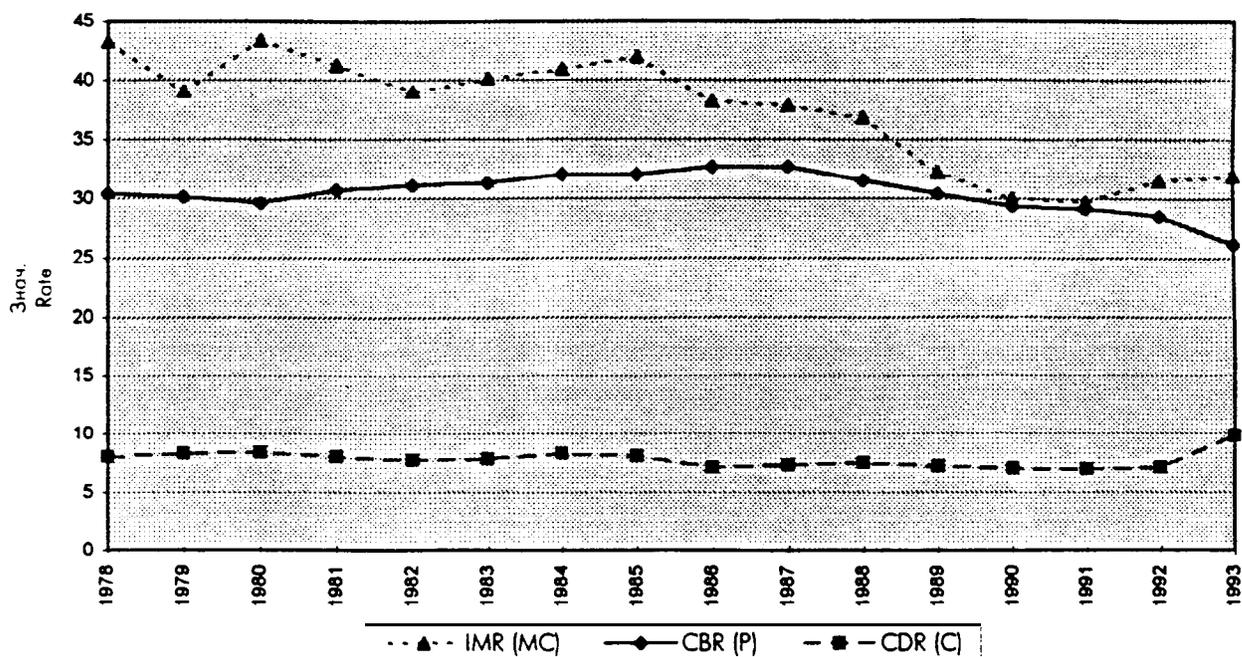
KYRGYZSTAN

ТЕНДЕНЦИИ РОЖДАЕМОСТИ, СМЕРТНОСТИ И МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ

TRENDS IN CRUDE BIRTH AND DEATH RATES AND INFANT MORTALITY RATES

Кыргызстан : 1978 - 1993

Kyrgyzstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
IMR (MC)	43.2	39.0	43.3	41.2	39.0	40.1	40.9	41.9	38.2	37.8	36.8	32.2	30.0	29.7	31.5	31.9
CBR (P)	30.4	30.1	29.6	30.7	31.1	31.3	32.0	32.0	32.6	32.7	31.5	30.4	29.3	29.1	28.5	26.1
CDR (C)	8.0	8.3	8.4	8.0	7.7	7.8	8.3	8.1	7.1	7.3	7.5	7.2	7.0	6.9	7.1	9.8

замечания: Младенческая смертность (MC)-число смертных случ. детей до 1г на 1000, рожденных живыми

Рождаемость (P) -число родившихся на 1000 населения

Смертность (C) - число смерт. случаев на 1000 населения

notes: Infant Mortality Rate (IMR) - deaths under 1 year / 1000 live births

Crude Birth Rate (CBR) - births / 1000 population

Crude Death Rate (CDR) - deaths / 1000 population

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993

All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

Показатели смертности и рождаемости в 1993
1993 Outcomes

	Рождаемость на 1000 Crude Birth Rate					Смертность на 1000 Crude Death Rate					Млад.смертность Infant Mortality Rate				
	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993		
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-14%	-17%	-17%	26.1		-4%	-1%	3%	7.7		-26%	-20%	-13%	31.9	
Чуйская Chuiskaya	-33%	-33%	-31%	17.0	6	9%	10%	17%	9.8	2	-44%	-44%	-20%	20.8	7
Ошская Oshskaya	-10%	-15%	-15%	32.4	1	-22%	-13%	-16%	6.1	7	-37%	-27%	-28%	31.7	5
Джалал-Абадская Dzhalal-Abadskaya	-9%	-15%	-14%	31.1	2	-20%	-16%	-10%	6.5	6	-31%	-32%	-20%	29.0	6
Иссык-Кульская Yssyk-Koulskaya	-11%	-14%	-18%	25.1	5	-4%	-2%	14%	8.2	3	-9%	-9%	6%	34.5	3
Нарынская Narynskaya	-21%	-17%	-14%	30.5	3	-12%	-12%	-1%	6.8	5	-10%	-17%	-1%	38.9	2
Таласская Talasskaya	-12%	-17%	-16%	28.9	4	-9%	-12%	-5%	7.1	4	-32%	-8%	-11%	33.6	4
г. Бишкек Bishkek Municipality	-35%	-27%	-32%	13.2	7	41%	33%	39%	10.4	1	106%	102%	74%	50.0	1

замечания: Младенческая смертность (МС)-число смертных случ. детей до 1г
на 1000, рожденных живыми
Рождаемость (Р) – число родившихся на 1000 населения
Смертность (С) – число смерт. случаев на 1000 населения

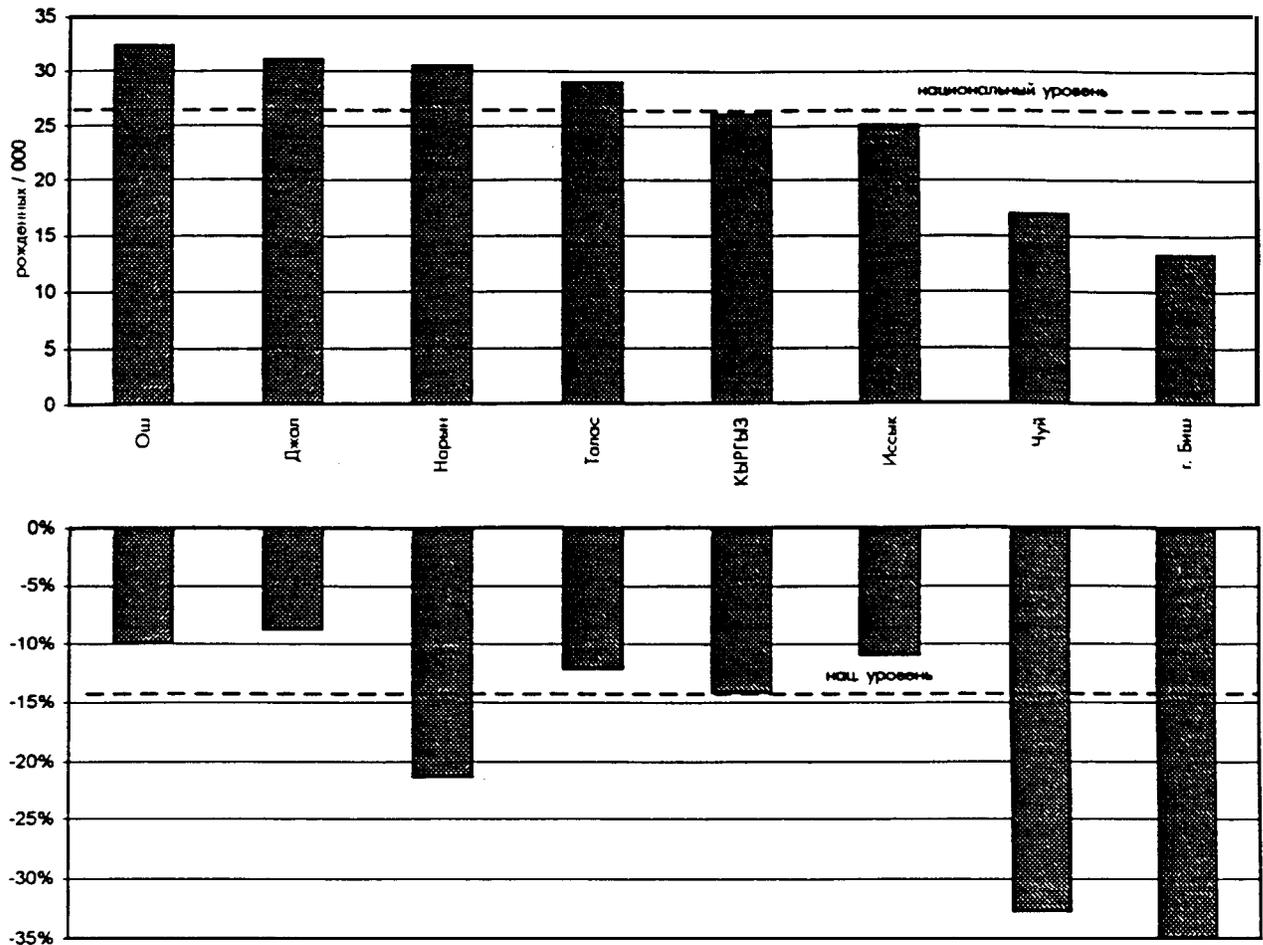
notes: Crude Birth Rate - births / 1000 population
Crude Death Rate - deaths / 1000 population
Infant Mortality Rate - deaths under 1 year / 1000 live births

Changes for Dzhalal-Abadskaya and Talasskaya calculated from 1980 onwards.

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

Рождаемость; Кыргызстан

1993, по областям

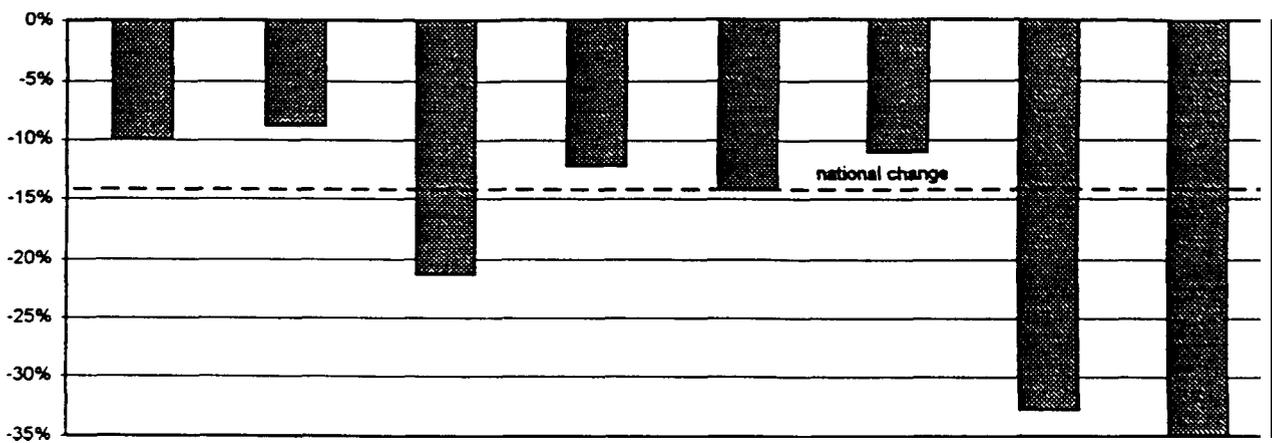
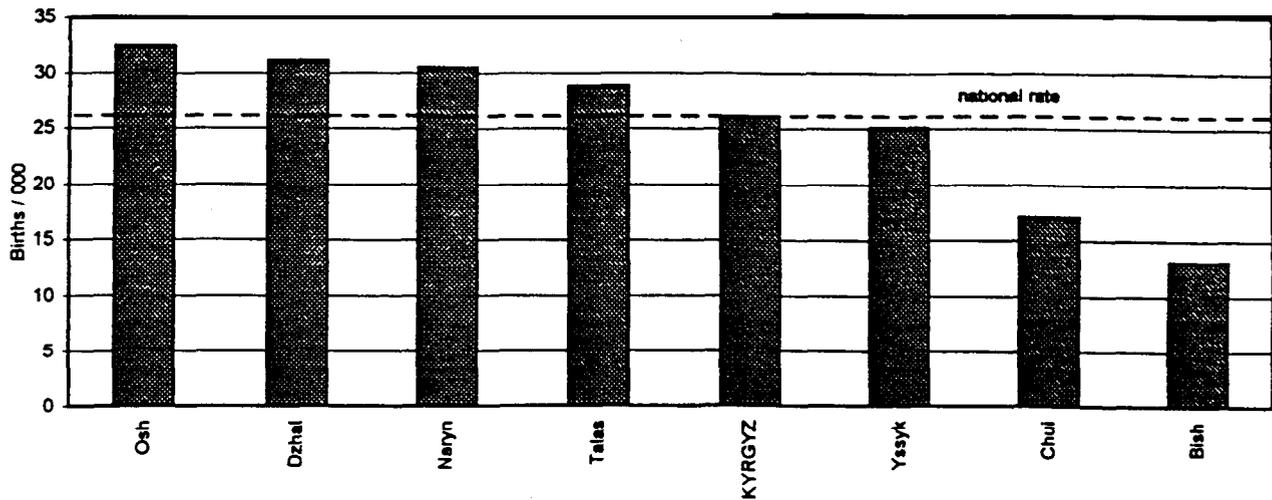


ИЗМЕНЕНИЕ РОЖДАЕМОСТИ В %; 1978 - 1993

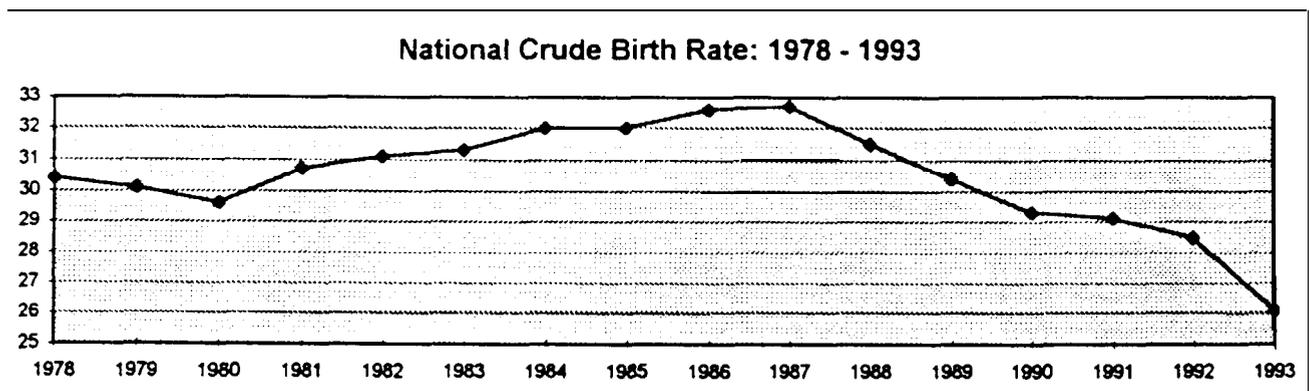


CRUDE BIRTH RATES: KYRGYZSTAN

1993, by Oblast



% Change in Birth Rates: 1978 - 1993



Рождаемость на 1000 населения: 1978 - 1993
Crude Birth Rate: 1978 - 1993
 (births / 1000 population)

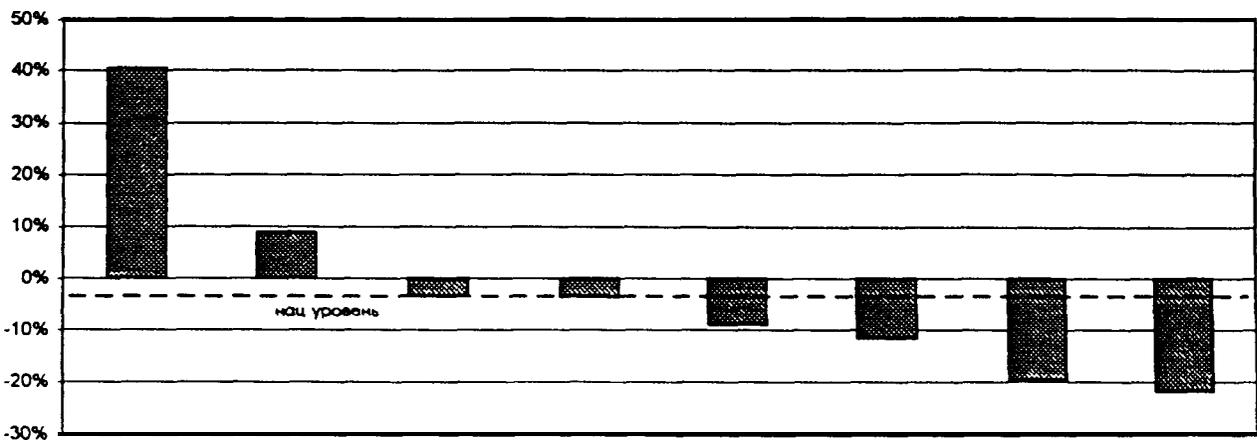
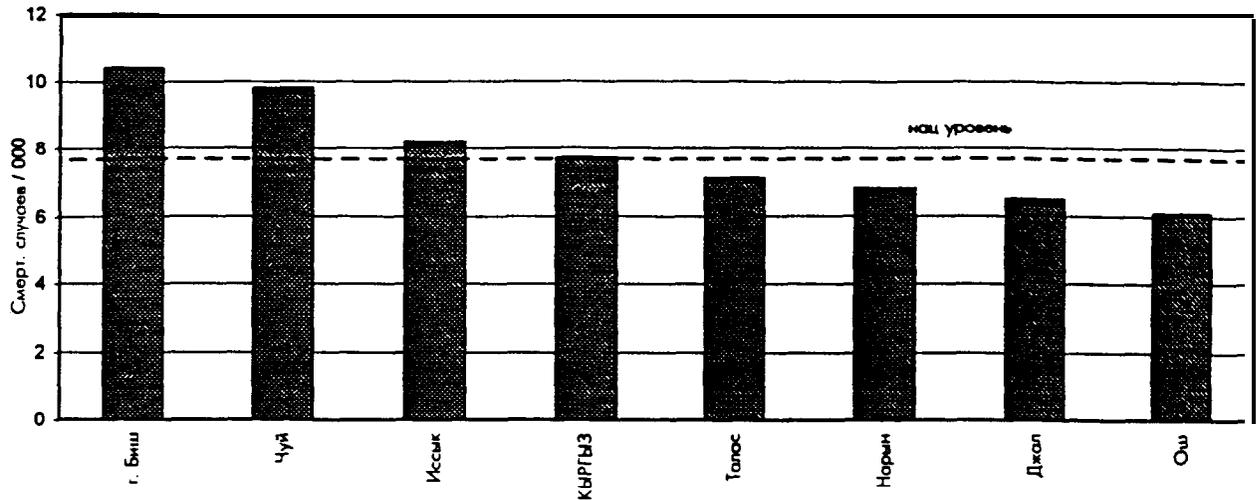
	Изменение % % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-14%	-17%	-17%	26.1	28.5	29.1	29.3	30.4	31.5	32.7	32.6	32.0	32.0	31.3	31.1	30.7	29.6	30.1	30.4
Чуйская Chuiskaya	-33%	-33%	-31%	17.0	20.4	21.8	22.3	23.5	24.6	26.0	25.8	25.1	25.8	25.4	25.6	24.9	23.3	25.3	25.3
Ошская Oshskaya	-10%	-15%	-15%	32.4	35.2	35.3	35.9	36.5	38.0	39.3	39.5	39.3	38.3	37.9	37.4	36.7	35.9	35.6	36.0
Джалал-Абадская Dzhalal-Abadskaya	-9%	-15%	-14%	31.1	33.9	34.8	35.2	36.2	36.2	38.2	38.0	37.9	37.7	36.7	36.3	36.2	34.1		
Иссык-Кульская Yssyk-Koulskaya	-11%	-14%	-18%	25.1	27.0	28.0	28.0	28.9	30.7	31.5	32.1	29.8	29.7	29.2	29.1	28.2	27.6	28.4	28.2
Нарынская Narynskaya	-21%	-17%	-14%	30.5	33.8	31.3	31.5	34.9	35.4	37.4	36.9	34.9	36.5	36.8	36.3	34.3	33.3	37.4	38.8
Таласская Talasskaya	-12%	-17%	-16%	28.6	31.0	32.7	31.4	33.8	34.5	33.9	35.0	34.2	35.8	34.9	34.7	33.0	32.9		
г. Бишкек Bishkek Municipality	-35%	-27%	-32%	13.2	15.8	16.8	16.8	17.8	19.3	20.1	19.7	19.3	19.8	18.1	18.3	20.3	20.1	19.9	20.3

note: Changes for Dzhalal-Abadskaya and Talasskaya calculated from 1980 onwards.

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

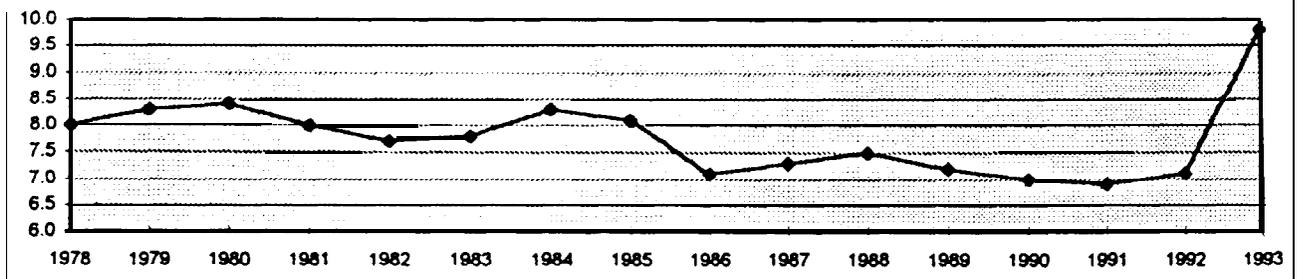
УРОВЕНЬ СМЕРТНОСТИ В КЫРГЫЗСТАНЕ

1993, по областям



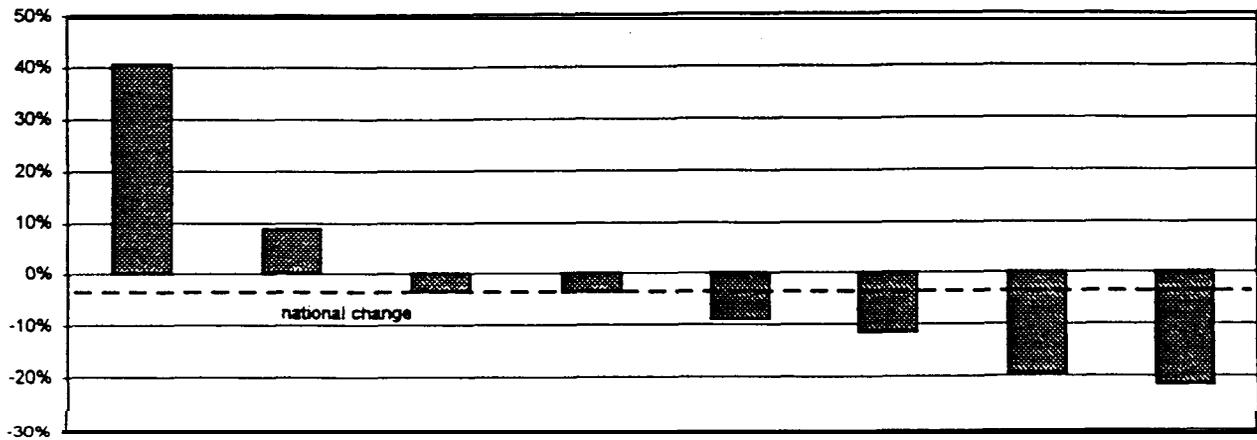
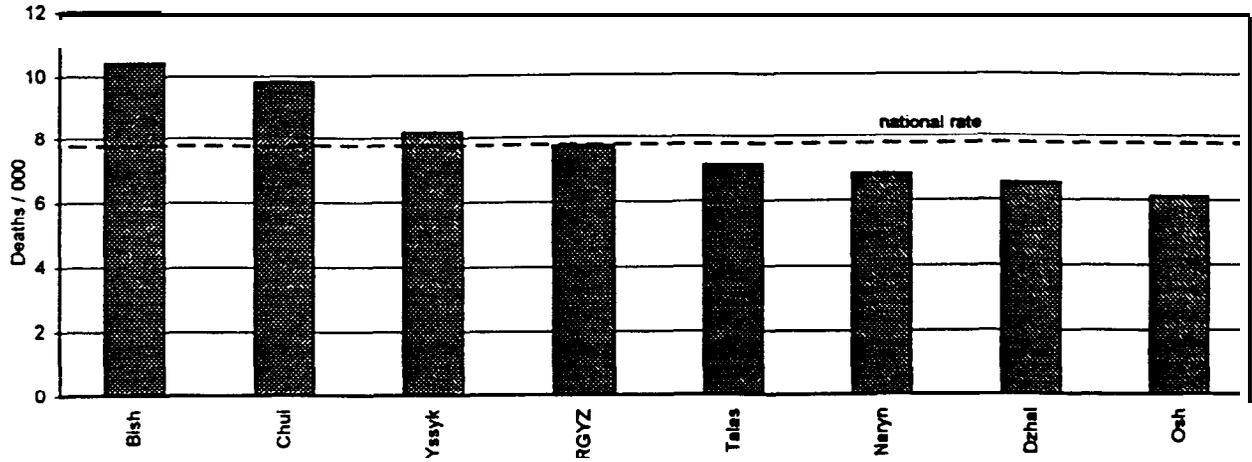
Изменение уровня смертности в %; 1978 - 1993

Национальный уровень смертности в Кыргызстане
1978 - 1993

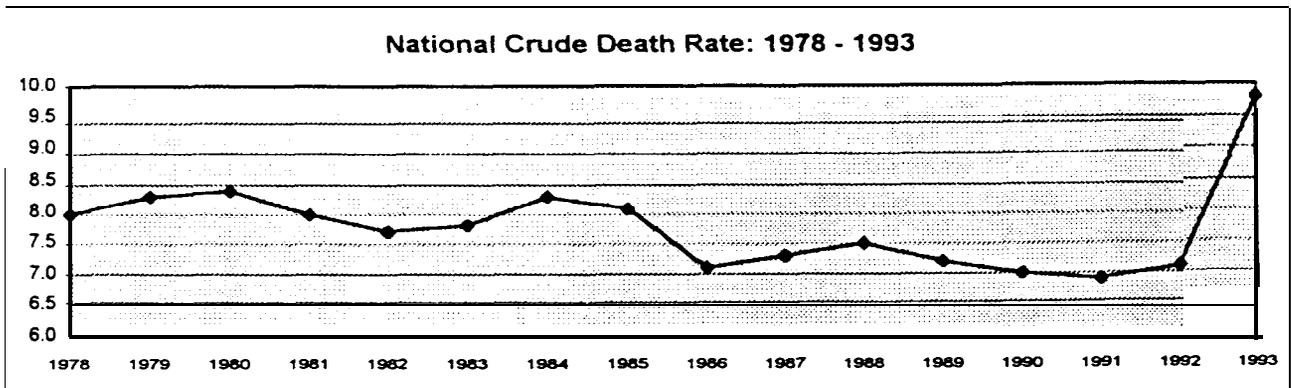


CRUDE DEATH RATES: KYRGYZSTAN

1993, by Oblast



% Change in Death Rates: 1978 - 1993



Смертность на 1000 чел. 1978 - 1993
Crude Death Rate: 1978 - 1993
 (deaths / 1000 population)

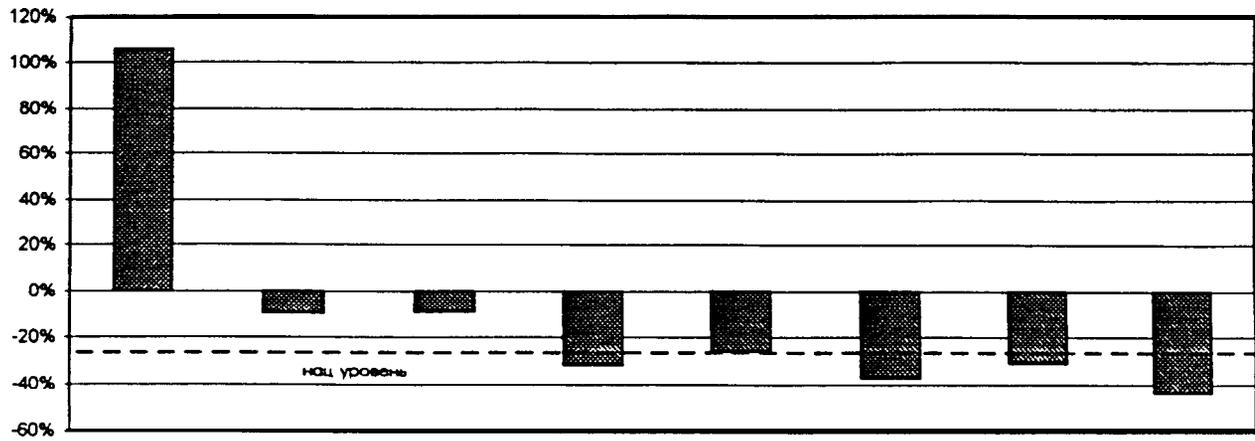
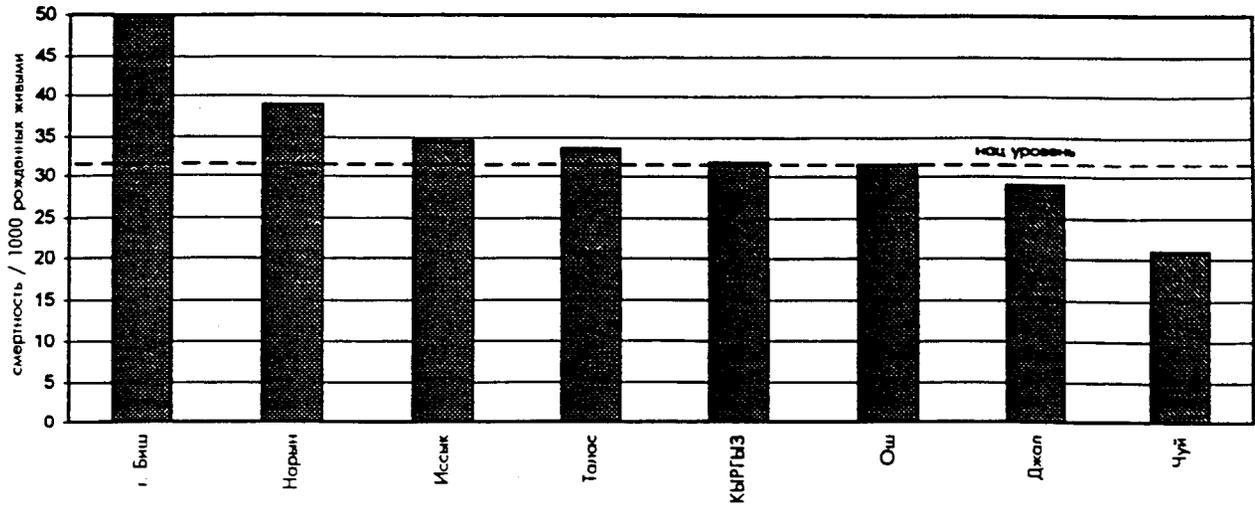
	Изменение % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-4%	-1%	3%	7.7	7.1	6.9	7.0	7.2	7.5	7.3	7.1	8.1	8.3	7.8	7.7	8.0	8.4	8.3	8.0	
Чуйская Chuiskaya	9%	10%	17%	9.8	8.8	9.0	8.7	8.6	8.4	8.3	7.8	8.8	9.6	8.9	9.2	9.1	9.4	15.6	9.0	
Ошская Oshskaya	-22%	-13%	-16%	6.1	6.1	5.6	6.0	6.3	7.3	7.1	6.7	7.6	7.6	7.0	7.0	7.5	8.3	7.6	7.8	
Джалал-Абадская Dzhalal-Abadskaya	-20%	-16%	-10%	6.5	6.5	5.9	6.1	6.5	7.2	7.0	6.7	7.5	7.8	7.7	7.4	7.5	8.1			
Иссык-Кульская Yssyk-Koulskaya	-4%	-2%	14%	8.2	7.5	7.6	7.6	7.7	7.2	7.4	7.1	8.1	8.7	8.4	8.1	8.3	8.7	8.8	8.5	
Нарынская Narynskaya	-12%	-12%	-1%	6.8	6.8	6.2	6.2	6.9	6.9	6.4	7.9	8.5	7.7	7.7	6.7	6.9	7.7	8.5	7.7	
Таласская Talasskaya	-9%	-12%	-5%	7.1	6.4	6.9	6.7	7.0	7.5	7.0	7.2	8.8	8.4	8.1	7.9	7.9	8.0			
г. Бишкек Bishkek Municipality	41%	33%	39%	10.4	8.6	8.4	7.9	7.9	7.5	7.5	7.3	8.1	8.4	7.8	7.8	8.2	7.9	7.7	7.4	

note: Changes for Dzhalal-Abadskaya and Talasskaya calculated from 1980 onwards.

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

УРОВЕНЬ МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ В КЫРГЫЗСТАНЕ

по областям в 1993г

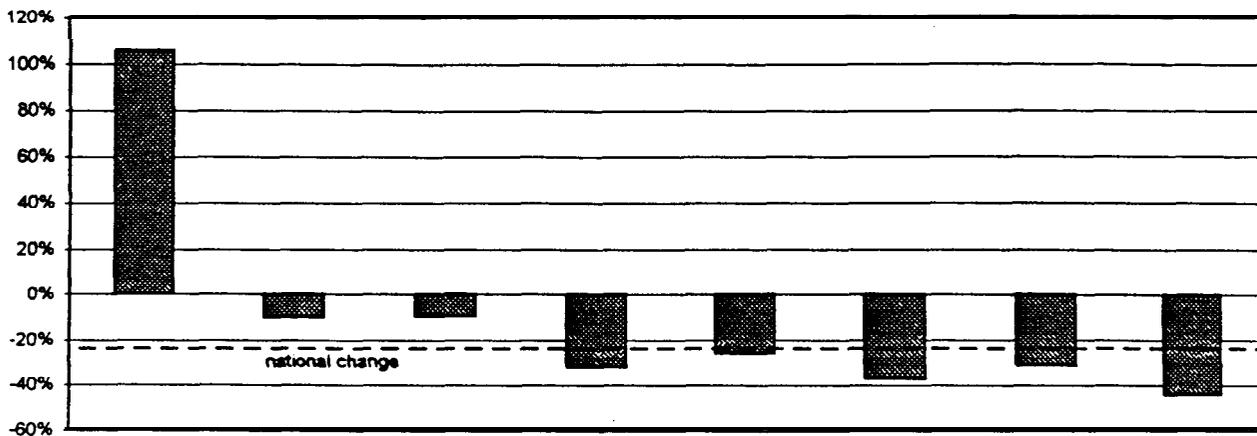
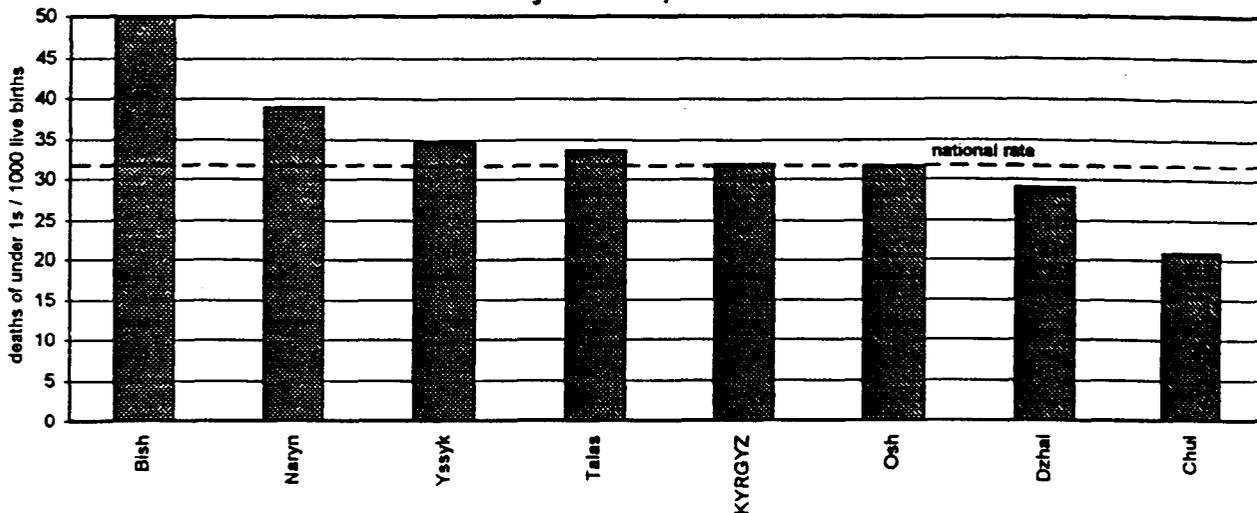


Изменения уровня МС в %; 1978 - 1993гг

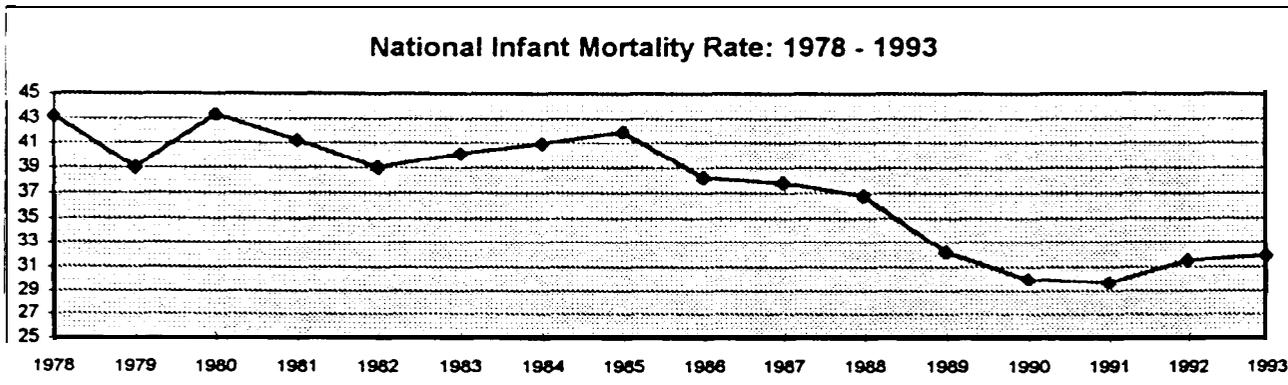


INFANT MORTALITY RATES: KYRGYZSTAN

by Oblast, 1993



% Change in IMR: 1978 - 1993



Младенческая смертность на 1000 рожденных живыми. 1978 - 1993
Infant Mortality Rate: 1978 - 1993
 (deaths of under 1s / 1000 live births)

	Изменение % % Change																				
	1978 - 1993	1983 - 1993	1988 - 1993	1983 - 1988	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-26%	-20%	-13%	-8%	31.9	31.5	29.7	30.0	32.2	36.8	37.8	38.2	41.9	40.9	40.1	39.0	41.2	43.3	39.0	43	
Чуйская Chuiskaya	-44%	-44%	-20%	-31%	20.8	23.0	25.5	26.0	27.0	25.9	29.2	24.2	34.9	35.7	37.4	36.3	34.8	34.6	36.7	37	
Ошская Oshskaya	-37%	-27%	-28%	1%	31.7	33.6	32.3	34.7	36.9	44.1	44.3	43.7	48.4	48.6	43.5	44.7	50.5	53.4	41.4	50	
Джалал-Абадская Dzhalal-Abadskaya	-31%	-32%	-20%	-14%	29.0	32.9	28.2	26.2	28.6	36.4	36.9	38.4	42.5	41.3	42.5	41.8	42.7	42.2			
Иссык-Кульская Yssyk-Koulskaya	-9%	-9%	6%	-14%	34.5	28.4	28.3	30.5	28.2	32.6	36.3	30.1	35.9	36.2	38.1	34.7	31.0	39.9	37.7	38	
Нарынская Narynskaya	-10%	-17%	-1%	-16%	38.9	33.1	31.2	28.0	34.9	39.2	40.4	47.5	42.8	38.1	46.6	36.2	38.3	46.1	51.7	43	
Таласская Talasskaya	-32%	-8%	-11%	3%	33.6	29.3	33.2	29.2	35.5	37.7	37.5	30.1	51.0	45.7	36.5	34.8	43.9	49.5			
г. Бишкек Bishkek Municipality	106%	102%	74%	16%	50.0	36.5	28.3	28.0	30.8	28.7	27.7	24.2	27.1	23.2	24.8	25.5	26.2	23.4	21.5	24	

note: Changes for Dzhalal-Abadskaya and Talasskaya calculated from 1980 onwards.

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

ТЕНДЕНЦИИ РЕСУРСОВ ЗДРАВООХРАНЕНИЯ

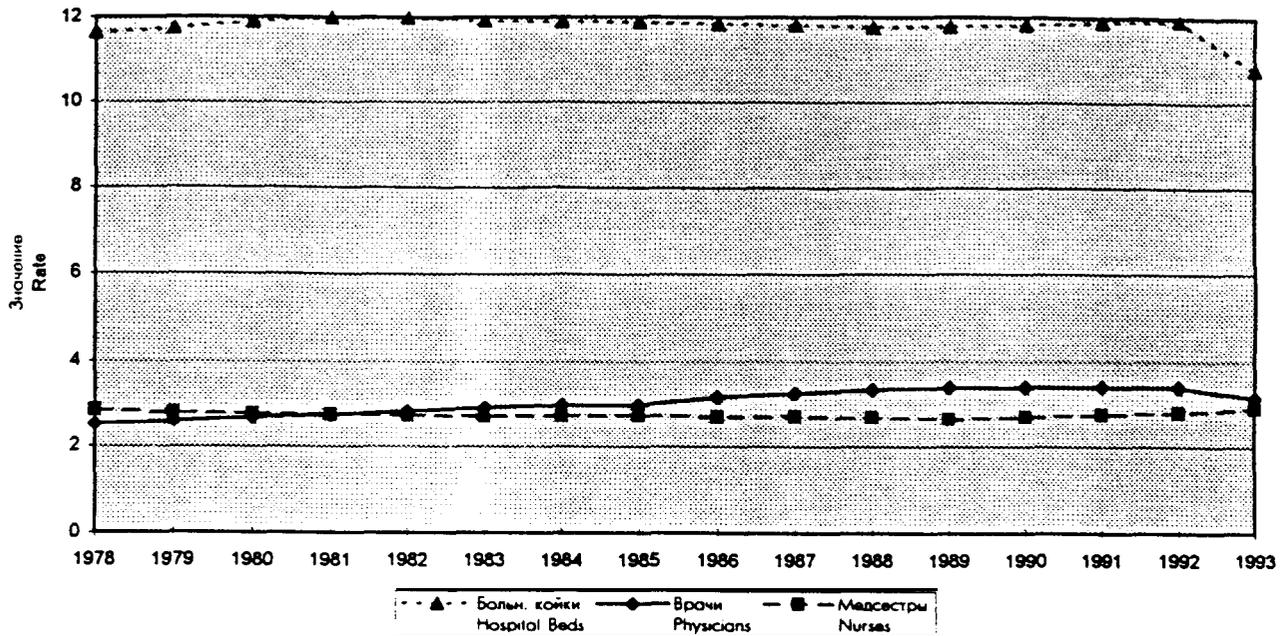
TRENDS IN INFRASTRUCTURE CAPACITY

ВРАЧИ, МЕДСЕСТРЫ И БОЛЬНИЧНЫЕ КОЙКИ

PHYSICIANS, NURSES, AND HOSPITAL BEDS

Кыргызстан: 1978 - 1993

Kyrgyzstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Врачи Physicians	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.2	3.3	3.4	3.4	3.4	3.4	3.4	3.2
Медсестры Nurses	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.9
Больн. койки Hospital Beds	11.6	11.7	11.9	12.0	12.0	11.9	11.9	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	10.8

замечания: Врачи - врачи/1000 населения

Медсестры - число медсестер/число врачей

Больничные койки - число коек/1000 населения

notes: Physicians - physicians / 1000 population

Nurses - nurses / physician

Hospital Beds - beds / 1000 population

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993

All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

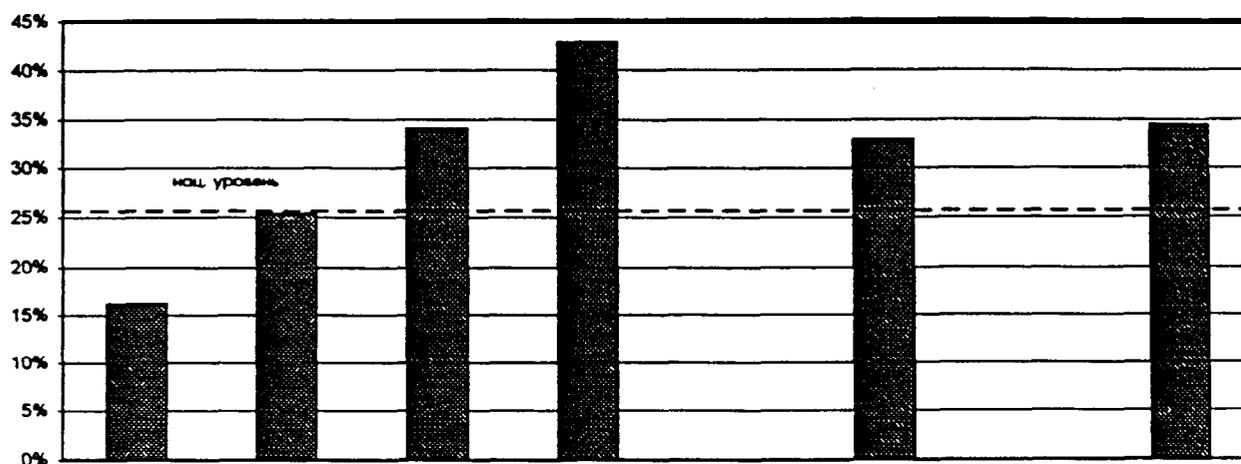
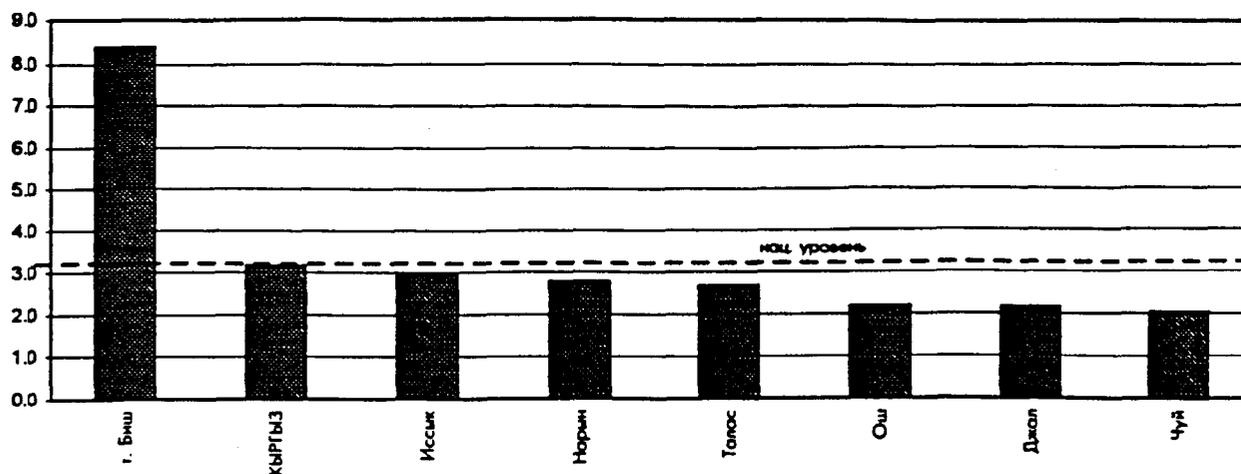
**Ресурсы Инфраструктуры; 1993г
1993 Infrastructure Capacity**

	Число врачей/1000 населения Physicians / 1000 population					Кол. медсестер на одного врача Ratio nurses to physicians					Число больн. коек/1000 населения Hospital beds / 1000 population						
	Изменение в % % Change			Знач. Ratio	Ранг Rank	Изменение в % % Change			Знач. Ratio	Ранг Rank	Изменение в % % Change			Знач. Ratio	Ранг Rank		
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993				
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	25%	8%	-5%	3.2				2%	8%	8%				-7%	-9%	-8%	10.8
Чуйская Chuiskaya	34%	6%	-14%	2.0	7	-9%	6%	17%	3.9	3	-1%	-6%	-9%	10.8	3		
Ошская Oshskaya	33%	8%	-6%	2.2	5	9%	14%	11%	3.9	2	-10%	-16%	-8%	9.3	7		
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	2.2	6	#N/A	#N/A	#N/A	4.4	1	#N/A	#N/A	#N/A	11.9	2		
Иссык-Кульская Yssyk-Koulskaya	34%	13%	-5%	3.0	2	3%	8%	16%	3.4	6	-8%	-10%	-15%	9.4	6		
Нарынская Narynskaya	34%	26%	7%	2.8	4	12%	17%	17%	3.9	4	-3%	-8%	-19%	9.5	5		
Таласская Talasskaya	43%	35%	7%	2.7	3	#N/A	9%	0%	3.8	5	#N/A	0%	-5%	10.1	4		
г. Бишкек Bishkek Municipality	16%	9%	-3%	8.4	1	-27%	-22%	-16%	1.3	7	-18%	-16%	-9%	14.5	1		

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

ЧИСЛО ВРАЧЕЙ НА 1000 НАСЕЛЕНИЯ

1993, по областям



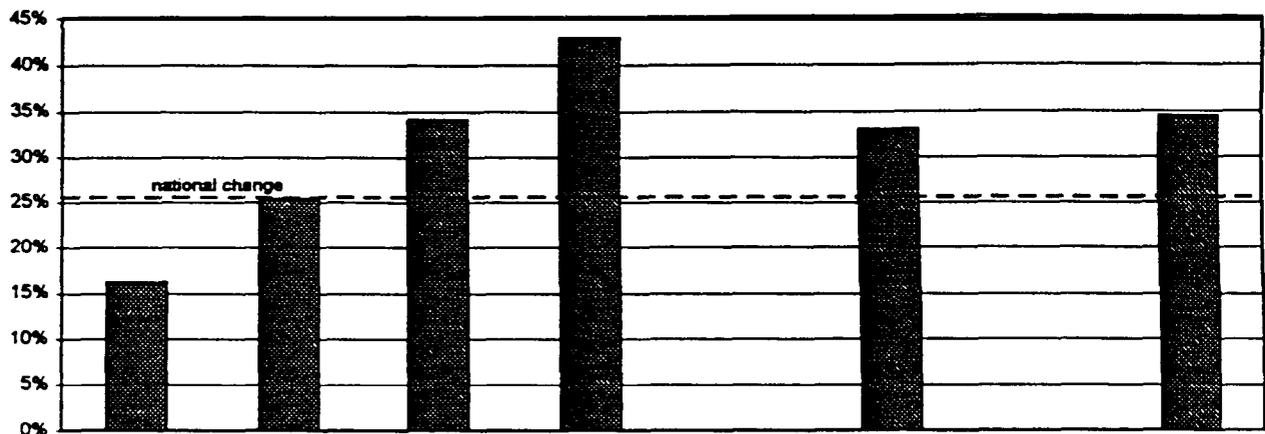
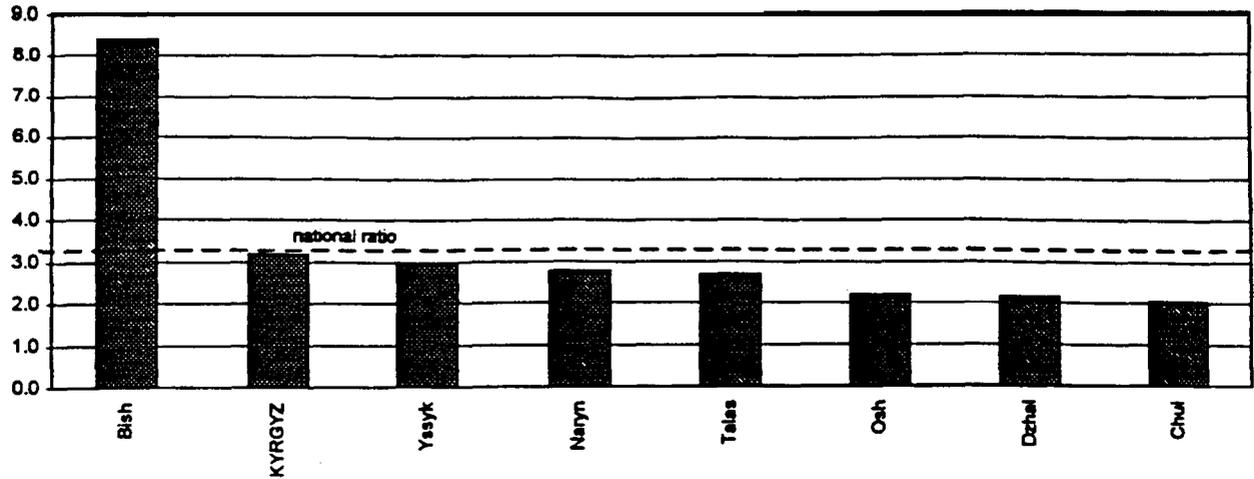
Изменение уровня за период 1978 - 1993г.г. в %



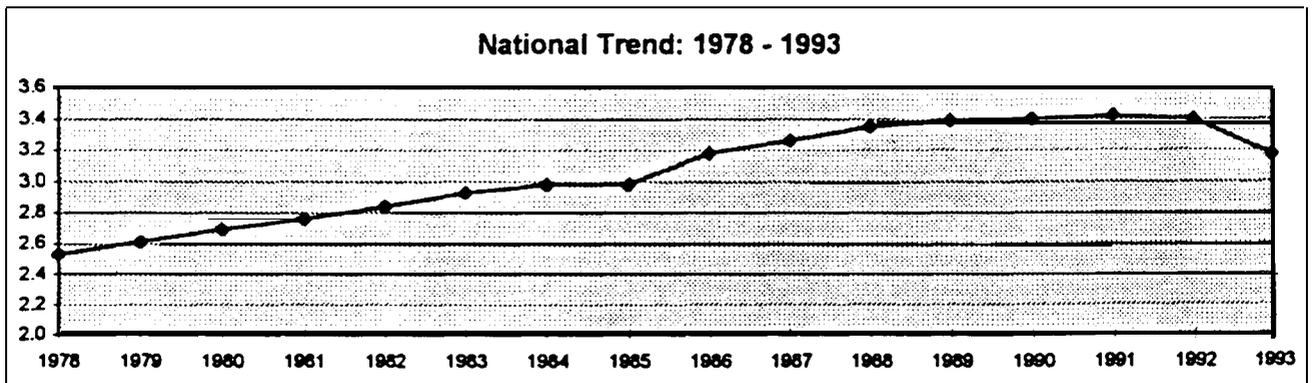
Тенденции по стране; 1978 - 1993г.г.

PHYSICIANS / 1000 POPULATION

1993, by Oblast



% Change in Ratio: 1978 - 1993



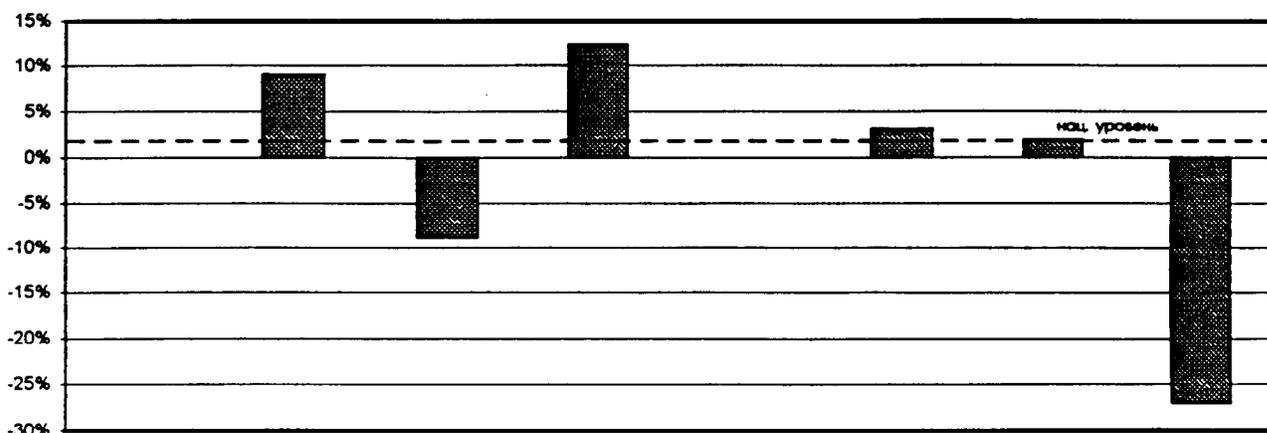
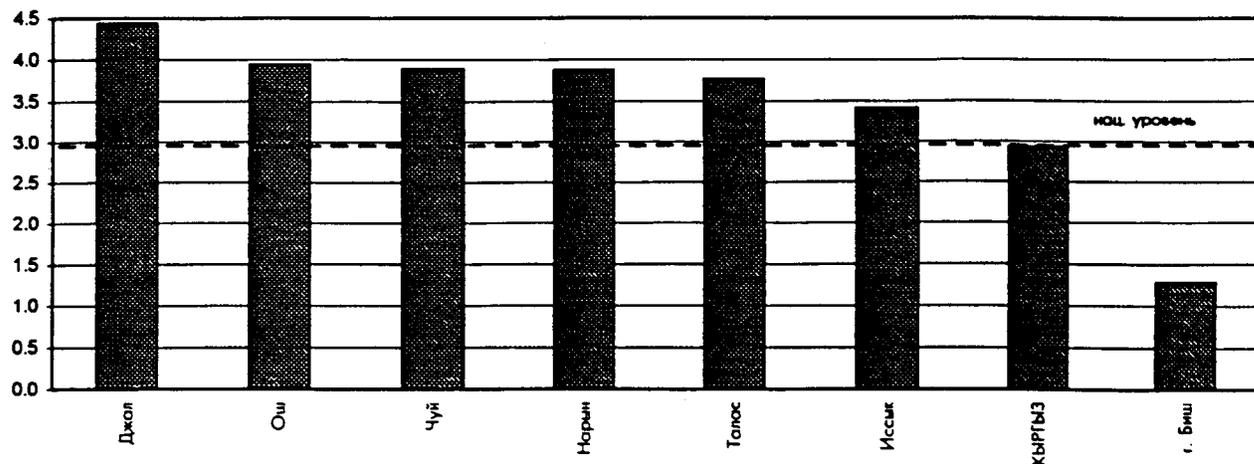
Врачи; 1978-1993г.г.
(число врачей/1000 населения)
Physicians: 1978-1993
(physicians / 1000 population)

	Изменение в % % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	25%	8%	-5%	3.2	3.4	3.4	3.4	3.4	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.5
Чуйская Chuiskaya	34%	6%	-14%	2.0	2.6	2.5	2.5	2.3	2.4	2.3	2.2	2.1	2.1	1.9	1.9	1.8	1.7	1.6	1.5
Ошская Oshskaya	33%	8%	-6%	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.7	1.6
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	2.2	2.2	2.3	2.2				2.2								
Иссык-Кульская Yssyk-Koulskaya	34%	13%	-5%	3.0	3.2	3.2	3.2	3.2	3.1	3.0	2.9	2.8	2.6	2.6	2.5	2.5	2.4	2.3	2.2
Нарынская Narynskaya	43%	26%	7%	2.8	2.7	2.7	2.7	2.7	2.6	2.6	2.5	2.3	2.3	2.2	2.1	2.1	2.1	2.0	1.9
Таласская Talasskaya	#N/A	35%	7%	2.7	2.8	2.8	2.7	2.7	2.5	2.5	2.3	2.2	2.0	2.0	1.9	1.7	1.5		
г. Бишкек Bishkek Municipality	16%	9%	-3%	8.4	9.1	9.1	8.9	8.8	8.7	8.0	7.9	7.9	7.6	7.7	7.5	7.4	7.3	7.3	7.2

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

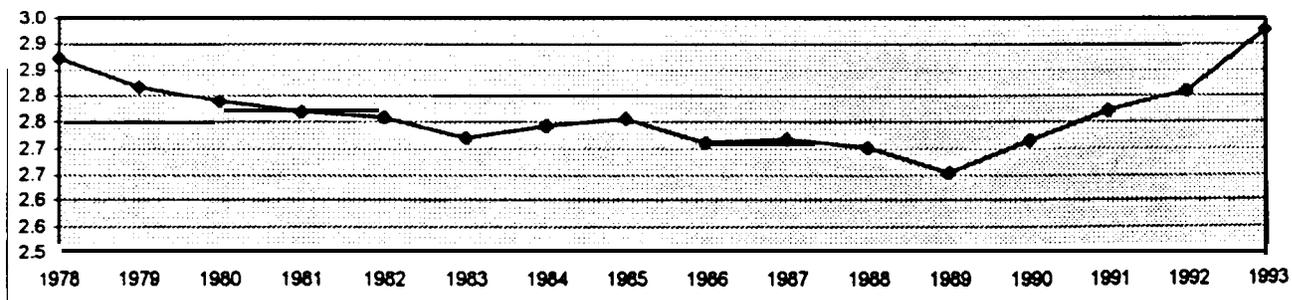
Число сред. медперсонала/Число врачей

1993, по областям



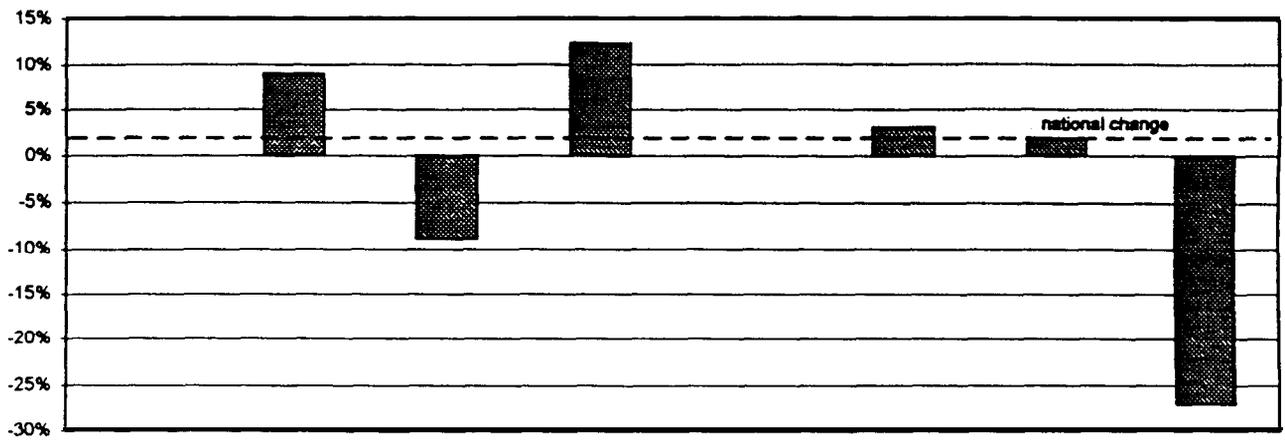
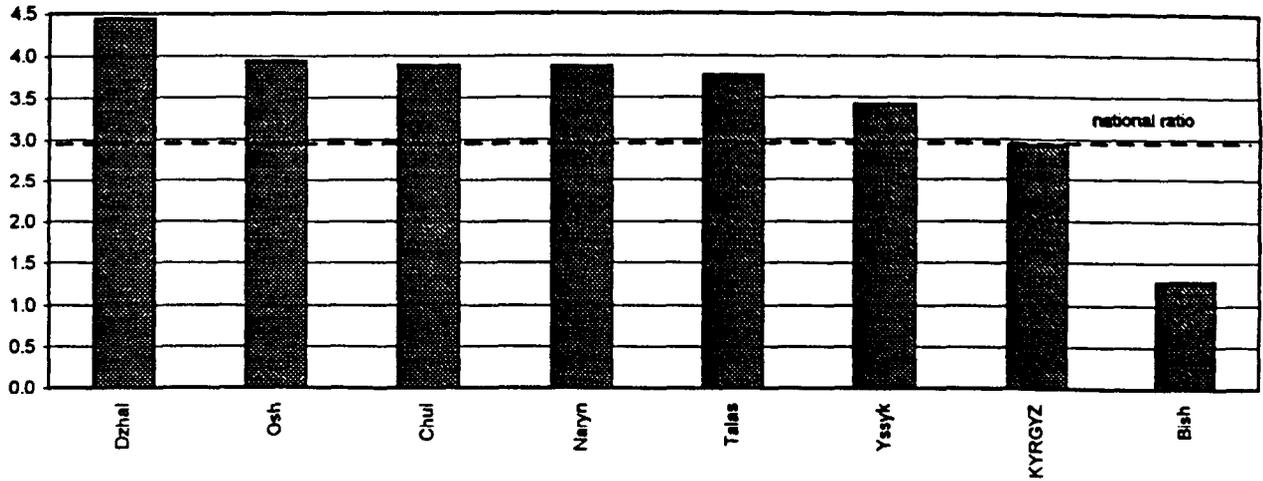
% изменения уровня за 1978 - 1993г.г.

Тенденции по стране за 1978 - 1993г.г.

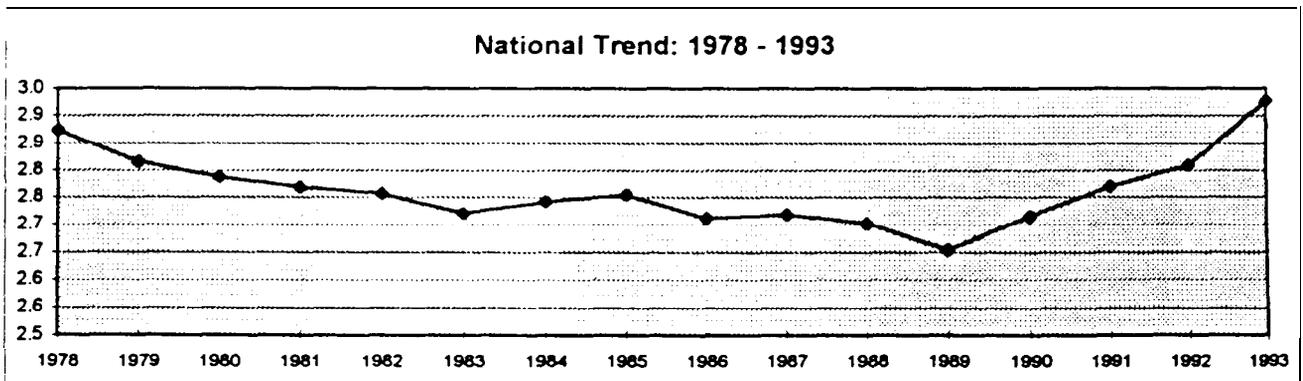


NURSES / PHYSICIAN

1993, by Oblast



% Change in Ratio: 1978 - 1993



Средний мед. персонал; 1978-1993

(число медсестер/число врачей)

Nurses: 1978-1993

(nurses / physician)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	2%	8%	8%	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.8
Чуйская Chuiskaya	-9%	6%	17%	3.9	3.3	3.4	3.3	3.5	3.3	3.4	3.3	3.4	3.5	3.7	3.7	3.8	3.6	4.1	4.3
Ошская Oshskaya	9%	14%	11%	3.9	3.8	3.8	3.5	3.4	3.5	3.5	3.4	3.6	3.5	3.4	3.4	3.4	3.4	3.5	3.6
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	4.4	4.2	4.1	4.1	#N/A	#N/A	#N/A	0.0	#N/A							
Иссык-Кульская Yssyk-Koulskaya	3%	8%	16%	3.4	3.3	3.1	3.0	3.0	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.2	3.2	3.2	3.3
Нарынская Narynskaya	12%	17%	17%	3.9	3.8	3.7	3.5	3.6	3.3	3.3	3.5	3.7	3.4	3.3	3.3	3.4	3.4	3.4	3.5
Таласская Talasskaya	#N/A	9%	0%	3.8	3.7	3.7	3.7	3.4	3.8	3.9	3.7	3.6	3.5	3.5	3.4	3.5	3.9	#N/A	#N/A
г. Бишкек Bishkek Municipality	-27%	-22%	-16%	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

Инфраструктура: Табл. 5.3
Infrastructure: Table 5.3

Больничные койки; 1978-1993г.г.

(число коек/1000 населения)

Hospital Beds: 1978-1993

(beds / 1000 population)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-7%	-9%	-8%	10.8	11.9	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	11.9	12.0	12.0	11.9	11.7	11.6	
Чуйская Chuiskaya	-1%	-6%	-9%	10.8	12.2	12.2	12.3	12.1	11.9	11.8	11.8	11.8	11.7	11.4	11.4	11.4	11.3	10.9	10.9	
Ошская Oshskaya	-10%	-16%	-8%	9.3	10.2	10.1	9.9	10.6	10.0	10.6	10.7	10.8	10.8	11.1	11.2	11.3	11.2	10.8	10.3	
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	11.9	12.1	12.2	12.1	12.0												
Иссык-Кульская Yssyk-Koulskaya	-8%	-10%	-15%	9.4	11.1	10.9	10.8	11.4	11.1	11.3	11.0	11.0	10.4	10.4	10.6	10.8	10.6	10.5	10.2	
Нарынская Narynskaya	-3%	-8%	-19%	9.5	12.1	12.0	11.9	11.2	11.8	11.9	11.0	11.2	10.0	10.3	10.0	9.9	9.9	9.9	9.8	
Таласская Talasskaya	#N/A	0%	-5%	10.1	10.7	11.1	11.0	10.6	10.6	10.7	10.0	10.0	9.9	10.1	9.8	9.7	9.4			
г. Бишкек Bishkek Municipality	-18%	-16%	-9%	14.5	15.9	15.7	15.9	15.9	16.0	15.8	16.4	16.6	16.7	17.2	17.6	17.6	17.5	17.3	17.7	

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

Инфраструктура: Табл. 5.4
Infrastructure: Table 5.4

ТЕНДЕНЦИИ ИСПОЛЬЗОВАНИЯ БОЛЬНИЧНЫХ РЕСУРСОВ

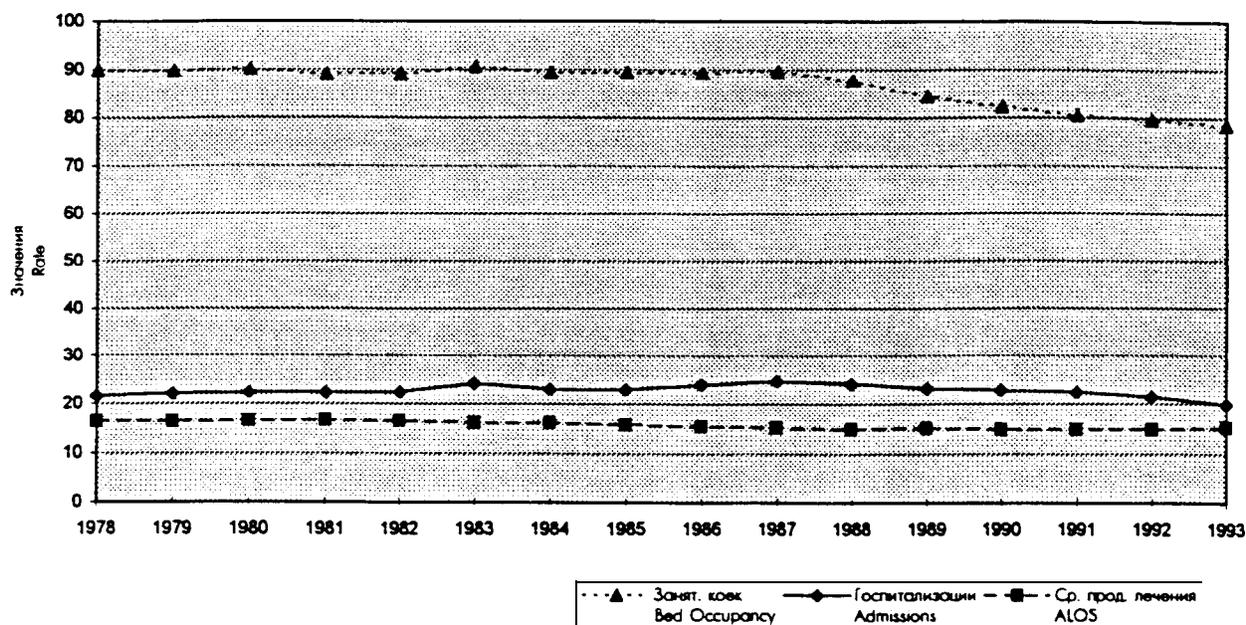
TRENDS IN HOSPITAL UTILIZATION

УРОВЕНЬ ГОСПИТАЛИЗАЦИИ, ЗАНЯТОСТЬ КОЕК И СРЕДНЯЯ ПРОДОЛЖИТЕЛЬНОСТЬ ЛЕЧЕНИЯ

ADMISSIONS, BED OCCUPANCY RATE, AND AVERAGE LENGTH OF STAY

Кыргызстан : 1978 - 1993

Kyrgyzstan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Госпитализации Admissions	22	22	22	22	23	24	23	23	24	25	24	23	23	23	22	20
Занят. коек Bed Occupancy	90	90	90	89	89	91	89	89	89	90	88	84	82	81	80	79
Ср. прод. лечения ALOS	16.4	16.4	16.6	16.7	16.6	16.2	16.1	15.8	15.5	15.2	15.0	15.1	14.9	14.9	14.9	15.3

замечания: Госпитализации- число госпитализаций на 100 чел. населения
 Занят. коек- % времени в год, в которое койка занята пациентами
 Ср. прод. лечения- средняя продолжительность госпитализации

notes: Admissions - hospital admissions / 100 population
 Bed Occupancy - days bed occupied in year / 365
 Average Length of Stay (ALOS) - average days in hospital per admission

ΕΥΘΑΥΧΝΟΑΙ

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

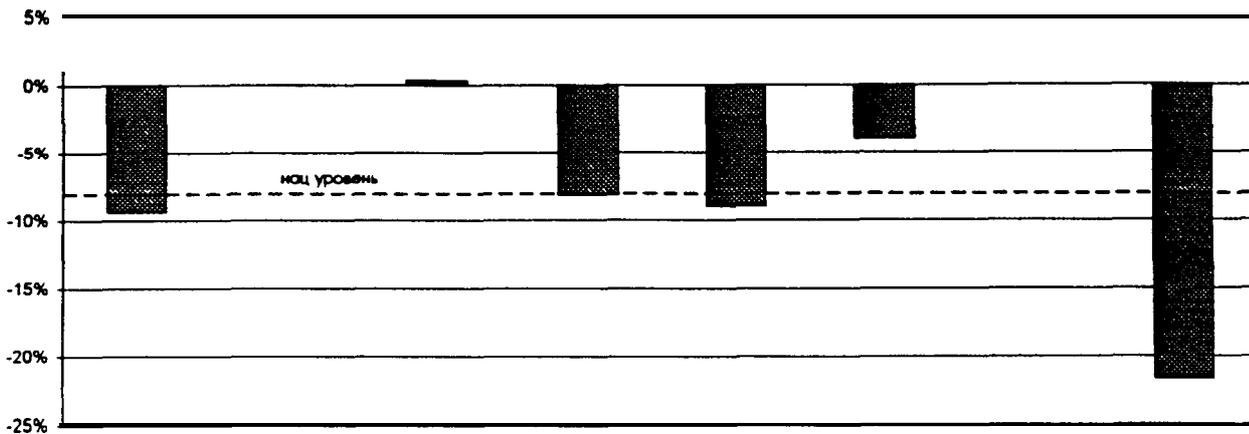
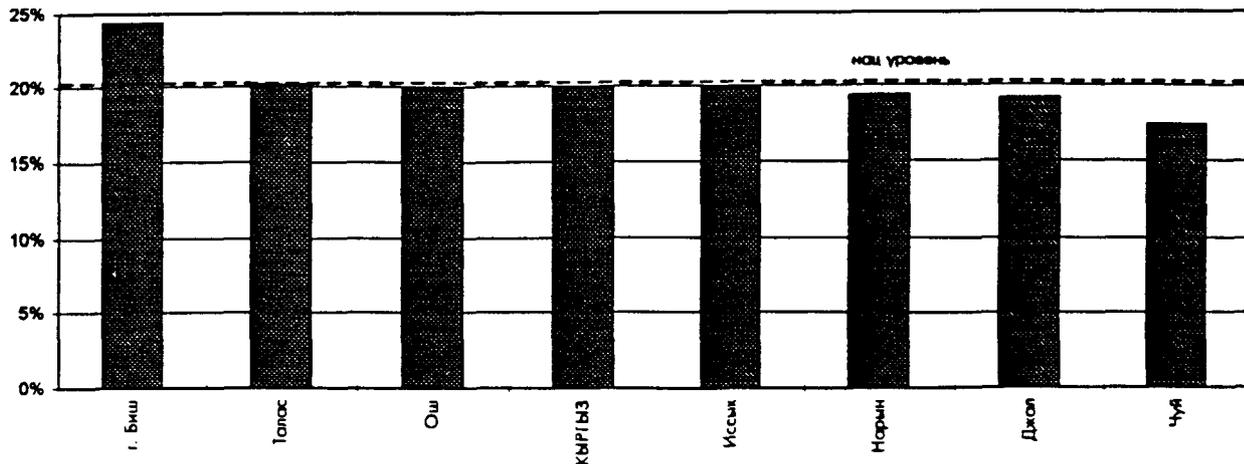
Использование больничных ресурсов в 1993г
1993 Hospital Utilization

	Число госпитализаций (% насел.) Admissions (as % population)					Занятость койки (%) Occupancy Rate					Сред. продолжительность лечения (дней) Average Length of Stay (in days)				
	Изменение в % % Change			Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 ALoS	Ранг Rank
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993		
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-8%	-18%	-18%	20%		-13%	-13%	-10%	79%		-7%	-6%	2%	15.3	
Чуйская Chuiskaya	-22%	-27%	-28%	17%	7	-21%	-22%	-17%	72%	7	5%	5%	6%	16.6	3
Ошская Oshskaya	0%	-11%	-17%	20%	3	-7%	-10%	-10%	82%	2	-16%	-15%	-5%	13.7	5
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	19%	6	#N/A	#N/A	#N/A	75%	4	#N/A	#N/A	#N/A	16.7	2
Иссык-Кульская Yssyk-Koulskaya	-9%	-15%	-21%	20%	4	-12%	-12%	-10%	76%	4	-6%	-5%	2%	13.1	7
Нарынская Narynskaya	-4%	-9%	-20%	19%	5	-17%	-18%	-10%	77%	3	-12%	-9%	-5%	14.3	4
Таласская Talasskaya	#N/A	-11%	-13%	20%	2	#N/A	-15%	-7%	75%	5	#N/A	-4%	1%	13.6	6
г. Бишкек Bishkek Municipality	-9%	-16%	-6%	24%	1	-6%	-6%	-3%	85%	1	3%	-6%	3%	18.1	1

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

ОТНОШЕНИЕ ЧИСЛА ГОСПИТАЛИЗАЦИЙ К ЧИСЛЕННОСТИ НАСЕЛЕНИЯ (%); КЫРГЫЗСТАН

1993, по областям

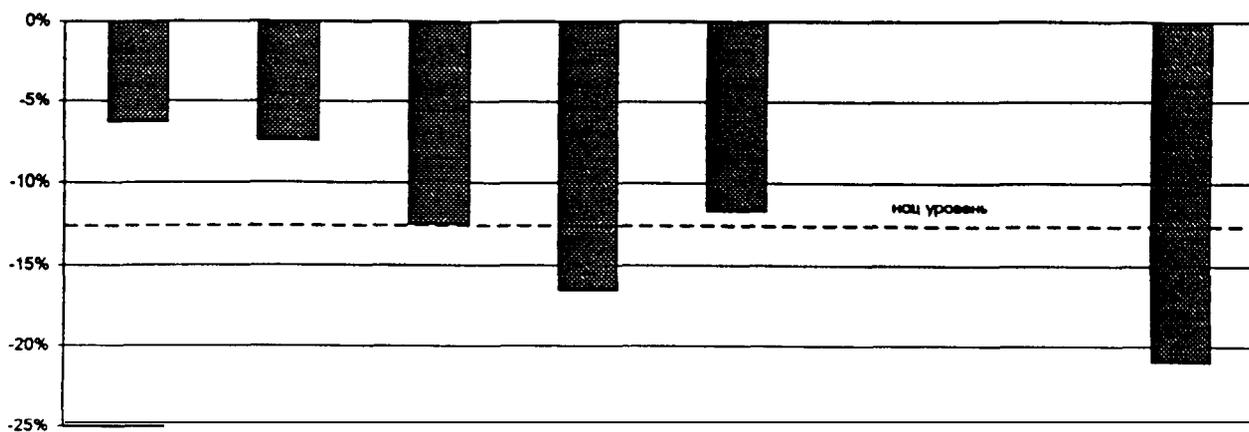
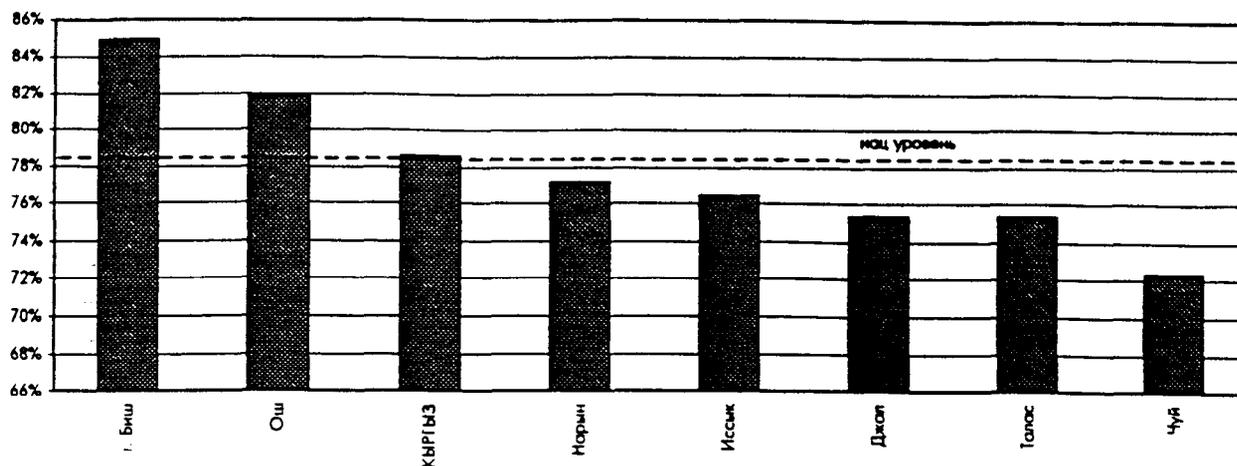


% Изменения: 1978 - 1993



УРОВЕНЬ ЗАНЯТОСТИ КОЕК; КЫРГЫЗСТАН

1993, по областям

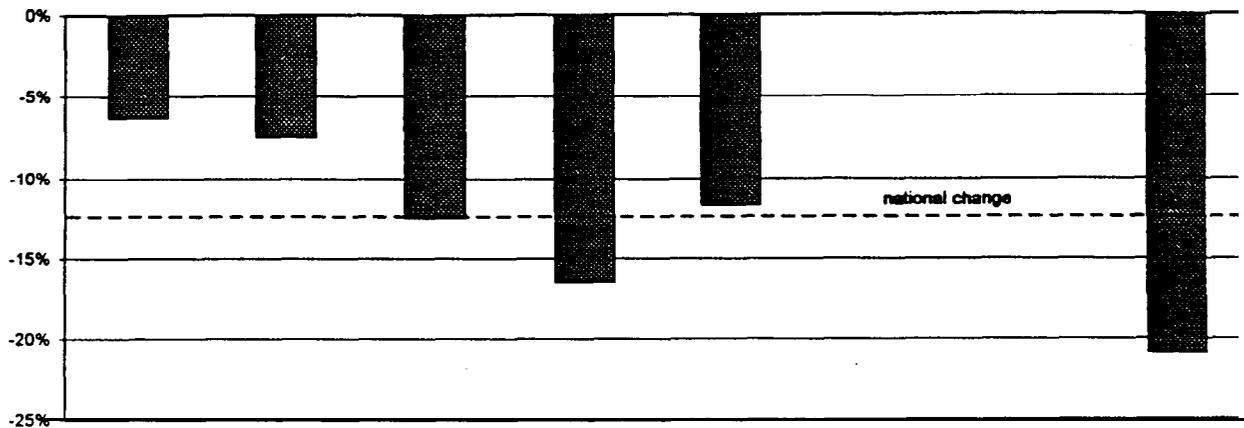
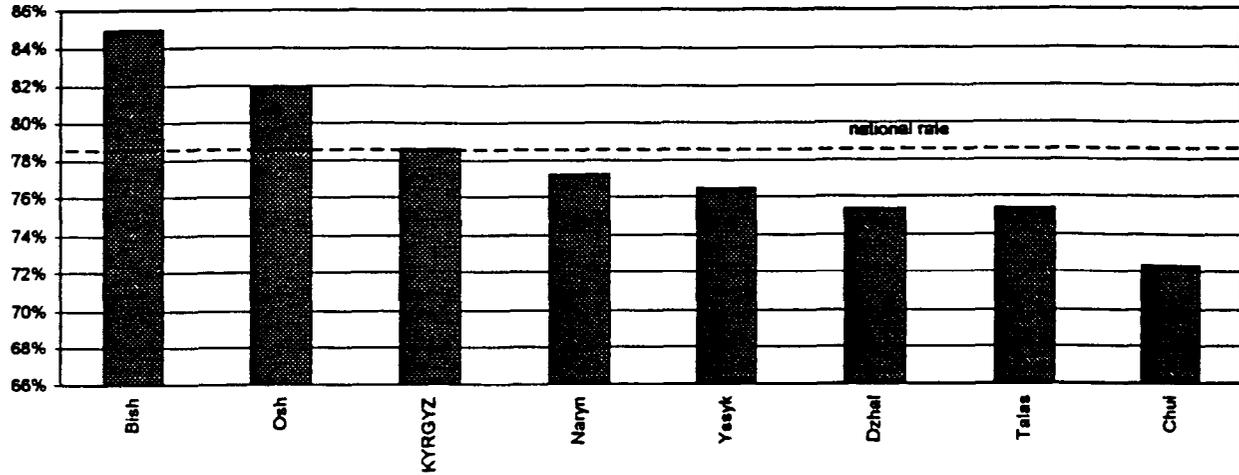


% Изменения с 1978г



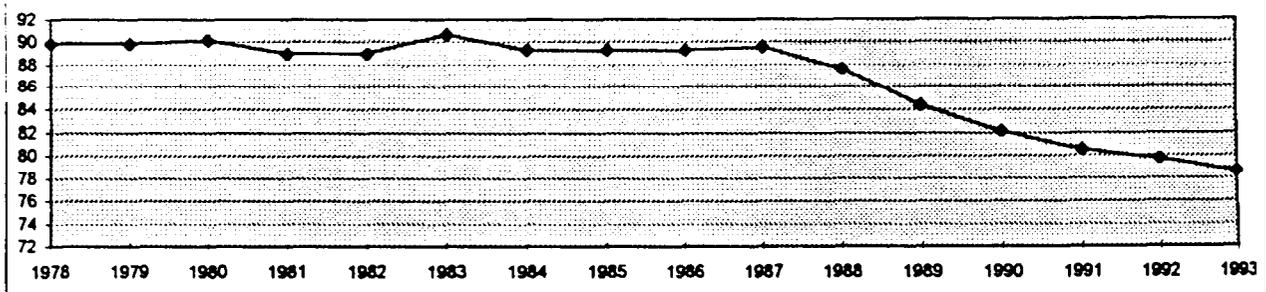
BED OCCUPANCY RATE, KYRGYZSTAN

1993, by Oblast



% Change since 1978

National Trend: 1978 - 1993



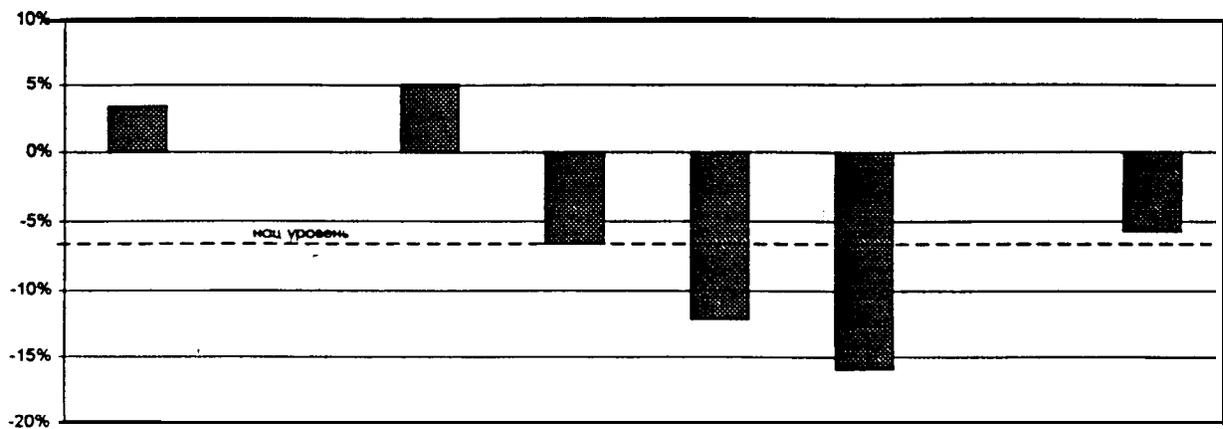
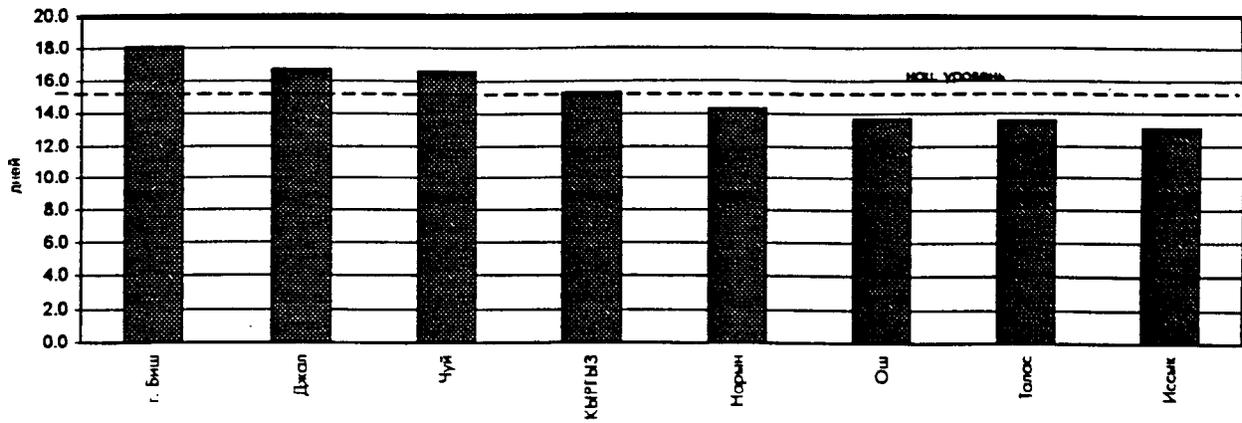
Занятость коек в 1978 -1993гг
(средний % времени, в которое койка занята пациентом)
Bed Occupancy Rate: 1978-1993
(average % of time bed occupied)

	Изменение в % % Change																		
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-13%	-13%	-10%	79%	80%	81%	82%	84%	88%	90%	89%	89%	89%	91%	89%	89%	90%	90%	90%
Чуйская Chuiskaya	-21%	-22%	-17%	72%	75%	78%	81%	84%	87%	90%	89%	89%	91%	92%	91%	91%	92%	92%	92%
Ошская Oshskaya	-7%	-10%	-10%	82%	83%	84%	84%	87%	91%	94%	93%	91%	90%	91%	88%	89%	90%	90%	88%
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	75%	83%	82%	85%	87%	#N/A										
Иссык-Кульская Yssyk-Koulskaya	-12%	-12%	-10%	76%	73%	76%	78%	57%	85%	84%	82%	85%	85%	87%	84%	87%	86%	84%	87%
Нарынская Narynskaya	-17%	-18%	-10%	77%	73%	76%	82%	#N/A	86%	81%	86%	90%	90%	95%	93%	88%	89%	87%	93%
Таласская Talasskaya	#N/A	-15%	-7%	75%	74%	76%	79%	#N/A	81%	87%	87%	85%	84%	89%	85%	87%	89%	#N/A	#N/A
г. Бишкек Bishkek Municipality	-6%	-6%	-3%	85%	83%	82%	83%	83%	87%	87%	87%	89%	90%	90%	90%	90%	92%	90%	91%

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

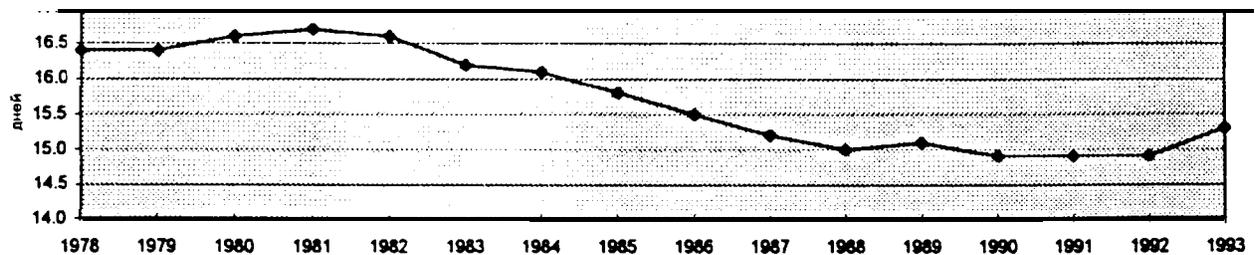
СРЕДНЯЯ ПРОДОЛЖИТЕЛЬНОСТЬ ЛЕЧЕНИЯ; КЫРГЫЗСТАН

1993, по областям



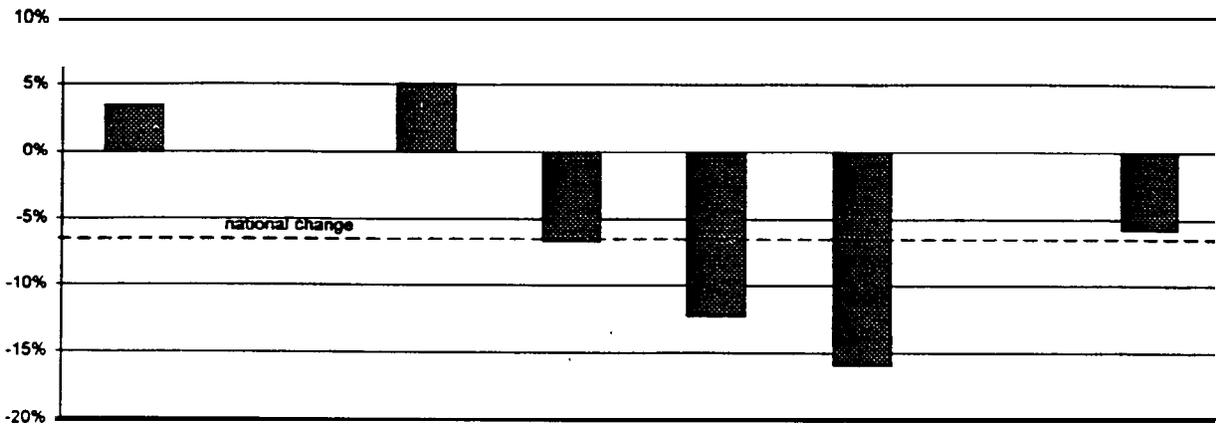
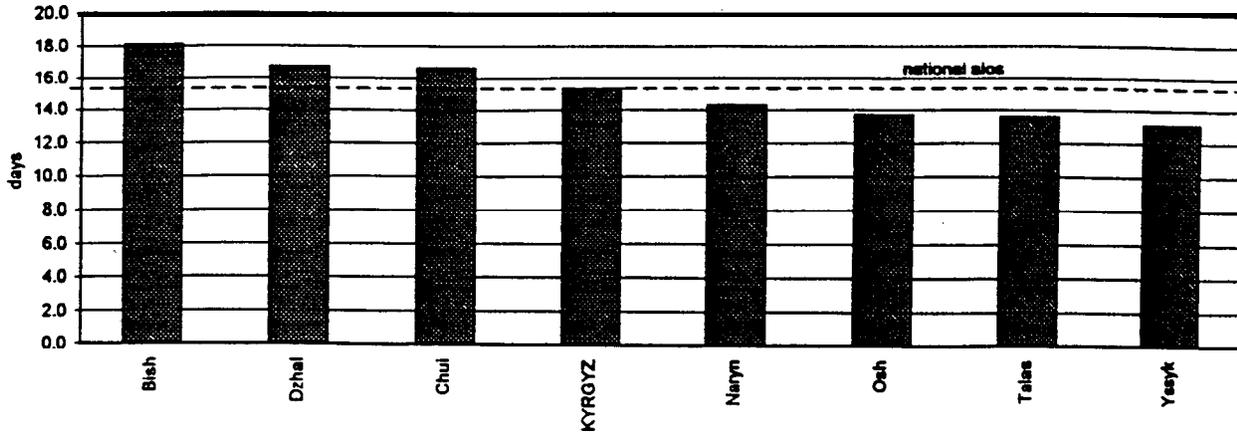
изменения с 1978 в %

Изменения национального уровня: 1978 - 1993



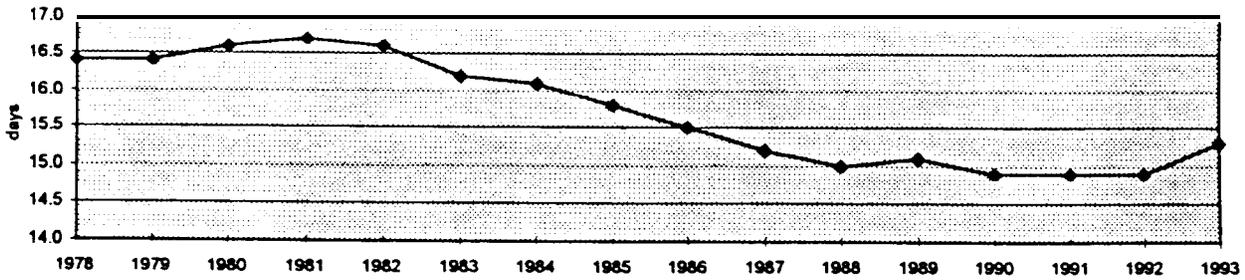
AVERAGE LENGTH OF STAY, KYRGYZSTAN

1993, by Oblast



% Change since 1978

National Trend: 1978 - 1993



Средняя продолжительность лечения в 1978 -1993гг
Average Length of Stay: 1978-1993
 (average days in hospital per admission)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
респ. Кыргызстан - Всего Rep. Kyrgyzstan - Total	-7%	-6%	2%	15.3	14.9	14.9	14.9	15.1	15.0	15.2	15.5	15.8	16.1	16.2	16.6	16.7	16.6	16.4	16.4
Чуйская Chuiskaya	5%	5%	6%	16.6	16.2	16.3	16.2	15.6	15.6	15.8	15.8	15.9	16.0	15.8	16.0	16.2	16.0	15.6	15.8
Ошская Oshskaya	-16%	-15%	-5%	13.7	13.2	13.1	12.8	14.3	14.4	14.7	15.2	15.4	15.8	16.1	16.3	16.5	16.2	16.1	16.3
Джалал-Абадская Dzhalal-Abadskaya	#N/A	#N/A	#N/A	16.7	16.4	15.9	15.8	14.3											
Иссык-Кульская Yssyk-Koulskaya	-6%	-5%	2%	13.1	13.5	13.1	13.1	11.6	12.9	13.3	13.5	13.4	13.7	13.8	14.0	14.2	14.1	13.8	13.9
Нарынская Narynskaya	-12%	-9%	-5%	14.3	15.0	14.8	14.8		15.0	15.2	15.3	15.6	15.8	15.7	16.0	16.1	15.9	15.7	16.3
Таласская Talasskaya	#N/A	-4%	1%	13.6	13.5	13.5	13.5		13.4	13.5	13.7	13.6	13.9	14.1	13.8	14.4	14.1		
г. Бишкек Bishkek Municipality	3%	-6%	3%	18.1	17.8	17.3	17.8	17.1	17.5	17.3	17.8	18.4	19.0	19.2	19.8	19.9	19.7	19.4	17.5

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
 All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993

ТЕНДЕНЦИИ БОЛЬНИЧНЫХ РЕСУРСОВ И ИХ ИСПОЛЬЗОВАНИЯ

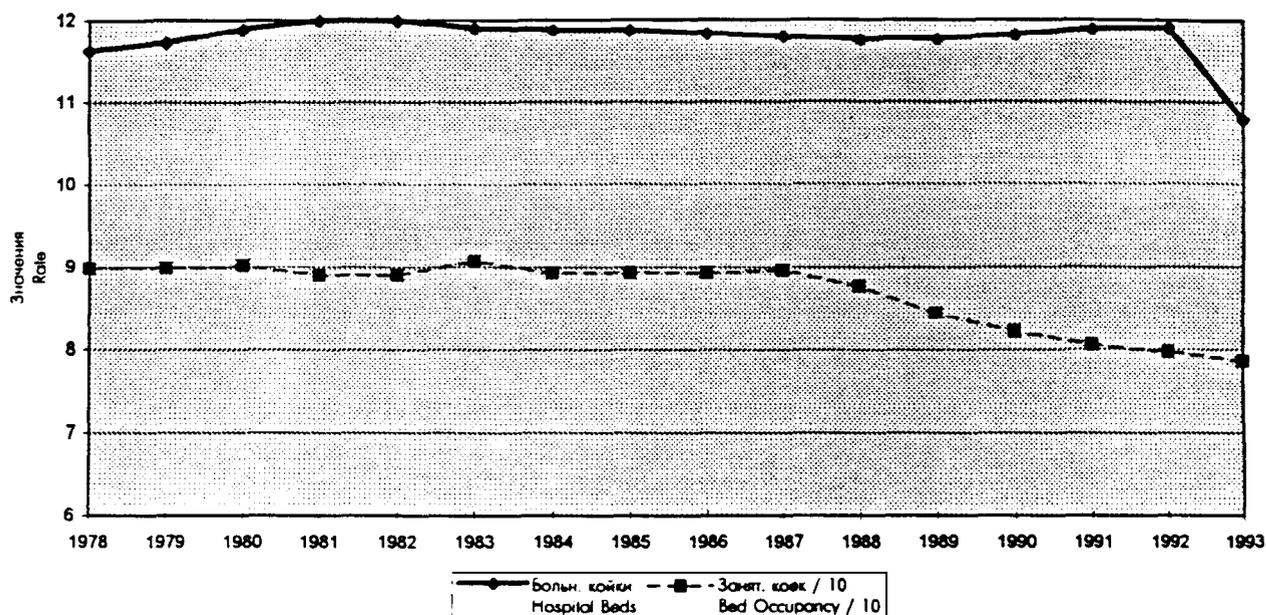
TRENDS IN HOSPITAL CAPACITY AND UTILIZATION

ОБЕСПЕЧЕННОСТЬ КОЙКАМИ И ЗАНЯТОСТЬ КОЕК

BED CAPACITY AND BED OCCUPANCY RATE

Кыргызстан : 1978 - 1993

Kyrgyzstan: 1978 - 1993

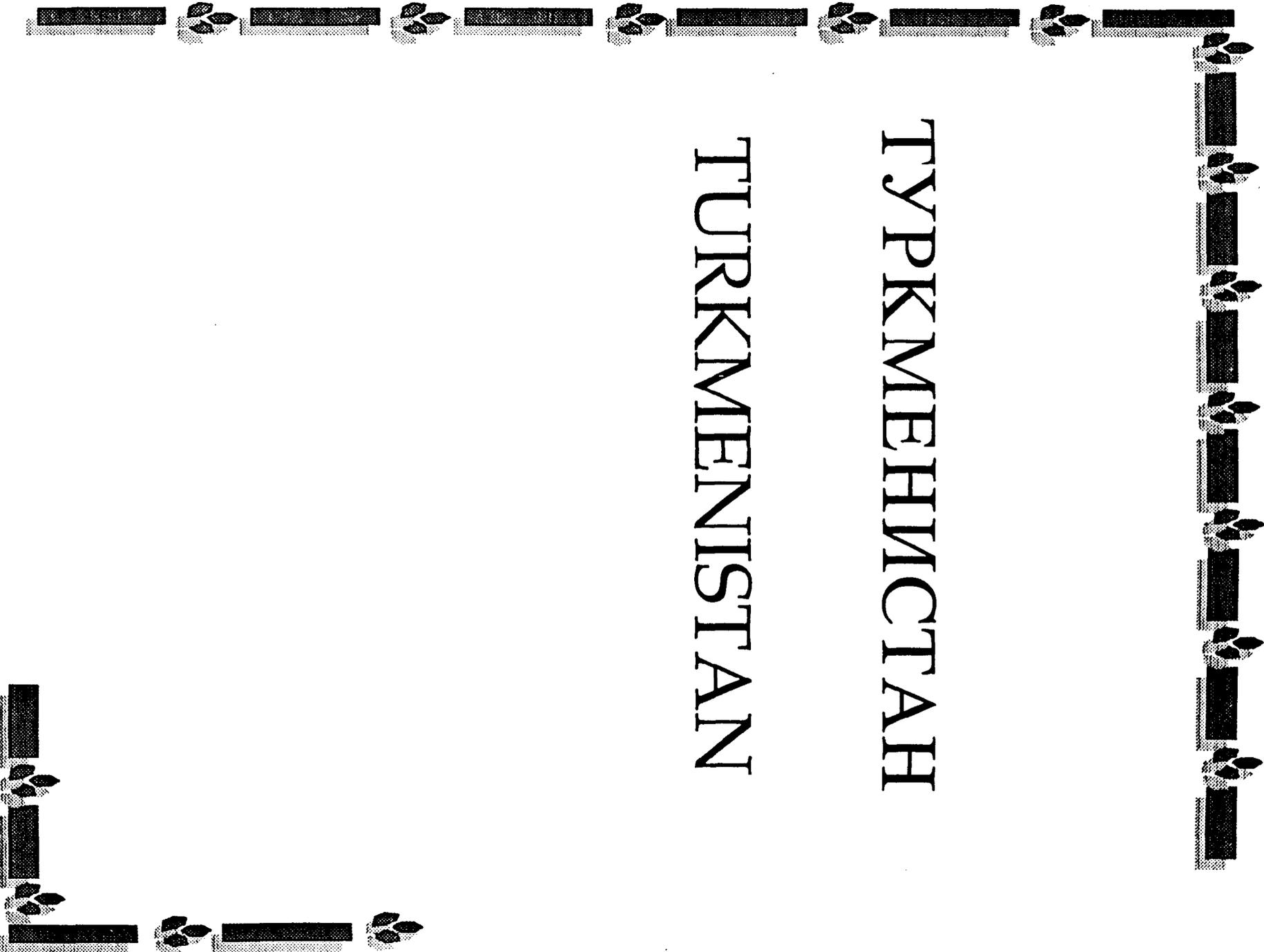


	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Больн. койки Hospital Beds	11.6	11.7	11.9	12.0	12.0	11.9	11.9	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	10.8
Занят. коек / 10 Bed Occupancy / 10	9.0	9.0	9.0	8.9	8.9	9.1	8.9	8.9	8.9	9.0	8.8	8.4	8.2	8.1	8.0	7.9

замечания: Больничные койки - число коек/1000 населения
Занят. коек- % времени в год, в которое койка занята пациентами

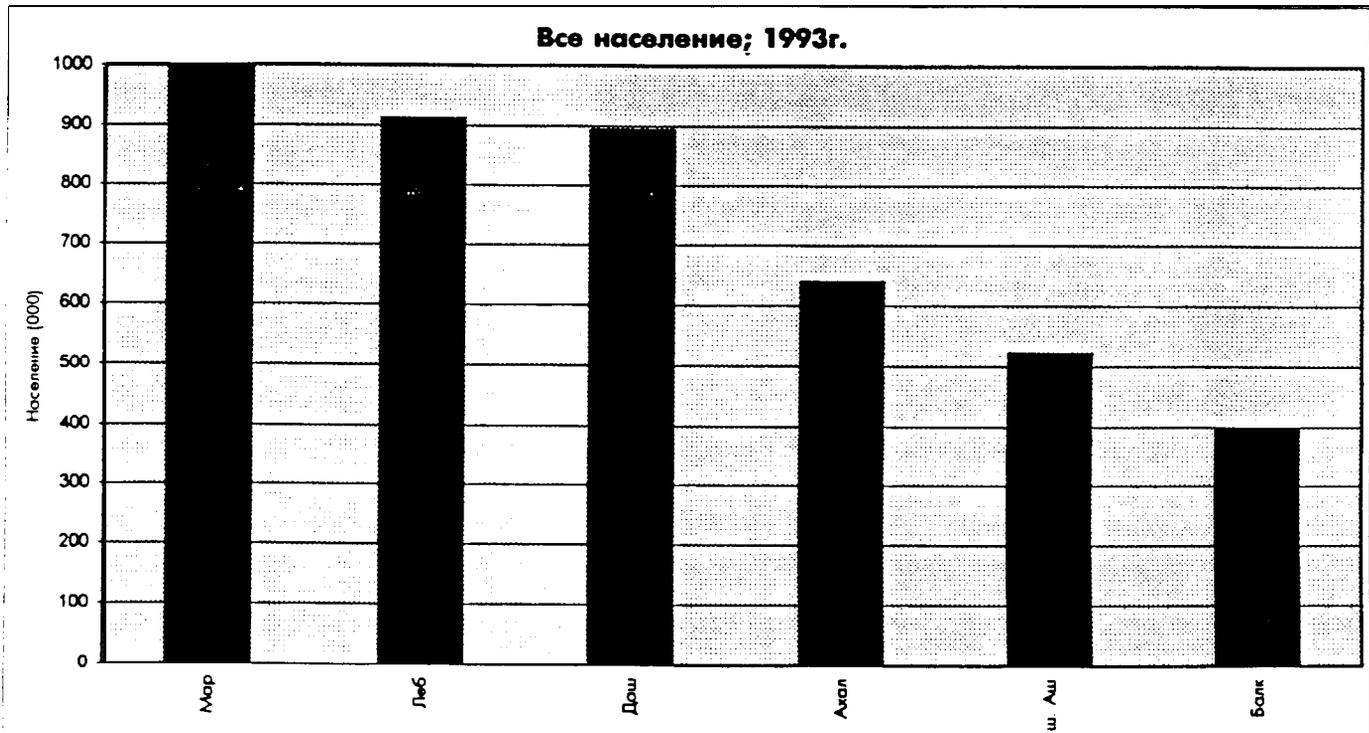
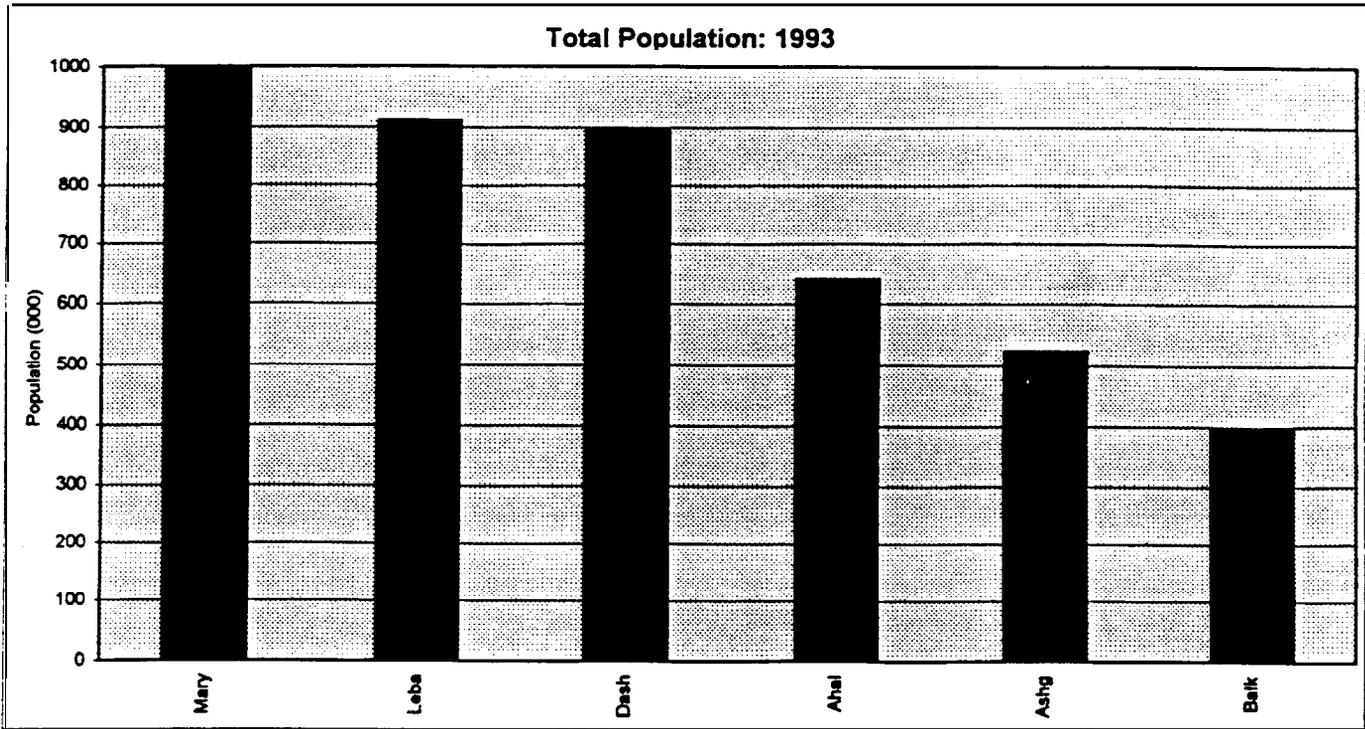
notes: Hospital Beds - beds / 1000 population
Bed Occupancy - days bed occupied in year / 365

Все данные из годовых отчетов Минздрава Кыргызстана 1978-1993
All data from Annual Reports of Kyrgyzstan Ministry of Health, 1978-1993



ТУРКМЕНИСТАН
TURKMENISTAN

Туркменистан: Население; 1993г.
Turkmenistan: Population 1993



Показатели смертности и рождаемости в 1993
1993 Outcomes

	Рождаемость на 1000 Crude Birth Rate					Смертность на 1000 Crude Death Rate					Млад.смертность Infant Mortality Rate				
	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank	Изменение в % % Change			1993 Знач. Rate	Ранг Rank
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993		
Туркменистан - всего Turkmenistan - total	-4%	-6%	-8%	33.1		-2%	-6%	1%	7.9		-21%	-14%	-14%	45.9	
ш. Ашгабад Ashgabat Municipality	-6%	-3%	-13%	21.9	6	14%	1%	21%	8.2	1	-2%	-4%	-21%	44.8	3
Ахалский Ahalsky	-3%	-6%	10%	35.3	3	-4%	0%	12%	7.4	6	-23%	-7%	0%	44.6	4
Балканский Balkansky	-16%	-12%	-8%	26.1	5	-1%	-3%	8%	7.8	4	-43%	-37%	-19%	36.1	6
Дашховузский Dashkhovuzsky	-8%	-12%	-10%	36.0	1	1%	-7%	-4%	8.0	3	-10%	2%	-21%	52.1	1
Лебапский Lebapsky	0%	-4%	-7%	34.9	4	-5%	-9%	-4%	7.8	4	-33%	-23%	-20%	40.5	5
Марыйский Marvisky	-1%	-2%	-5%	35.7	2	-6%	-13%	4%	8.1	2	-12%	-15%	-7%	49.8	2

замечания: Младенческая смертность (МС)-число смертных случ. детей до 1г
на 1000, рожденных живыми

Рождаемость (Р) — число родившихся на 1000 населения

Смертность (С) — число смерт. случаев на 1000 населения

notes: Crude Birth Rate - births / 1000 population

Crude Death Rate - deaths / 1000 population

Infant Mortality Rate - deaths under 1 year / 1000 live births

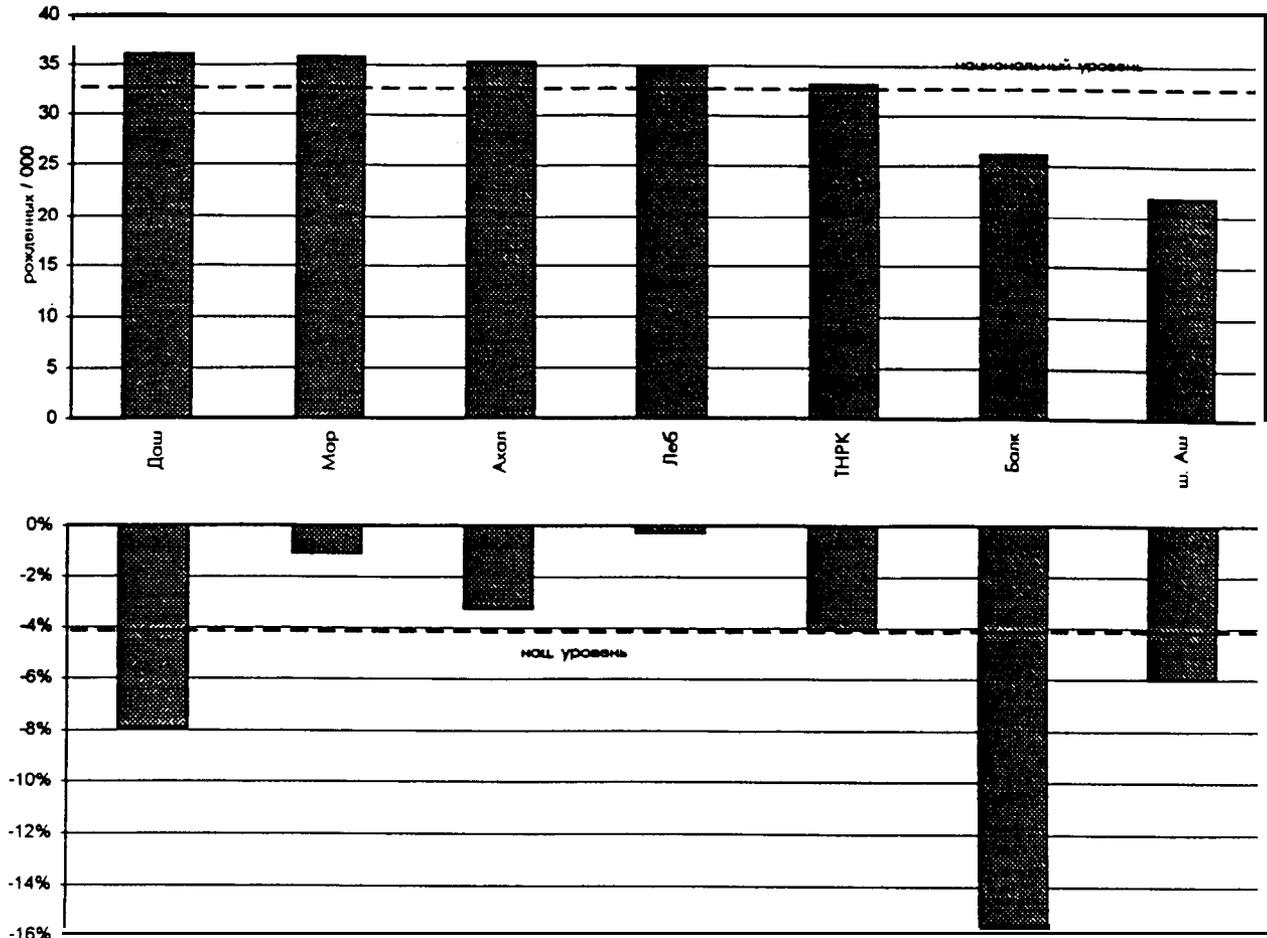
Все данные из годовых отчетов Минздрава Туркменистана 1978-1993

All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

Показатели смерт. и рожд.: Табл. 2.1
Outcomes: Table 2.1

Рождаемость; Туркменистан

1993, по валаям

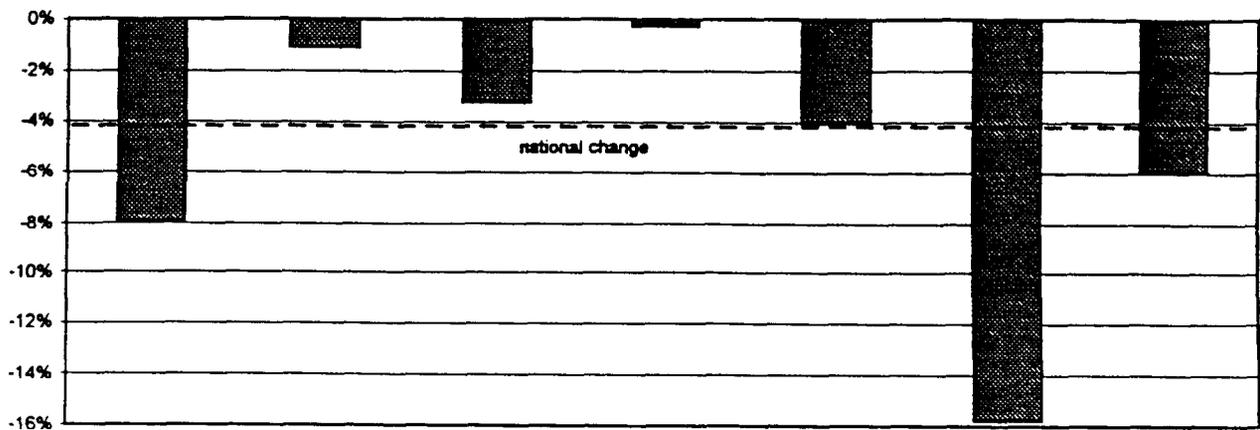
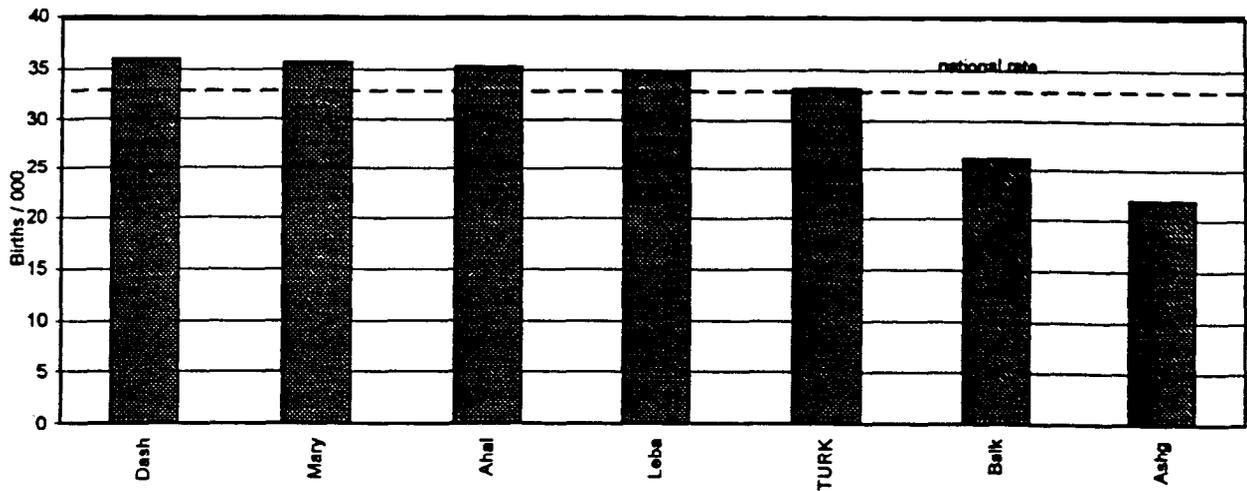


ИЗМЕНЕНИЕ РОЖДАЕМОСТИ В %; 1978 - 1993

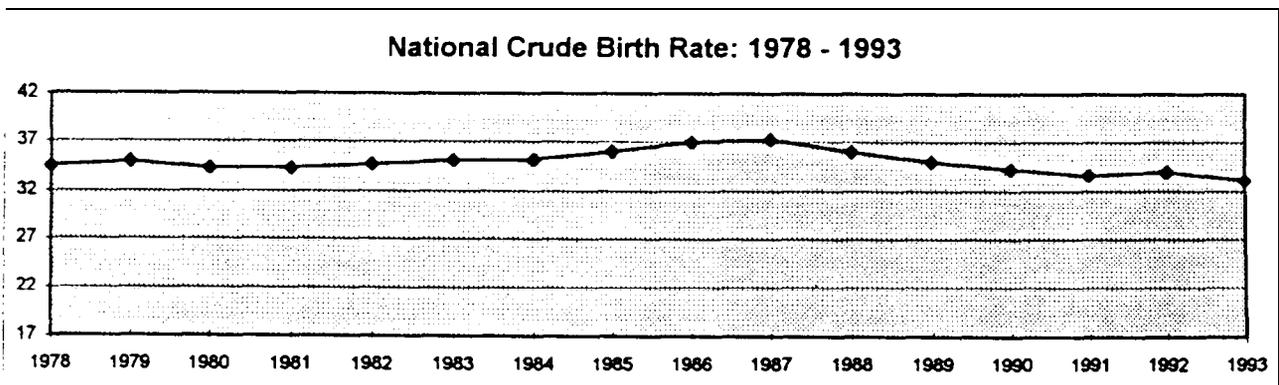


CRUDE BIRTH RATES: TURKMENISTAN

1993, by Velayat



% Change in Birth Rates: 1978 - 1993

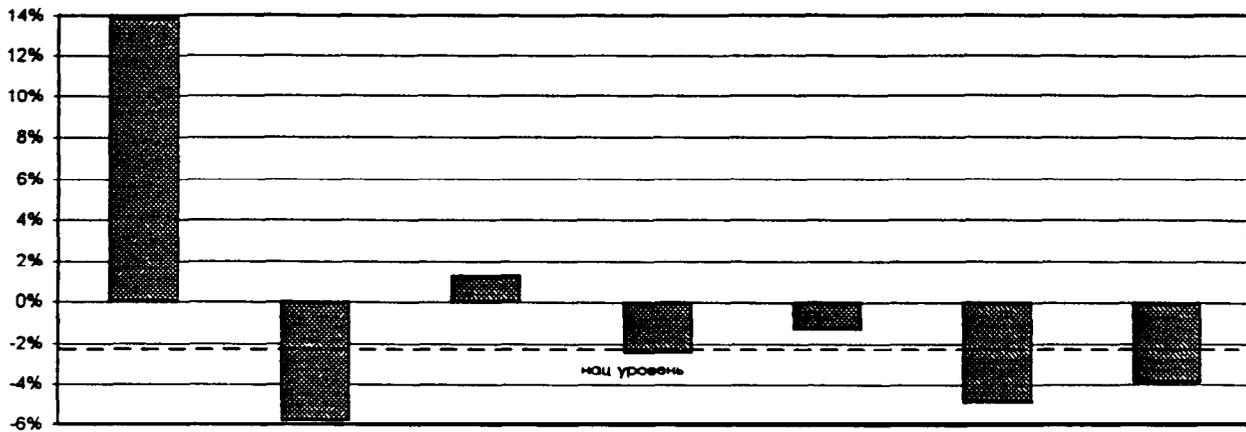
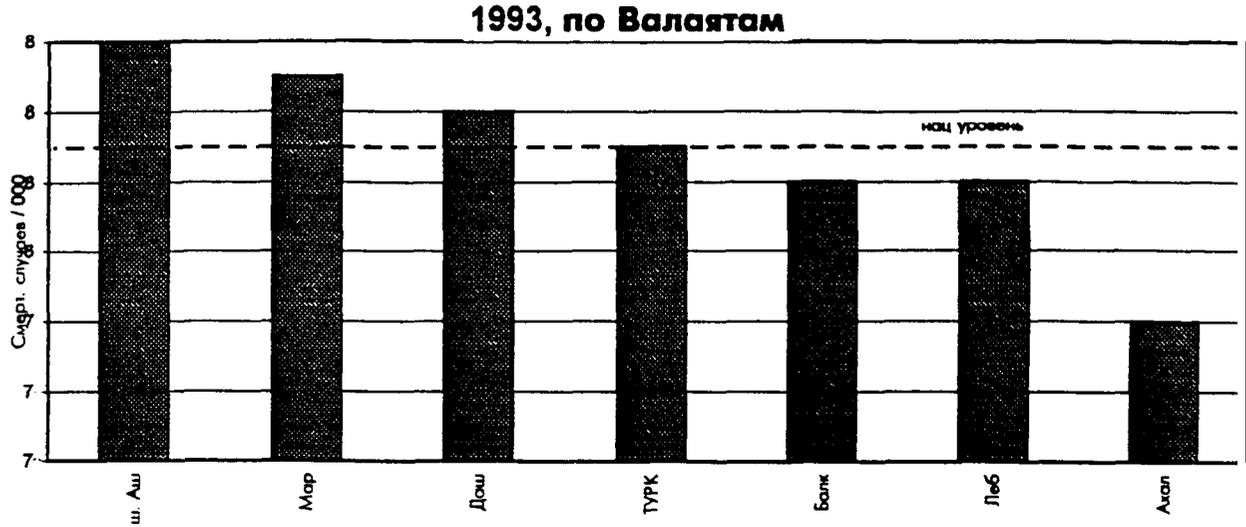


Рождаемость на 1000 населения: 1978 - 1993
Crude Birth Rate: 1978 - 1993
 (births / 1000 population)

	Изменение % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Туркменистан - всего Turkmenistan - total	-4%	-6%	-8%	33.1	34.0	33.6	34.2	35.0	36.0	37.2	36.9	36.0	35.2	35.1	34.7	34.3	34.3	34.9	34.5	
ш. Ашгабад Ashgabat Municipality	-6%	-3%	-13%	21.9	22.0	22.6	22.7	23.1	25.1	27.3	23.0	21.8	23.6	22.5	23.6	22.3	22.5	22.5	23.3	
Ахалский Ahalsky	-3%	-6%	10%	35.3	36.6	37.0	37.1	34.3	32.0	35.1	35.7	38.4	36.0	37.4	36.9	38.1	36.6	38.3	36.5	
Балканский Balkansky	-16%	-12%	-8%	26.1	26.0	26.2	26.3	27.0	28.3	29.6	30.3	30.6	29.5	29.7	30.7	30.4	29.0	30.8	31.0	
Дашховузский Dashkhovuzsky	-8%	-12%	-10%	36.0	37.3	37.3	37.1	38.0	39.8	40.4	41.8	40.4	40.4	40.8	39.3	38.0	38.9	40.8	39.1	
Лебапский Lebapsky	0%	-4%	-7%	34.9	35.5	34.2	36.4	36.8	37.6	39.6	37.7	37.7	36.8	36.2	35.5	33.9	34.5	35.0	35.0	
Марыйский Maryisky	-1%	-2%	-5%	35.7	36.9	36.9	36.3	37.2	37.6	38.6	38.5	38.6	37.2	36.6	36.1	36.9	37.1	36.1	36.1	

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

УРОВЕНЬ СМЕРТНОСТИ В ТУРКМЕНИСТАНЕ

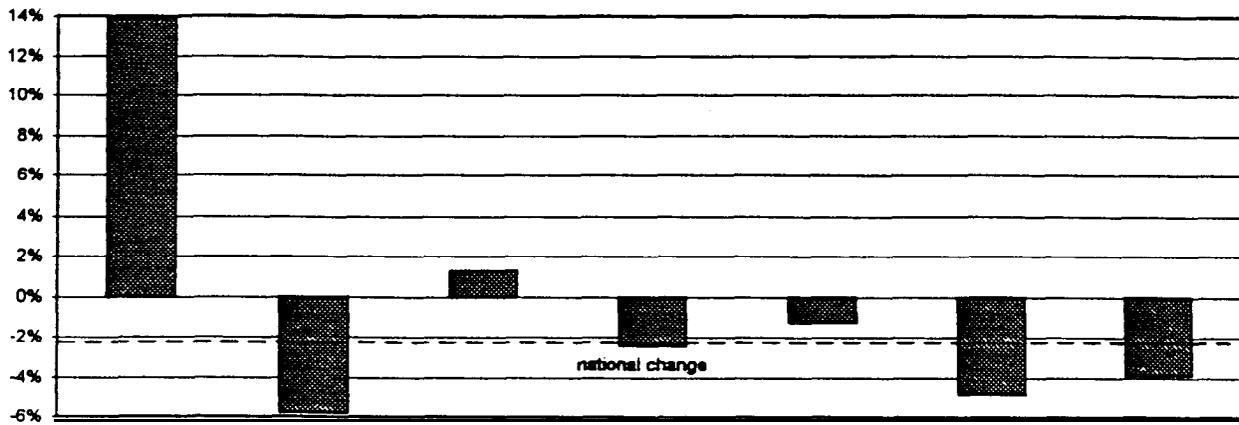
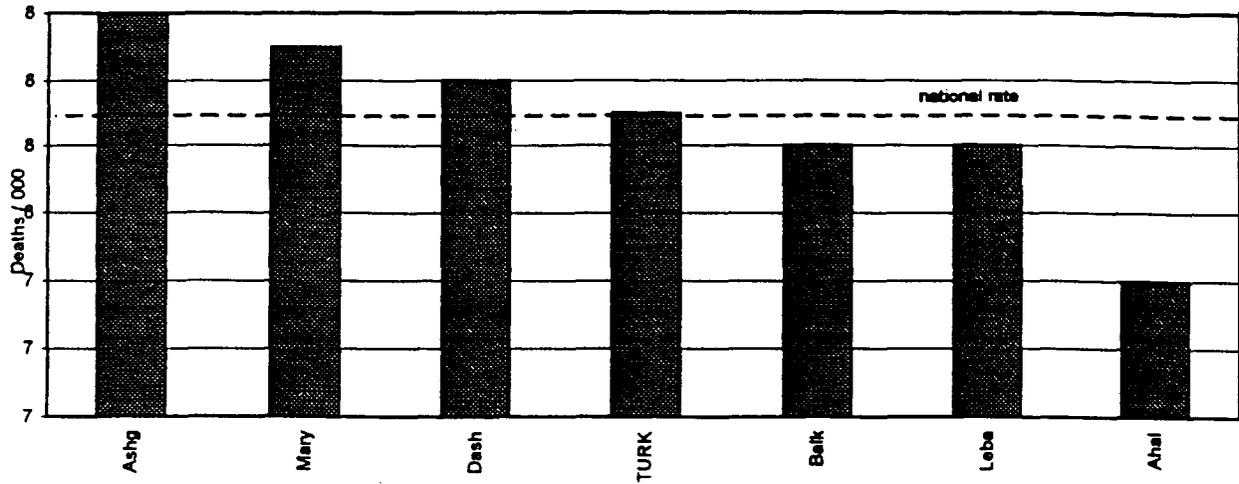


Изменение уровня смертности в %; 1978 - 1993

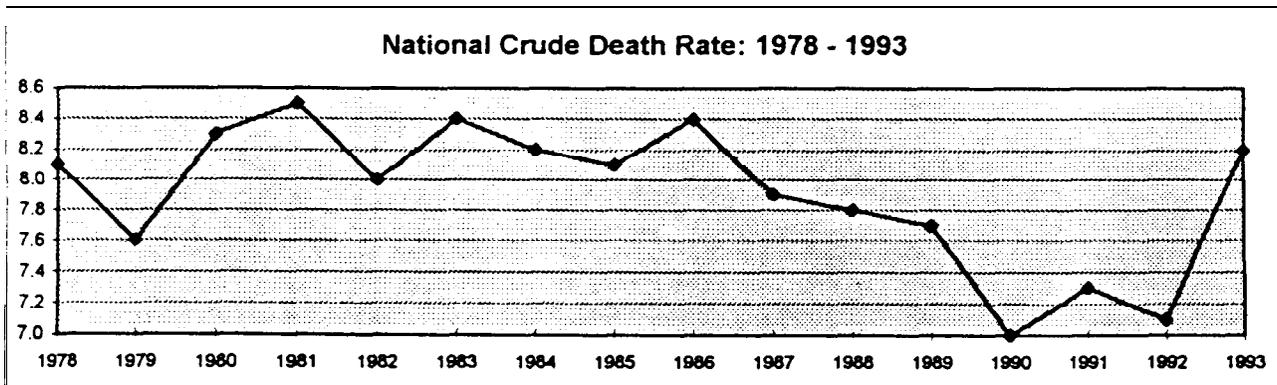


CRUDE DEATH RATES: TURKMENISTAN

1993, by Velayat



% Change in Death Rates: 1978 - 1993



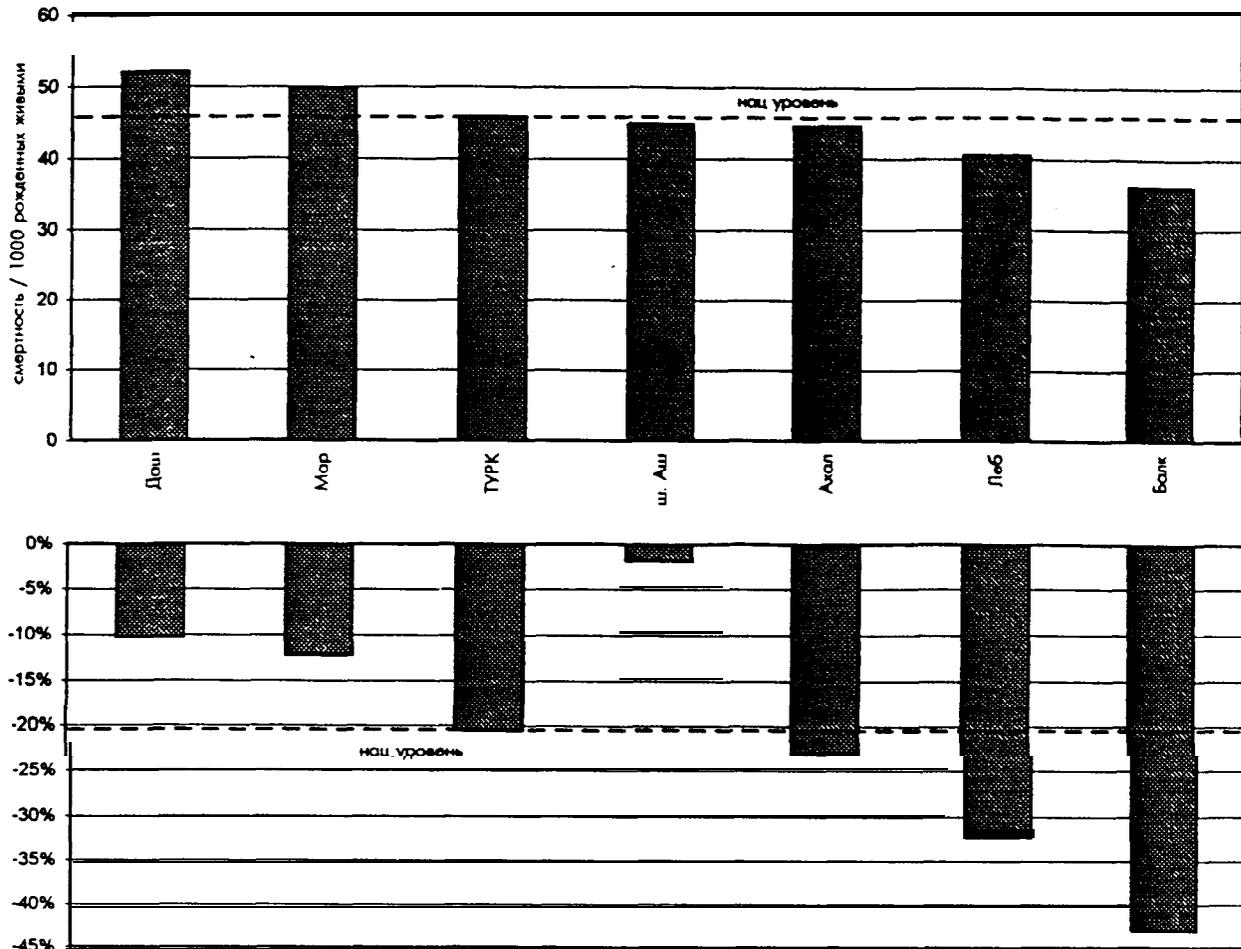
Смертность на 1000 чел. 1978 - 1993
Crude Death Rate: 1978 - 1993
 (deaths / 1000 population)

	Изменение % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Туркменистан - всего Turkmenistan - total	-2%	-6%	1%	7.9	7.1	7.3	7.0	7.7	7.8	7.9	8.4	8.1	8.2	8.4	8.0	8.5	8.3	7.6	8.1	
ш. Ашгабад Ashgabat Municipality	14%	1%	21%	8.2	7.1	7.1	6.8	7.1	6.8	6.9	7.5	6.7	7.4	8.1	7.3	7.6	7.8	7.2	7.2	
Ахалский Ahalsky	-4%	0%	12%	7.4	6.6	7.0	6.1	7.2	6.6	7.3	7.3	7.3	7.0	7.4	7.2	7.5	7.3	7.1	7.7	
Балканский Balkansky	-1%	-3%	8%	7.8	7.0	7.3	7.1	7.2	7.2	7.5	7.3	7.4	8.1	8.0	7.8	8.3	8.4	8.0	7.9	
Дашховузский Dashkhovuzsky	1%	-7%	-4%	8.0	7.5	7.7	7.4	8.2	8.3	9.1	9.9	9.2	8.5	8.6	8.1	9.4	8.7	8.2	7.9	
Лебапский Lebapsky	-5%	-9%	-4%	7.8	6.9	7.2	7.1	7.7	8.1	7.9	8.6	8.4	8.4	8.6	8.4	8.1	8.6	7.5	8.2	
Марыйский Maryisky	-6%	-13%	4%	8.1	7.2	7.4	7.2	8.2	7.8	8.0	8.4	8.3	8.8	9.3	8.5	9.2	8.7	8.2	8.6	

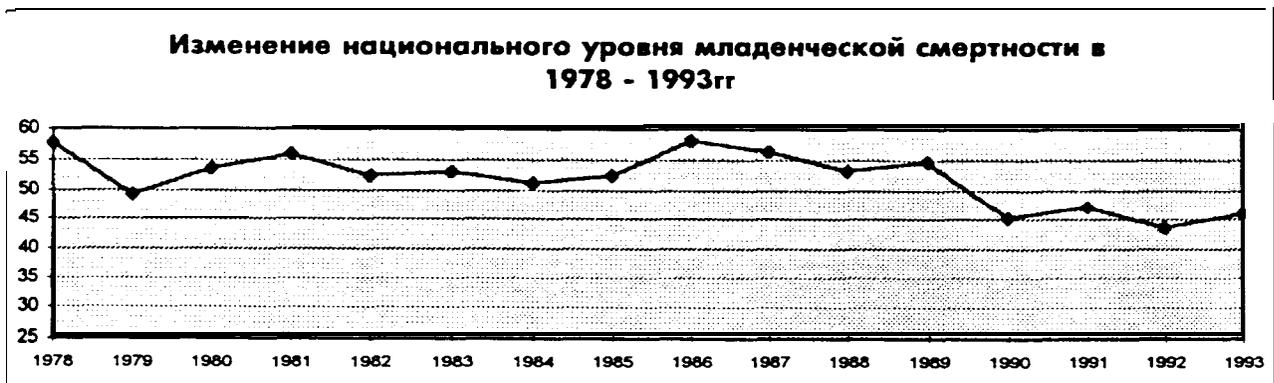
Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

УРОВЕНЬ МЛАДЕНЧЕСКОЙ СМЕРТНОСТИ В ТУРКМЕНИСТАНЕ

по Валаям в 1993г

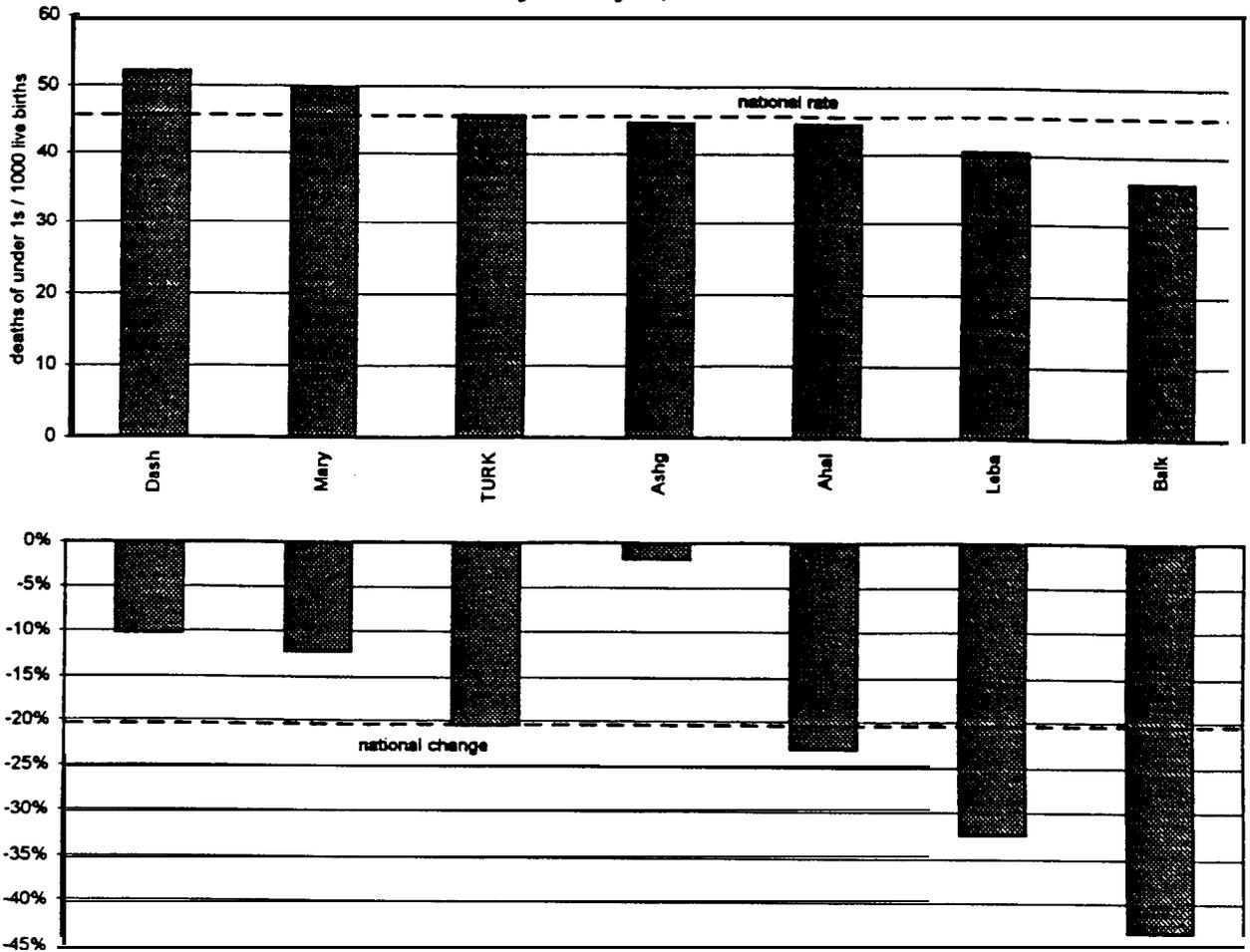


Изменения уровня МС в %; 1978 - 1993гг

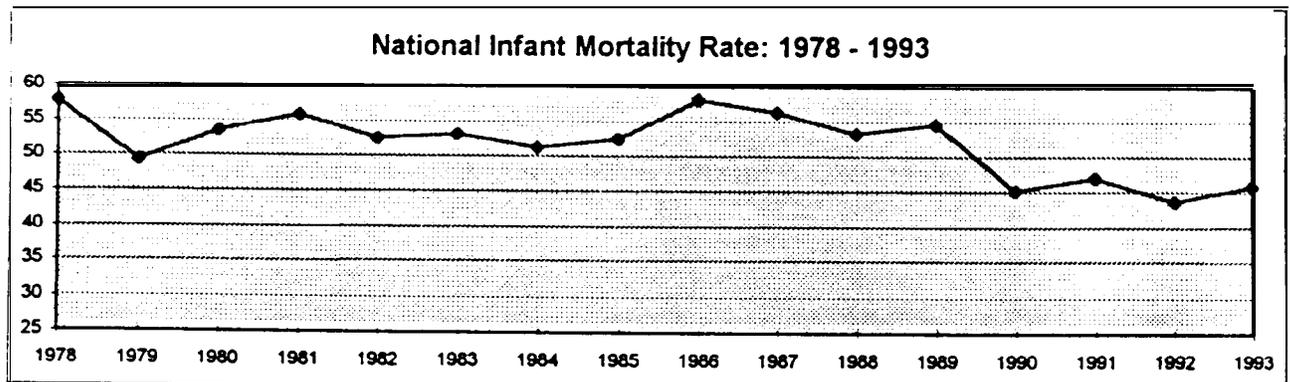


INFANT MORTALITY RATES: TURKMENISTAN

by Velayat, 1993



% Change in IMR: 1978 - 1993



Показатели смерт. и рожд.: Рис. 2.4
Outcomes: Chart 2.4

Младенческая смертность на 1000 рожденных живыми. 1978 - 1993
Infant Mortality Rate: 1978 - 1993
 (deaths of under 1s / 1000 live births)

	Изменение % % Change				1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993	1983 - 1988																
Туркменистан - всего Turkmenistan - total	-21%	-14%	-14%	0%	45.9	43.6	47.0	45.2	54.7	53.3	56.4	58.2	52.4	51.2	53.1	52.5	55.9	53.6	49.3	57.8
ш. Ашгабад Ashgabat Municipality	-2%	-4%	-21%	20%	44.8	34.2	35.6	34.8	44.8	56.5	48.9	55.9	35.9	38.1	46.9	42.4	41.6	48.9	45.1	45.7
Ахалский Ahalsky	-23%	-7%	0%	-7%	44.6	42.3	41.4	42.7	50.6	44.8	53.1	50.3	54.1	56.5	48.2	49.4	49.5	51.4	49.8	58.0
Балканский Balkansky	-43%	-37%	-19%	-23%	36.1	35.0	36.6	39.7	45.3	44.5	48.4	45.3	49.3	56.0	57.6	60.6	66.0	61.7	55.8	63.5
Дашховузский Dashkhovuzsky	-10%	2%	-21%	29%	52.1	52.6	57.7	55.6	66.1	65.6	75.2	76.3	59.2	49.0	51.0	51.2	63.0	52.9	50.9	58.1
Лебапский Lebapsky	-33%	-23%	-20%	-4%	40.5	38.7	44.8	40.8	47.6	50.5	50.2	49.1	48.7	48.1	52.7	56.5	52.9	56.4	56.7	60.0
Марыйский Maryisky	-12%	-15%	-7%	-9%	49.8	46.3	48.3	47.4	58.2	53.4	56.5	54.9	56.4	56.0	58.7	52.2	56.3	51.5	43.1	56.8

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

Показатели смерт. и рожд.: Табл. 2.4
 Outcomes: Table 2.4

ТЕНДЕНЦИИ РЕСУРСОВ ЗДРАВООХРАНЕНИЯ

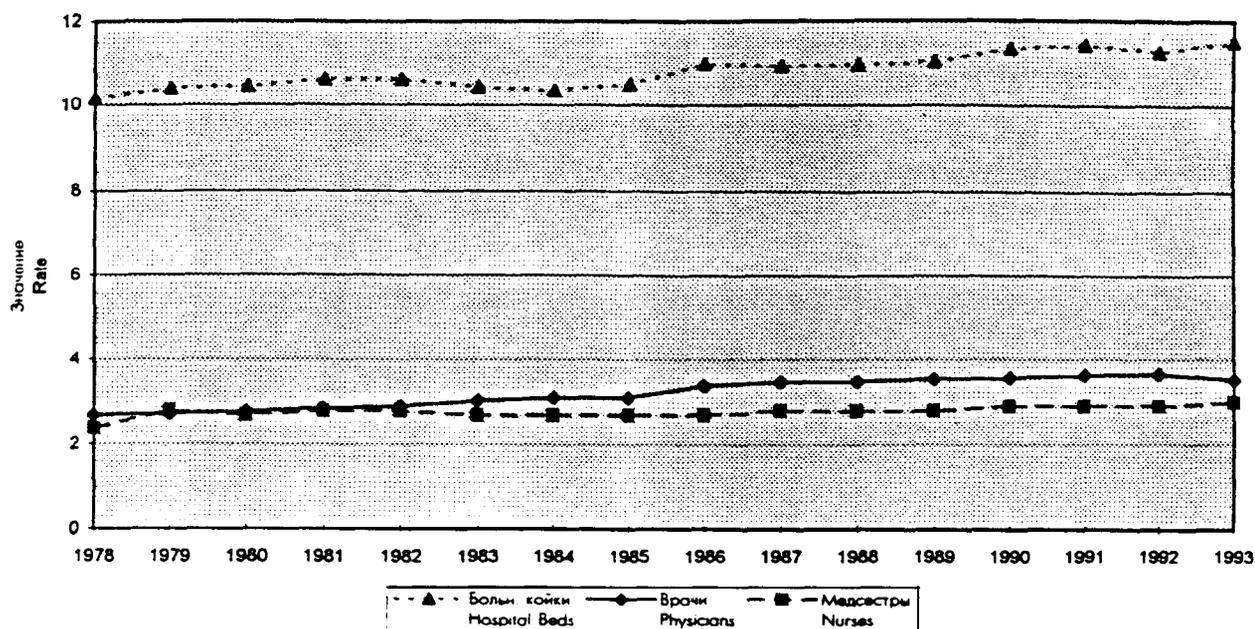
TRENDS IN INFRASTRUCTURE CAPACITY

ВРАЧИ, МЕДСЕСТРЫ И БОЛЬНИЧНЫЕ КОЙКИ

PHYSICIANS, NURSES, AND HOSPITAL BEDS

Туркменистан: 1978-1993 г.г.

Turkmenistan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Врачи Physicians	2.7	2.7	2.8	2.9	2.9	3.0	3.1	3.1	3.4	3.5	3.5	3.5	3.6	3.6	3.6	3.5
Медсестры Nurses	2.4	2.8	2.7	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0
Больн. койки Hospital Beds	10.2	10.4	10.5	10.6	10.6	10.4	10.4	10.5	11.0	10.9	11.0	11.0	11.3	11.4	11.3	11.5

замечания: Врачи - врачи/1000 населения

Медсестры - число медсестер/число врачей

Больничные койки - число коек/1000 населения

notes: Physicians - physicians / 1000 population

Nurses - nurses / physician

Hospital Beds - beds / 1000 population

Все данные взяты из Годовых Отчетов Министерства Здравоохранения Туркменистана за 1978-1993г.г.
All data from Annual Reports of Turkmenistan Ministry of Health, 1978 - 1993

**Ресурсы Инфраструктуры; 1993г
1993 Infrastructure Capacity**

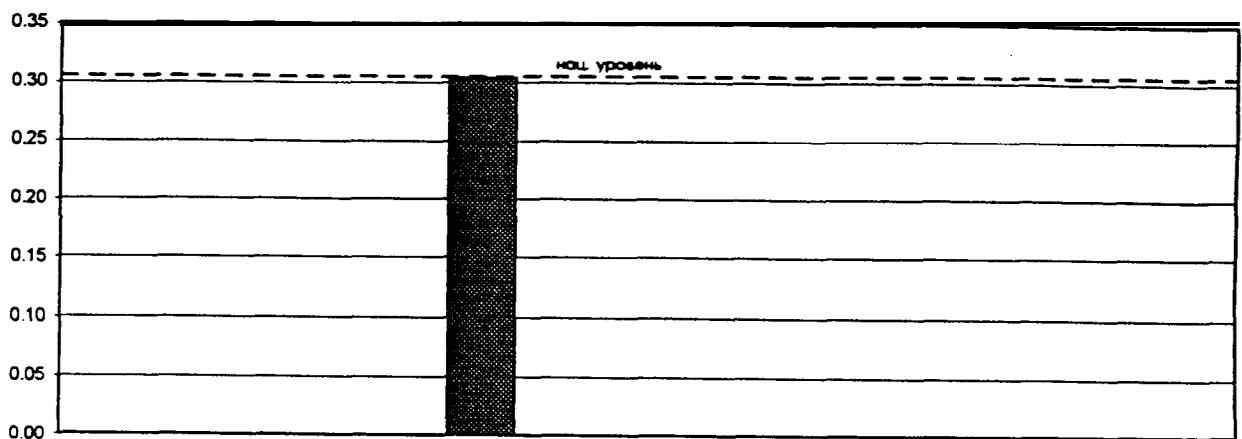
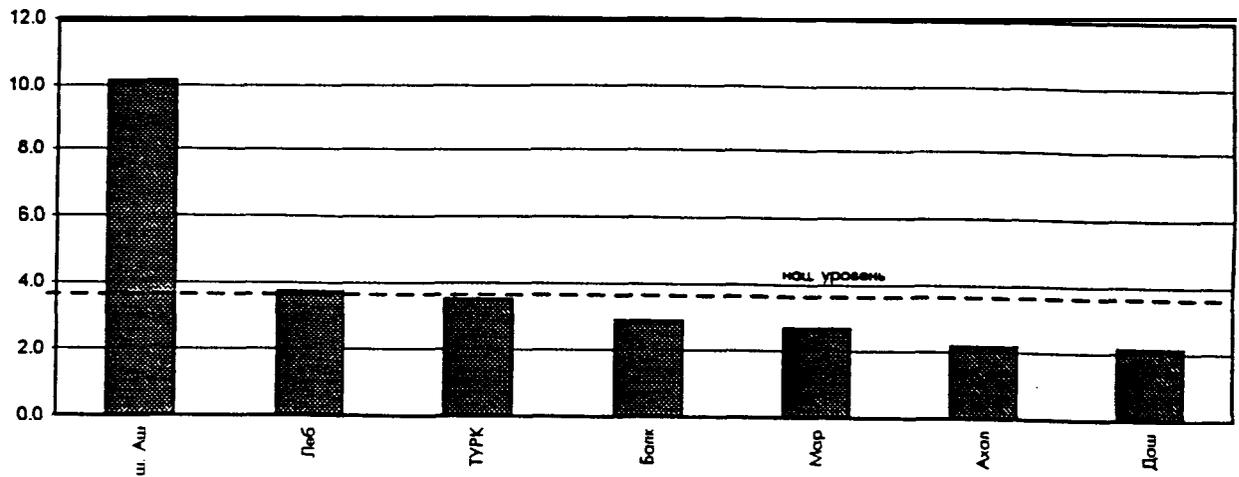
	Число врачей/1000 населения Physicians / 1000 population					Кол. медсестер на одного врача Ratio nurses to physicians					Число больн. коек/1000 населения Hospital beds / 1000 population				
	Изменение в % % Change			Знач. Ratio	Ранг Rank	Изменение в % % Change			Знач. Ratio	Ранг Rank	Изменение в % % Change			Знач. Ratio	Ранг Rank
	1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993			1978 - 1993	1983 - 1993	1988 - 1993		
Туркменистан - всего Turkmenistan - total	30%	16%	1%	3.5		25%	11%	7%	3.0		13%	10%	5%	11.5	
ш. Ашгабад Ashgabat Municipality	#DIV/0!	#####	8%	10.1	1	18%	0%	-7%	1.3	6	#####	#DIV/0!	#####	17.6	1
Ахалский Ahalsky	#DIV/0!	#####	-15%	2.2	5	236%	28%	16%	3.7	3	#####	#DIV/0!	#####	9.1	5
Балканский Balkansky	#DIV/0!	#####	14%	2.9	3	27%	9%	19%	3.8	2	#####	#DIV/0!	#####	13.6	2
Дашховузский Dashkhovuzsky	#DIV/0!	#####	-4%	2.1	6	11%	11%	14%	4.9	1	#####	#DIV/0!	#####	6.8	6
Лебяпский Lebapsky	#DIV/0!	#####	5%	3.7	2	10%	0%	-9%	3.2	5	#####	#DIV/0!	#####	11.7	3
Марыйский Maryisky	#DIV/0!	#####	0%	2.7	4	32%	9%	9%	3.7	3	#####	#DIV/0!	#####	10.9	4

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

Инфраструктура: Табл. 5.1
Infrastructure: Table 5.1

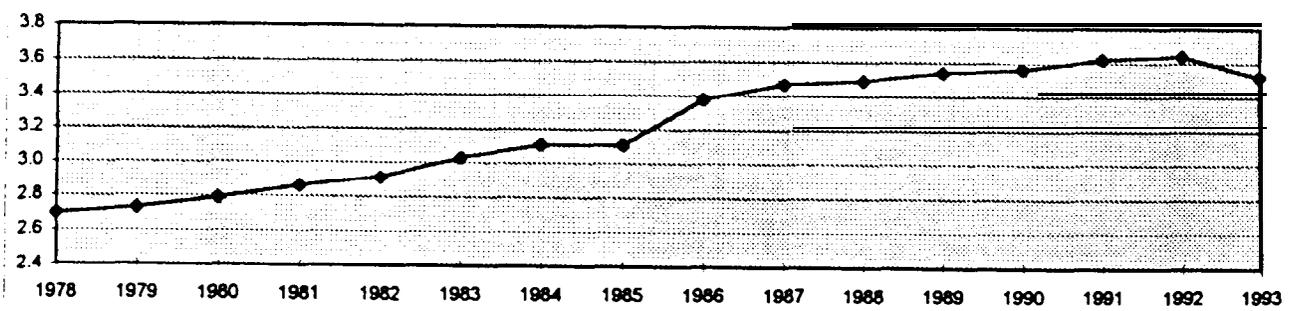
ЧИСЛО ВРАЧЕЙ НА 1000 НАСЕЛЕНИЯ

1993, по Велаятам



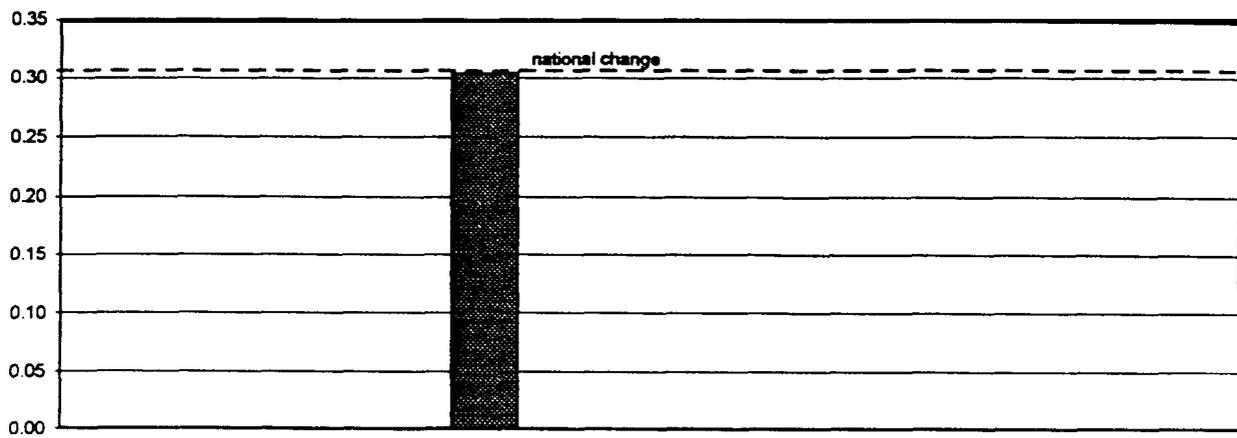
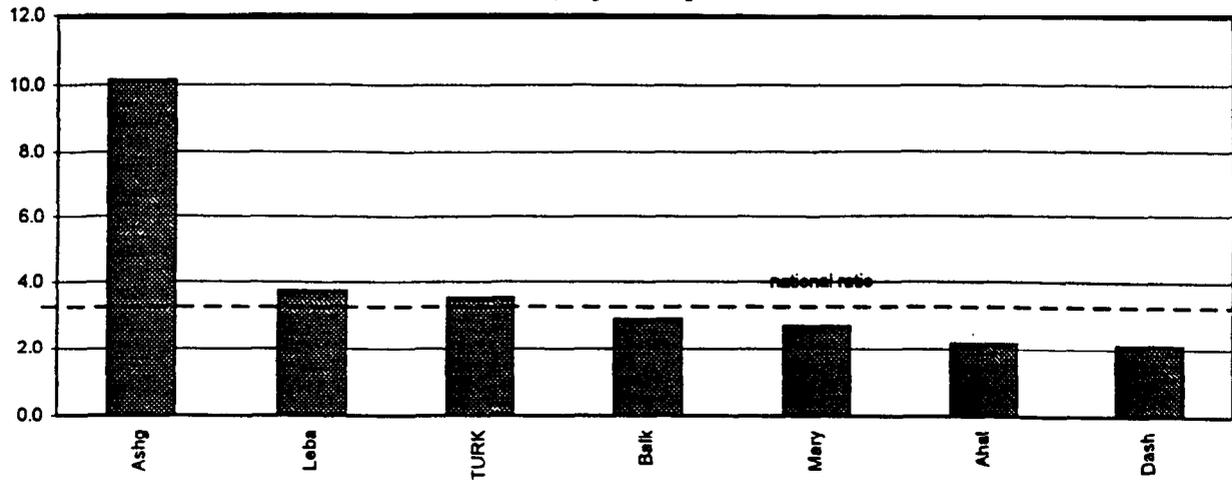
Изменение уровня за период 1978 - 1993г.г. в %

Тенденции по стране; 1978 - 1993г.г.

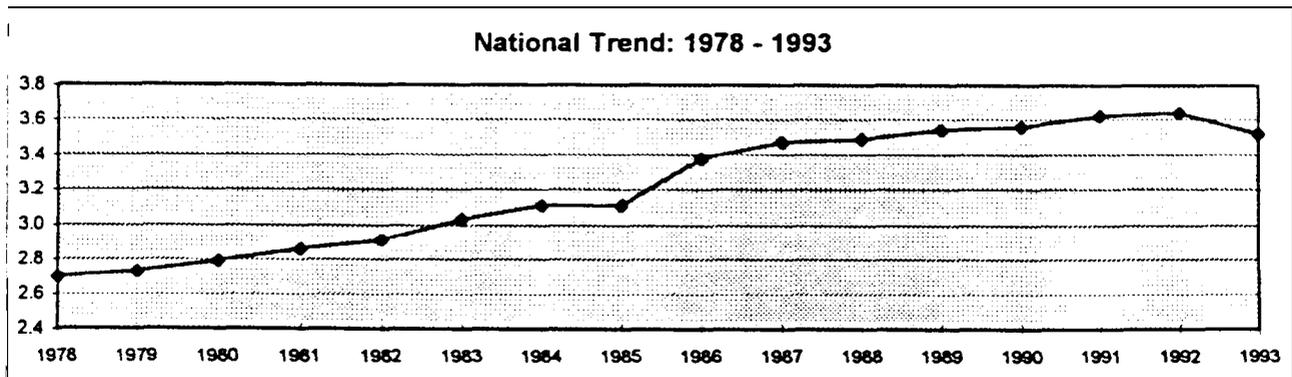


PHYSICIANS / 1000 POPULATION

1993, by Velayat



% Change in Ratio: 1978 - 1993



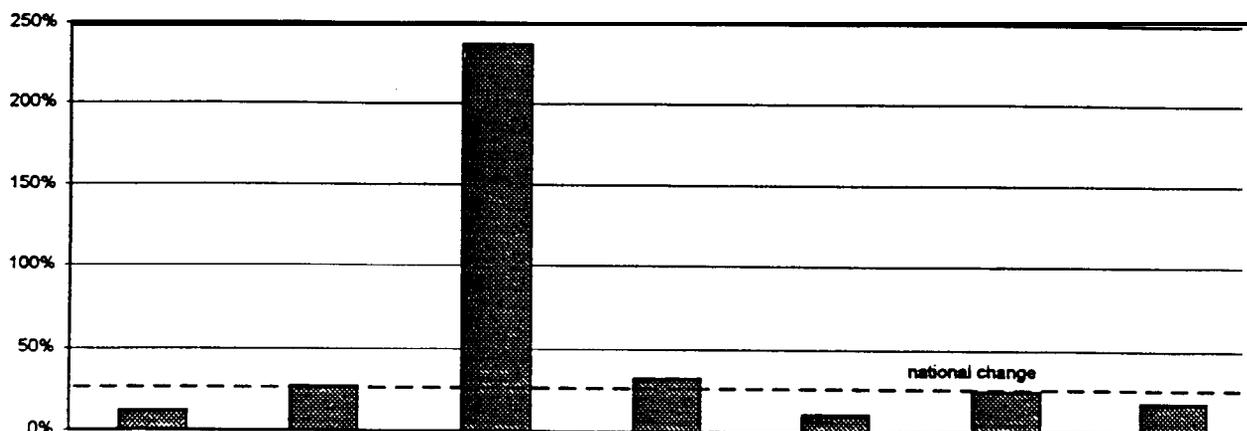
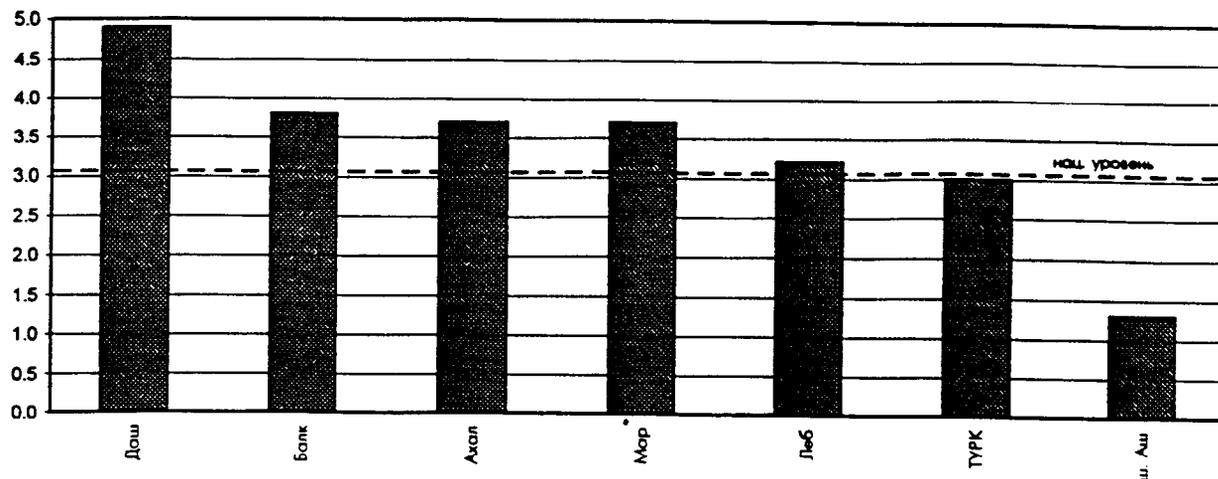
Врачи; 1978-1993г.г.
(число врачей/1000 населения)
Physicians: 1978-1993
(physicians / 1000 population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	197
	1978 - 1983 - 1988 - 1993	1983	1993																
Туркменистан - всего Turkmenistan - total	30%	16%	1%	3.5	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.3	3.1	3.0	2.9	2.9	2.8	2.7	2
ш. Ашгабад Ashgabat Municipality	####	####	8%	10.1	8.4	10.3	9.6	9.5	9.4	9.4	9.3	9.2	9.0						
Ахалский Ahalsky	####	####	-15%	2.2	2.0	2.1	2.0	2.1	2.5	2.3	2.2	2.1	2.0						
Балканский Balkansky	####	####	14%	2.9	2.9	3.0	3.2	3.2	2.5	2.9	2.9	2.8	2.7						
Дашховузский Dashkhovuzsky	####	####	-4%	2.1	1.9	2.2	2.2	2.2	2.2	2.1	2.1	2.0	1.9						
Лебапский Lebapsky	####	####	5%	3.7	3.4	3.8	3.9	3.7	3.6	3.5	3.4	3.2	3.0						
Марыйский Maryisky	####	####	0%	2.7	2.9	3.0	2.8	2.7	2.7	2.7	2.5	2.4	2.3						

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

Число сред. медперсонала/Число врачей

1993, по Велаятам

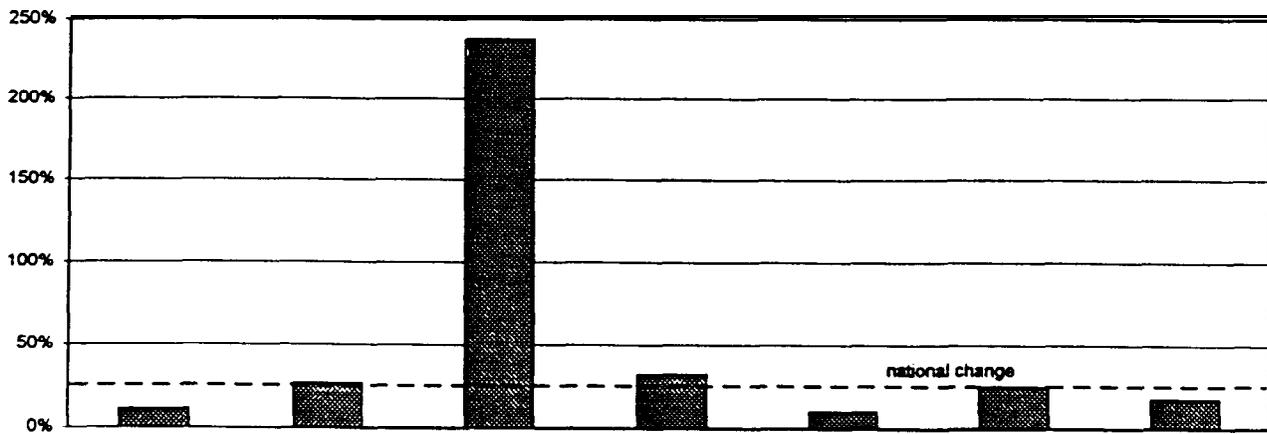
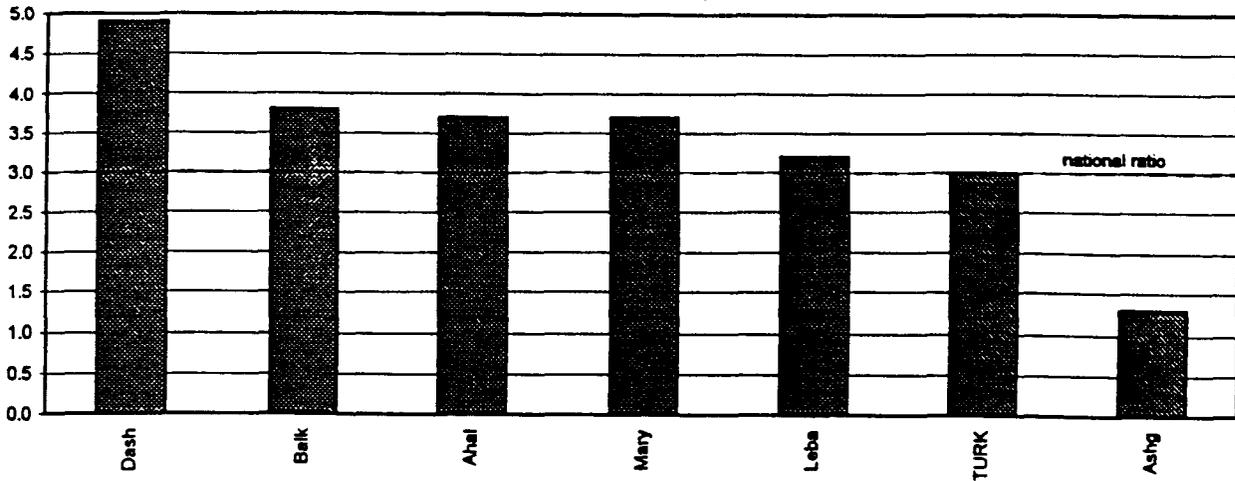


% изменения уровня за 1978 - 1993г.г.

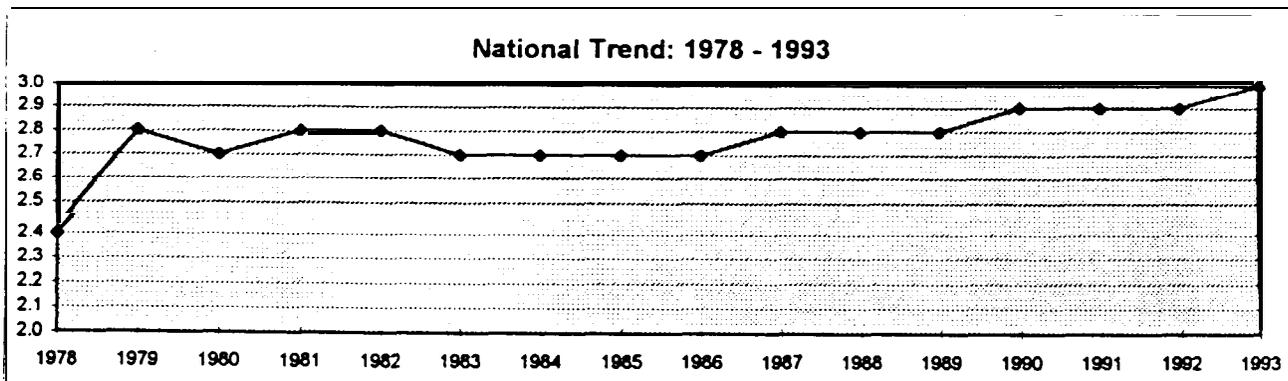


NURSES / PHYSICIAN

1993, by Velayat



% Change in Ratio: 1978 - 1993



Средний мед. персонал; 1978-1993
(число медсестер/число врачей)

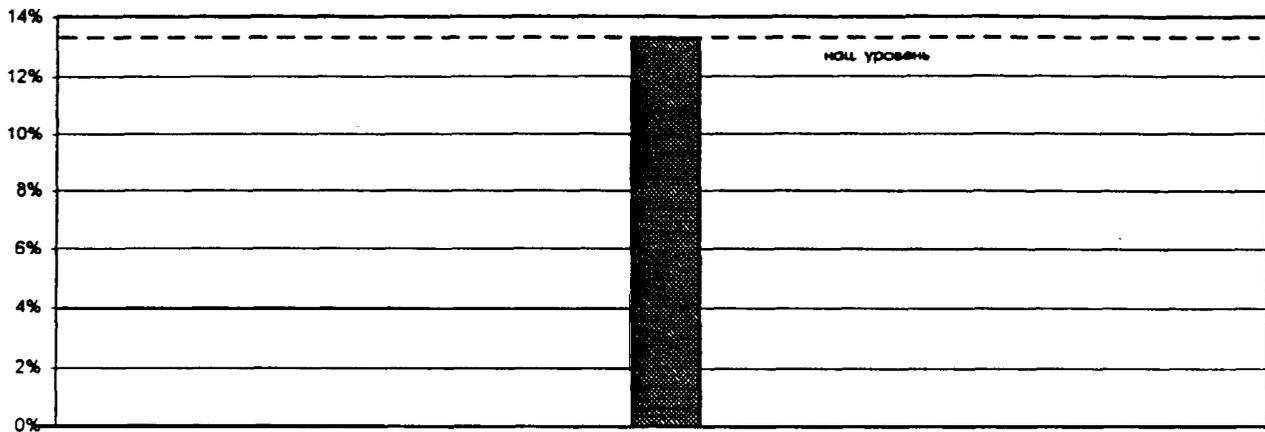
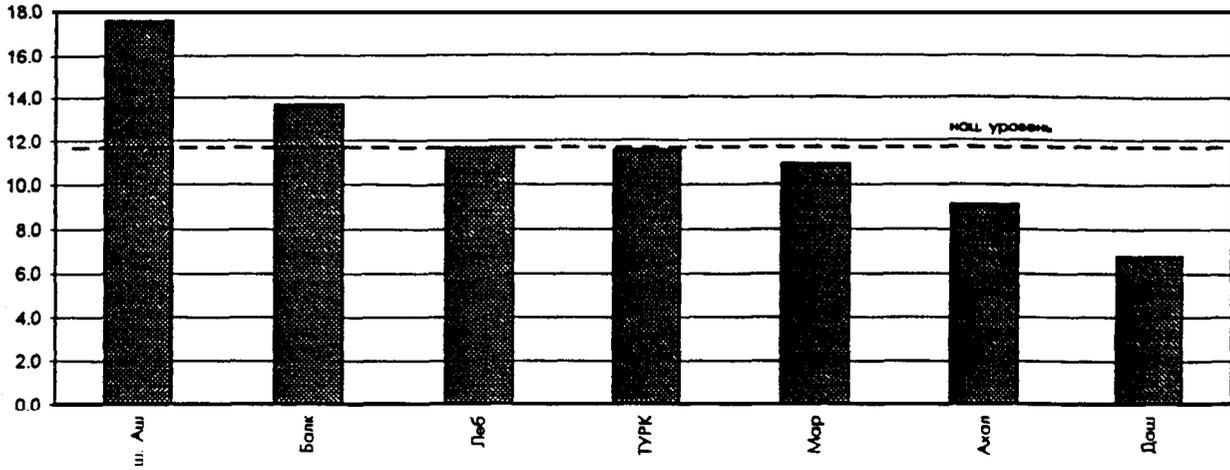
Nurses: 1978-1993
(nurses / physician)

	Изменение в % % Change																			
	1978 - 1993	1983 - 1993	1988 - 1993	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	
Туркменистан - всего Turkmenistan - total	25%	11%	7%	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.8	2.7	2.8	2.4	
ш. Ашгабад Ashgabat Municipality	18%	0%	-7%	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.1	
Ахалский Ahalsky	236%	28%	16%	3.7	4.0	3.6	3.4	3.4	3.2	3.0	2.8	2.3	3.0	2.9	2.8	2.7	3.1	3.5	1.1	
Балканский Balkansky	27%	9%	19%	3.8	3.7	3.9	3.6	4.0	3.2	3.7	3.7	3.7	3.6	3.5	3.4	3.6	3.5	3.5	3.0	
Дашховузский Dashkhovuzsky	11%	11%	14%	4.9	5.2	5.1	4.6	5.6	4.3	4.5	4.3	3.4	4.4	4.4	4.5	4.5	4.6	4.4	4.4	
Лебапский Lebapsky	10%	0%	-9%	3.2	3.3	3.2	3.2	3.3	3.5	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.1	3.2	2.9	
Марыйский Maryisky	32%	9%	9%	3.7	3.7	3.6	3.6	3.6	3.4	3.5	3.4	3.2	3.3	3.4	3.5	3.5	3.3	3.3	2.8	

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

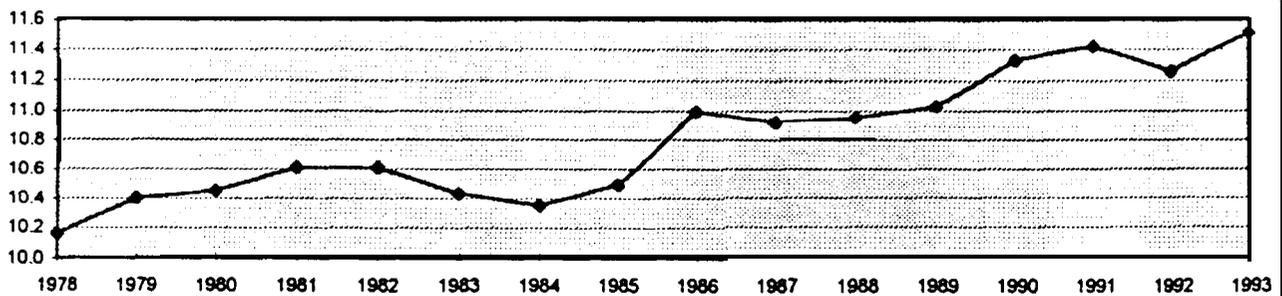
ЧИСЛО БОЛЬНИЧНЫХ КОЕК / 1000 НАСЕЛЕНИЯ

1993, по Велаятам



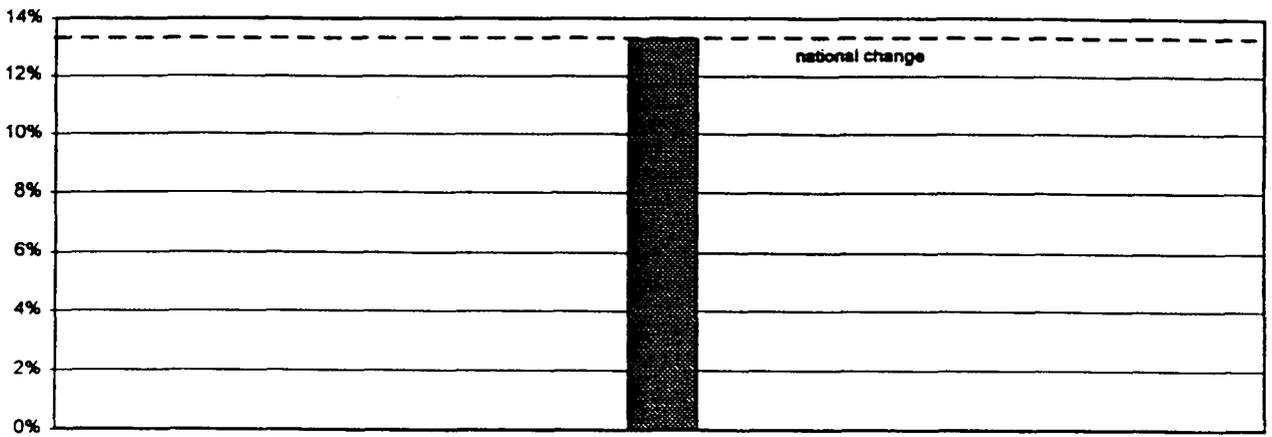
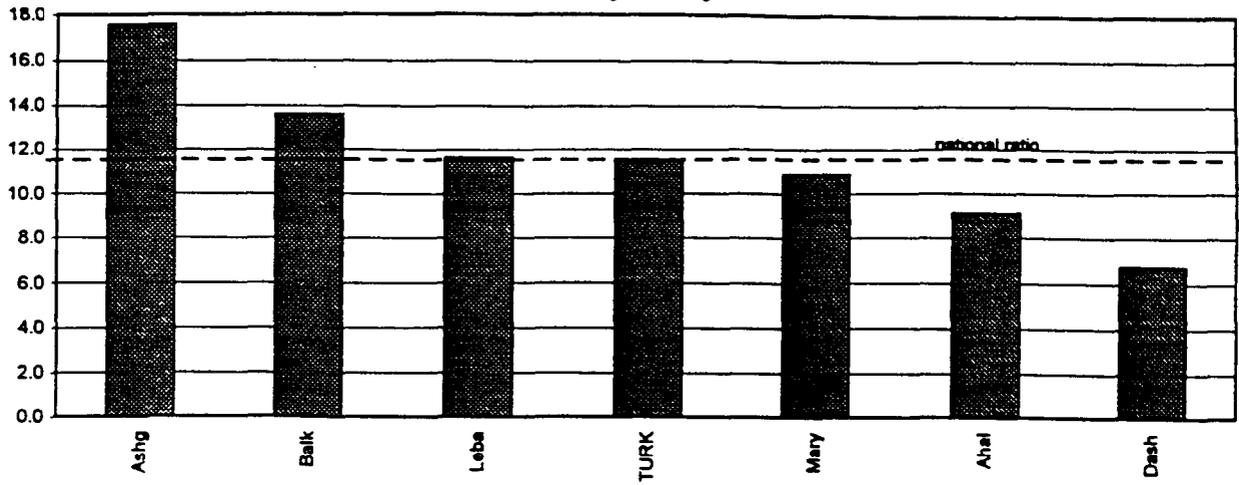
Изменение уровня за 1978 - 1993г.г. в %

Тенденции по стране за 1978 - 1993г.г.

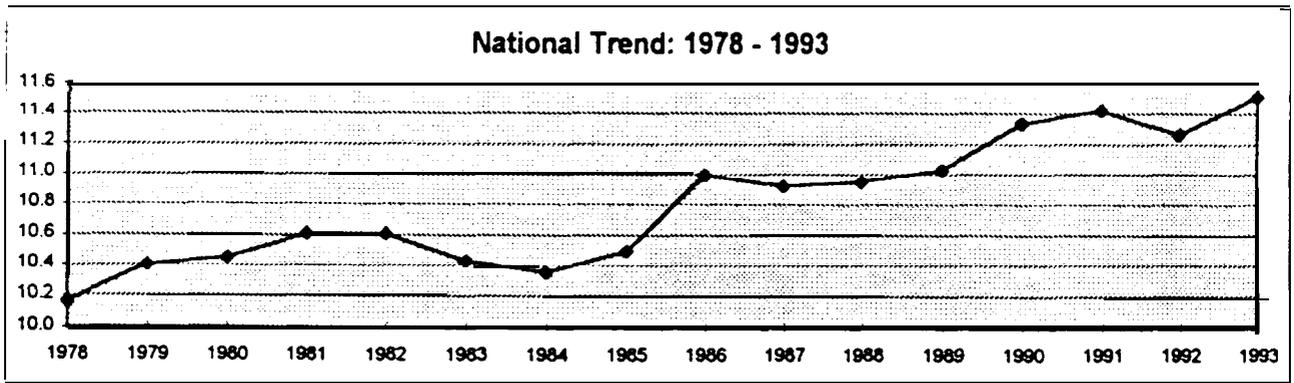


HOSPITAL BEDS / 1000 POPULATION

1993, by Velayat



% Change in Ratio: 1978 - 1993



Больничные койки; 1978-1993г.г.
(число коек/1000 населения)
Hospital Beds: 1978-1993
(beds / 1000 population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
Туркменистан - всего Turkmenistan - total	13%	10%	5%	11.5	11.3	11.4	11.3	11.0	11.0	10.9	11.0	10.5	10.4	10.4	10.6	10.6	10.5	10.4	10.3
ш. Ашгабад Ashgabat Municipality	#DIV/0!	#DIV/0!	#####	17.6	16.2														
Ахалский Ahalsky	#DIV/0!	#DIV/0!	#####	9.1	8.8														
Балканский Balkansky	#DIV/0!	#DIV/0!	#####	13.6	13.1														
Дашховузский Dashkhovuzsky	#DIV/0!	#DIV/0!	#####	6.8	9.9														
Лебапский Lebapsky	#DIV/0!	#DIV/0!	#####	11.7	11.9														
Марыйский Marvisky	#DIV/0!	#DIV/0!	#####	10.9	10.4														

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

ТЕНДЕНЦИИ ИСПОЛЬЗОВАНИЯ БОЛЬНИЧНЫХ РЕСУРСОВ

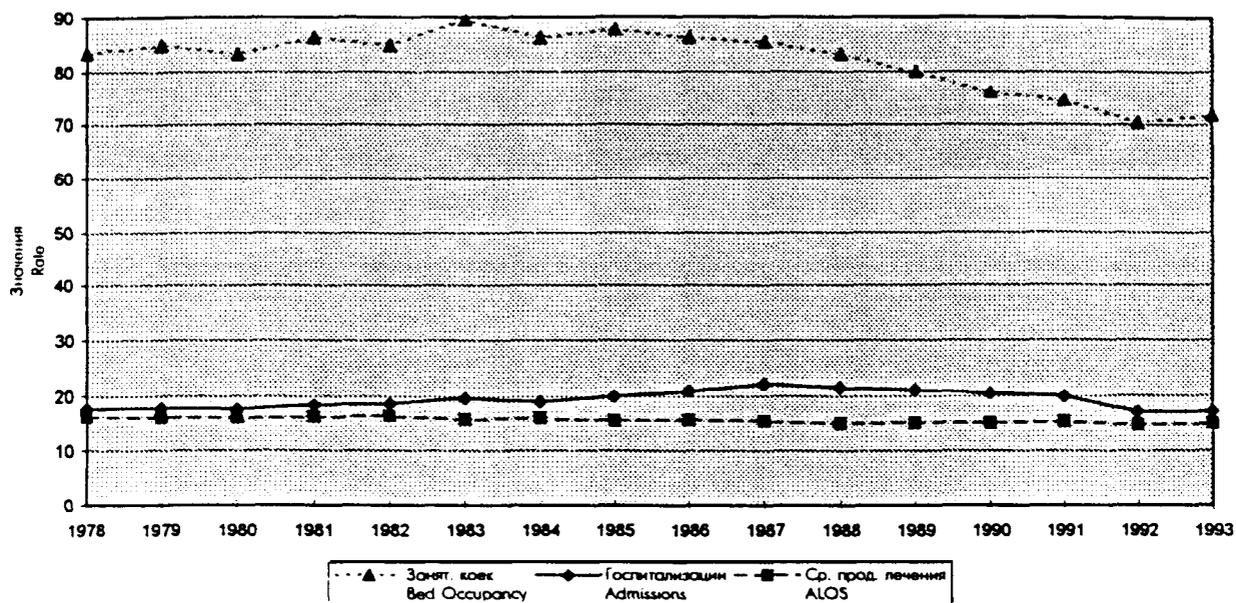
TRENDS IN HOSPITAL UTILIZATION

УРОВЕНЬ ГОСПИТАЛИЗАЦИИ, ЗАНЯТОСТЬ КОЕК И СРЕДНЯЯ ПРОДОЛЖИТЕЛЬНОСТЬ ЛЕЧЕНИЯ

ADMISSIONS, BED OCCUPANCY RATE, AND AVERAGE LENGTH OF STAY

Туркменистан: 1978 - 1993

Turkmenistan: 1978 - 1993



	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Госпитализации Admissions	17.6	17.8	17.6	18.4	18.6	19.7	19.0	20.0	20.9	22.3	21.6	21.1	20.6	20.0	17.0	17.2
Занят. койка Bed Occupancy	84	85	83	86	85	90	86	88	86	85	83	80	76	75	70	72
Ср. прод. лечения ALOS	16.1	16.0	16.0	16.1	16.2	15.7	15.9	15.4	15.6	15.3	14.9	15.0	15.0	15.2	14.7	14.9

замечания: Госпитализации- число госпитализаций на 100 чел. населения
 Занят. койка- % времени в год, в которое койка занята пациентами
 Ср. прод. лечения- средняя продолжительность госпитализации

notes: Admissions - hospital admissions / 100 population
 Bed Occupancy - days bed occupied in year / 365
 Average Length of Stay (ALOS) - average days in hospital per admission

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978 - 1993

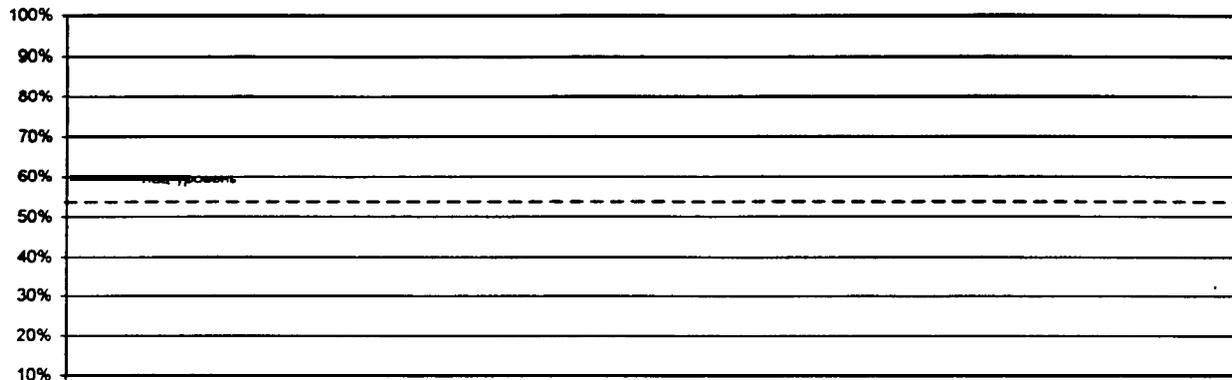
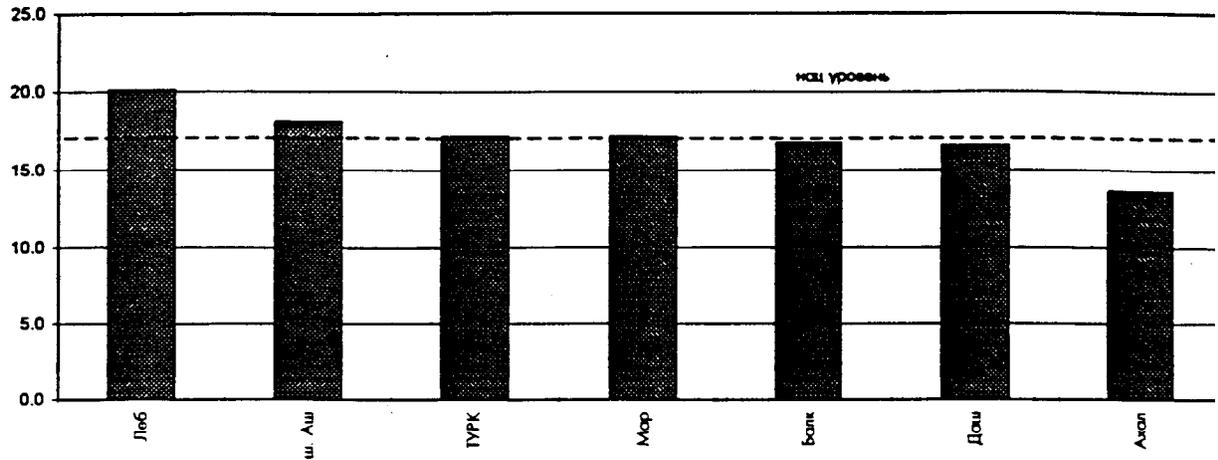
Использование больничных ресурсов в 1993г
1993 Hospital Utilization

	Число госпитализаций (% насел.) Admissions (as % population)					Занятость койки (%) Occupancy Rate					Сред. продолжительность лечения (дней) Average Length of Stay (in days)								
	Изменение в % % Change			Знач. Rate	Ранг Rank	Изменение в % % Change			1993		Изменение в % % Change			1993					
1978 - 1993	1983 - 1993	1988 - 1993	1978 - 1993			1983 - 1993	1988 - 1993	Знач. Rate	Ранг Rank	1978 - 1993	1983 - 1993	1988 - 1993	1978 - 1993	1983 - 1993	1988 - 1993	ALoS	Ранг Rank		
Туркменистан - всего Turkmenistan - total	-2%	-13%	-20%	17.2				-14%	-20%	-14%	72%				-7%	-5%	0%	14.9	
ш. Ашгабад Ashgabat Municipality	#####	#####	-24%	18.1	2			#####	#####	-10%	72%	3			#####	#####	1%	17.6	1
Ахалский Ahalsky	#####	#####	-23%	13.6	6			#####	#####	-15%	71%	5			#####	#####	-4%	15.8	3
Балканский Balkansky	#####	#####	-5%	16.8	4			#####	#####	-22%	65%	6			#####	#####	4%	17.1	2
Дашховузский Dashkhovuzsky	#####	#####	-17%	16.6	5			#####	#####	-14%	73%	2			#####	#####	-3%	14.1	4
Лебапский Lebapsky	#####	#####	-18%	20.1	1			#####	#####	-9%	74%	1			#####	#####	1%	14.1	4
Марыйский Marvisky	#####	#####	-20%	17.2	3			#####	#####	-18%	72%	3			#####	#####	-1%	13.5	6

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

ОТНОШЕНИЕ ЧИСЛА ГОСПИТАЛИЗАЦИЙ К ЧИСЛЕННОСТИ НАСЕЛЕНИЯ (%); ТУРКМЕНИСТАН

1993, по Валаятам

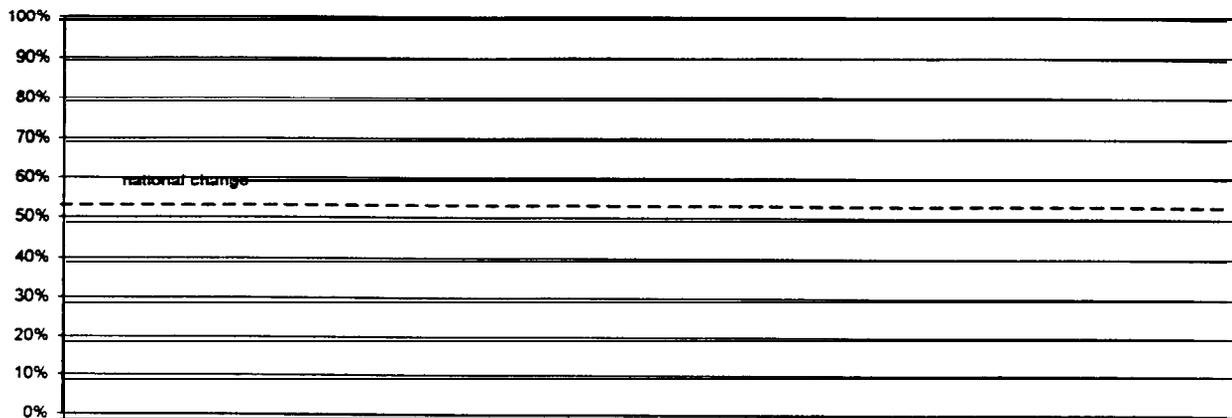
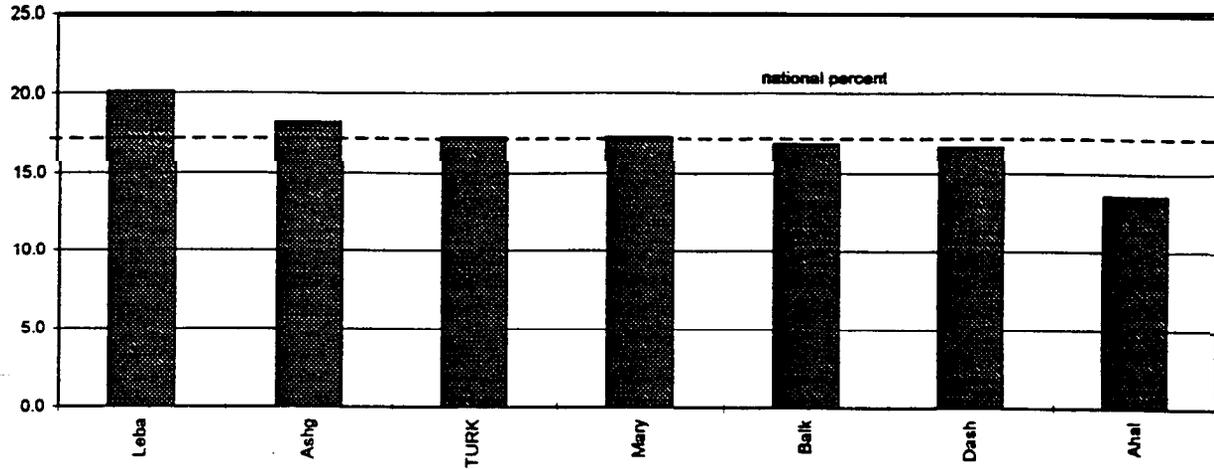


% Изменения: 1978 - 1993



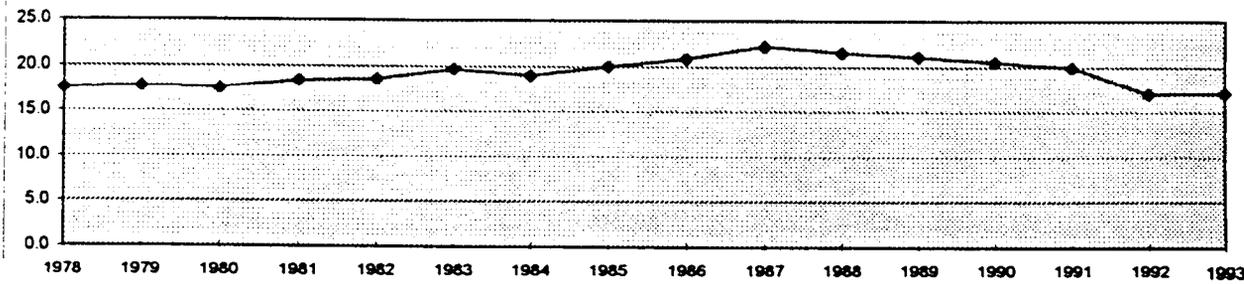
ADMISSIONS as % of POPULATION, TURKMENISTAN

1993, by Velayat



% Change: 1978 - 1993

National Trend: 1978 - 1993



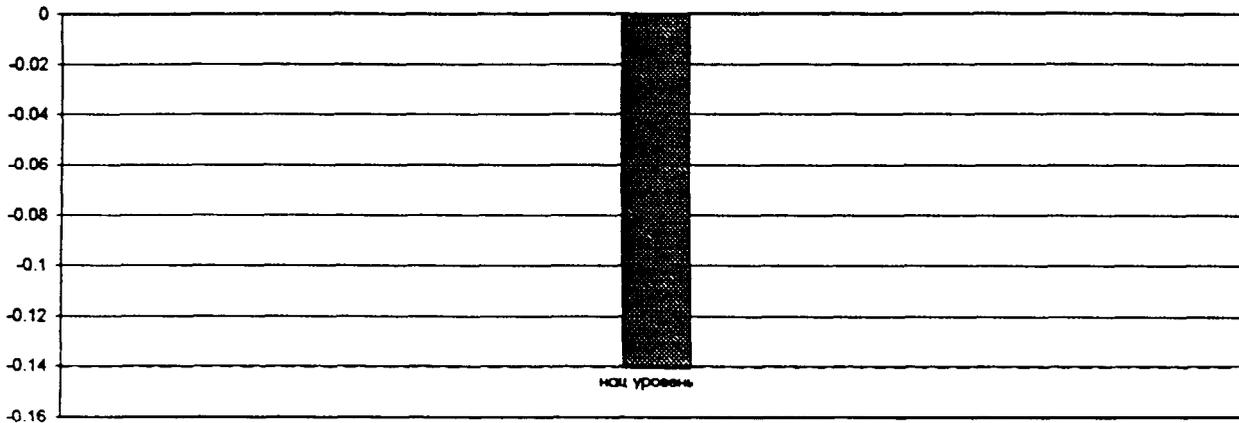
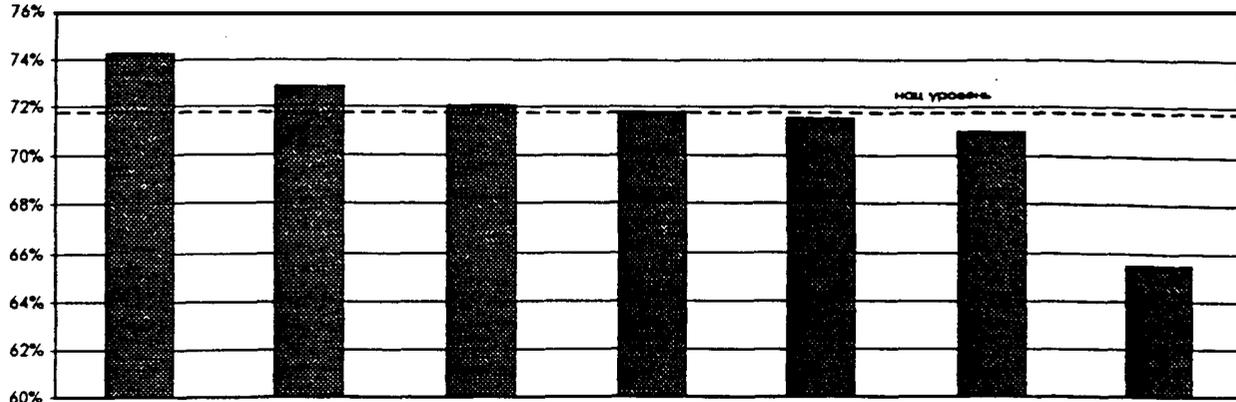
Число госпитализаций в 1978 - 1993гг
 (% от численности населения)
Admissions: 1978-1993
 (as % of population)

	Изменение в % % Change			1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978
	1978 - 1993	1983 - 1993	1988 - 1993																
Туркменистан - всего Turkmenistan - total	-2%	-13%	-20%	17.2	17.0	20.0	20.6	21.1	21.6	22.3	20.9	20.0	19.0	19.7	18.6	18.4	17.6	17.8	17.6
ш. Ашгабад Ashgabat Municipality	#####	#####	-24%	18.1	17.1	21.4	21.1	22.8	23.8	23.7	22.8	21.4	19.7						
Ахалский Ahalsky	#####	#####	-23%	13.6	13.7	15.3	16.0	17.3	17.7	16.8	16.2	15.3	15.1						
Балканский Balkansky	#####	#####	-5%	16.8	16.5	18.0	18.7	17.3	17.7	19.5	19.8	19.0	18.0						
Дашховузский Dashkhovuzsky	#####	#####	-17%	16.6	17.0	19.3	19.9	19.2	19.9	29.3	29.9	18.6	16.9						
Лебапский Lebapsky	#####	#####	-18%	20.1	19.6	22.8	23.2	23.7	24.5	15.9	22.8	22.0	21.9						
Марыйский Maryisky	#####	#####	-20%	17.2	16.8	18.9	19.5	20.4	21.6	21.5	20.5	20.2	19.1						

Все данные из годовых отчетов Минздрава Туркменистана 1978-1993
 All data from Annual Reports of Turkmenistan Ministry of Health, 1978-1993

УРОВЕНЬ ЗАНЯТОСТИ КОЕК; ТУРКМЕНИСТАН

1993, по Валаятам



% Изменения с 1978г

Изменение национального уровня в период 1978 - 1993гг

