

**Open Society Institute  
International Palliative Care Initiative  
New York, NY**

**Country Visit Report - Azerbaijan  
July 26-31, 2009  
January 17-22, 2010**

**Stephen R. Connor, PhD  
Palliative Care Consultant**

**FUNDED BY THE OPEN SOCIETY INSTITUTE**

**Public Health Program**

**International Palliative Care Initiative**

## Table of Contents

|   |    |
|---|----|
| <i>Background</i> .....   | 4  |
| <i>Update on the Country</i> .....  | 4  |
| <i>Mortality Data</i> .....   | 5  |
| <i>Projected Need for Palliative Care</i> .....                             | 5  |
| <i>The Azeri Health Care System</i> .....                                   | 6  |
| <i>Health Facilities</i> .....  | 6  |
| <i>Physician Workforce</i> .....  | 6  |
| <i>Paramedical Workforce</i> .....  | 6  |
| <i>The Public Health Situation</i> .....                                    | 7  |
| <i>Policy</i> .....   | 7  |
| <i>Drug Availability</i> .....  | 7  |
| <i>Education</i> .....  | 7  |
| <i>Implementation</i> .....   | 8  |
| <i>Health Care Reform Efforts</i> .....                                     | 8  |
| <i>Interviews Conducted</i> .....   | 9  |
| <i>World Health Organization</i> .....                                      | 9  |
| <i>Ministry of Health Drug Control Office</i> .....                         | 9  |
| <i>Struggle with AIDS Public Union</i> .....                                | 10 |
| <i>Charity Center ‘Havva’ Jewish Women’s Organization</i> .....             | 10 |
| <i>Global Fund – Project Implementation Unit</i> .....                      | 10 |
| <i>Open Society Institute Assistance Foundation Azerbaijan</i> .....        | 11 |
| <i>Ministry of Health – Center for Public Health and Reform</i> .....       | 11 |
| <i>Ministry of Health – Azerbaijan AIDS Control Center</i> .....            | 12 |
| <i>Central Hospital Cancer Clinic</i> .....                                 | 12 |
| <i>Ministry of Health – World Bank – Health Sector Reform Project</i> ..... | 13 |
| <i>Merkez Klinika</i> .....   | 14 |
| <i>UNICEF</i> .....   | 14 |
| <i>USAID Primary Healthcare Strengthening Project</i> .....                 | 14 |
| <i>Baku State University</i> .....  | 15 |
| <i>Legal Department Center for Public Health and Reform</i> .....           | 15 |
| <i>National Academy of Sciences</i> .....                                   | 15 |
| <i>Seminars Given</i> .....   | 16 |

***Findings..... 16***  
***Recommendations/Next Steps ..... 16***  
***Appendix 1 Schedule of Activities ..... 17***  
***Appendix 2 Schedule of Activities (January 2010) ..... 19***  
***Appendix 3 Health Statistics..... 22***

**OSI International Palliative Care Initiative  
Country Visit Report  
Azerbaijan  
July 26-31, 2009  
January 17-22, 2010  
Stephen R. Connor, PhD – IPCI Palliative Care Consultant**

## **Background**

Open Society Institute Assistance Foundation Azerbaijan (OSIAFA) requested consultation to assist in the development of a strategic implementation plan for palliative care in Azerbaijan. A rapid appraisal needs assessment was conducted in 2007 by Dr. John Ely and following this a roundtable session was held in March of 2008. Following the roundtable a request was put to the Azerbaijan Ministry of Health to form a working group on palliative care. After many months the request was responded to and the Ministry's Public Health and Reform Center (PH&RC) was designated as the body to oversee the work.

In collaboration with OSIAFA the Center determined the individuals to participate in the Working Group and a first meeting was held July 2009. A second meeting of the Working Group was held July 28<sup>th</sup> in Baku at the PH&RC of the MOH. I made a presentation to the Working Group and the group proceeded to begin to make decisions about how to proceed. The initial focus of activity will be on the development of National Guidelines for Palliative Care for Azerbaijan. A final draft of the Standards was completed by January 2010.

In January 2010 I returned to Baku to assess progress in palliative care development and to assist the Palliative Care Working Group (PCWG) in planning. The PCWG met twice to review objectives for the coming year and the draft National Guidelines for Palliative Care.

Palliative care delivery in Azerbaijan is currently limited to a program of the National AIDS Center in Baku. There are 20 beds at the Center, an outpatient clinic, a methadone clinic, and a mobile team that sees patients at home. A home care service with a 'pain room' has recently begun at Sumgayit Clinic near Baku and they are very interested in expanding palliative care in their clinic.

## **Update on the Country**

Azerbaijan continues to transition from a socialist to a market economy. Increased oil exports have improved the standard of living in the country such that the poverty level has dropped to 24%, mainly in rural areas and there is almost no unemployment. The political situation seems stable as the current president

remains in office until 2013. There has been some recent progress in the dispute with Armenia over the Nagorno-Karabakh region as some negotiations toward a resolution have finally taken place in Moscow.

Azerbaijan's Human Development Index is 0.746 putting the country 98/177. The adult literacy rate is currently 98.8%. The current population estimate is 9,000,000 (January 2010 est.) with only 6.7% of the population over 65 years.

### *Mortality Data*

Health care statistics are inconsistent but according to the MOH the current overall death rate is 8.32/1000 population. Total deaths for the country are estimated from this at 68,545 persons. WHO mortality database gives 49,568 registered deaths for Azerbaijan in 2004. Both of these figures are much lower overall mortality than reported by Dr. Ely's estimate of 80,925 deaths. An inexplicable drop in the death rate from 2006 to 2007 can explain this, which appears to be an adjustment to the rate to reflect more accurate data than a real drop in mortality.

Ministry of Health data indicate that there were 8,324 new cancer diagnoses reported in 2007. WHO Statistical information system (WHOSIS) gives the cancer mortality rate at 113 per 100,000 population but WHO Mortality Database indicated only 6,107 registered cancer deaths. WHOSIS would yield an estimate of over 9,300 cancer deaths, consistent with Dr. Ely's estimate but the latest information on cancer mortality from the Ministry of Health puts the cancer mortality rate at 78.6 per 100,000 or 7,074 though this may be subject to underreporting.

### *Projected Need for Palliative Care*

Based on these adjusted numbers, if we use the 68,545 total deaths and approximately 7,300 cancer deaths and we use the model proposed by Professor Irene Higginson we would estimate that 47,722 people would benefit annually from palliative care ( $68,545 - 7300 = 61,245 \times .66 = 40,422 + 7300$ ). Stjernswald's model (60% of total) would estimate 41,427 patients so we can project the need at approximately 45,000 patients/year.

(See Dr. John Ely's Needs Assessment for Azerbaijan, May 2007 for additional information).



**The Azeri Health Care System (See Appendix 2 for MOH Statistics on Health)**

*Health Facilities*

There are currently a total of 748 public and private hospitals in the country with a total of 68,076 beds (2008), which is slightly down from 2007 (68356). There are 1692 ambulatory-polyclinic organizations, 904 antenatal clinics, 4 nurseries, 7 nursing facilities with a total of 1,012 beds 787 of which were occupied.

*Physician Workforce*

| Specialty                                   | 2008          |
|---|---------------|
| Therapeutics                                | 8528          |
| Surgeons                                    | 3793          |
| Gynecologists                               | 2073          |
| Pediatricians                               | 4415          |
| Ophthalmologists                            | 811           |
| Otolaryngologists                           | 555           |
| Neuropathologists                           | 953           |
| Psychiatrists                               | 445           |
| Physiatrists                                | 324           |
| Dermatologists/Venereal Disease Specialists | 526           |
| Radiologists                                | 557           |
| Physicians in Training                      | 147           |
| Dentists                                    | 2522          |
| Epidemiologists                             | 1457          |
| Other                                       | 5282          |
| <b>TOTAL</b>                                | <b>32,388</b> |

*Paramedical Workforce*

|                    |        |
|--------------------|--------|
| Nurses             | 33,379 |
| Medical attendants | 8,826  |
| Midwives           | 9,588  |

|                      |       |
|----------------------|-------|
| Lab attendants       | 3,840 |
| X-Ray lab assistants | 446   |
| Other paramedical    | 5,365 |

## **The Public Health Situation**

### *Policy*

Health care reform activity in Azerbaijan offers the opportunity to consider the addition of palliative care to the country's health care system. At present there are no standards for palliative care and no legal framework for the inclusion of palliative care. An analysis of the existing legal and regulatory framework is needed to determine what changes need to be made to introduce palliative care into the system. PH&RC legal staff are working on drafting legislative language that could be introduced to establish a legal basis for palliative care. Since decision making is highly centralized in Azerbaijan it will be essential to gain support from the current Minister of Health for any of these changes as early as possible.

### *Drug Availability*

Access to opioids and other psychoactive medications continues to be highly controlled and greatly restricted. Oral opioids are not generally available. Injectable morphine and fentanyl patches are used and may be available in hospitals and can be prescribed outside institutions but in practice only oncologists may prescribe these medications and the oncologist must have the prescription co-signed by the head of oncology at the institution. Generally only nurses do injections so cancer patients cannot achieve effective pain control. All used morphine ampoules and used fentanyl patches must be returned to the dispensing pharmacy for a refill to be allowed.

Return of used products is done to insure that none of these medications are diverted for non-medical use. No physician training programs in pain assessment or treatment exist in Azerbaijan though some physicians have had occasional courses in other countries. A thorough audit of the availability of essential palliative care medications is needed. I have provided the list of essential palliative care medications to the PH&RC and they plan to do a cross walk to see what is missing from their list of pharmaceuticals.

### *Education*

There are no existing educational programs or courses in palliative care in Azerbaijan. The first hospice program (Havva) arranged, with support from OSI, to go to St. Petersburg, Russia for palliative care training back in 2001. That program is not currently operating. The national AIDS Control Center is focused on general care for the population living with HIV/AIDS and palliative care when indicated. A

palliative care program that can be viewed as a center of excellence in care provision and education is needed. There is also the possibility that palliative care can be implemented in a primary, intermediate, and tertiary fashion, with all the new primary health care program staff being trained in basic palliative care, a home based care system developed with additional training and competency in palliative care and tertiary specialist palliative care centers for the most challenging patients.

### *Implementation*

At present, outside the national AIDS Control Center, there are no services implemented. Estimates of the workforce need and repurposing of health care infrastructure needs additional analysis. A new service is being initiated at Sumgayit Oncology Clinic in a city about 30 km from Baku.

### **Health Care Reform Efforts**

The Azerbaijani health care system follows the model developed by Russia for itself and other countries of the former Soviet Union. This model is a highly centralized hierarchically structured system of control wherein all decisions about operation, treatment, and distribution of resources were made in Moscow and now are made by Ministers in the central government. Staffing and placement of hospitals and polyclinics are set and do not vary based on patient volumes. This has resulted in a misallocation of resources wherein some facilities are overwhelmed with patient care needs and in others staff are greatly underutilized. Added to this is a system of silo budgeting that limits the departments in funding and incentivizes overspending, as any unspent funds must be returned to the government.

Beginning in 2008 the government of Azerbaijan began to implement a program of health care reform for the country that would gradually change the health care system from the Soviet model to a new model based more on Western medicine. The objectives of the program include:

- Strengthening health system governance and regulation
- Strengthening health care financing
- Increasing the effectiveness of health service delivery
  - Strengthening and prioritizing primary health care
  - Increasing the efficiency of secondary, tertiary and social care provision
  - Strengthening of Public Health Services
  - Improve access and rational use of drugs
- Aligning human resources for health to population health needs
- Health information systems, monitoring and evaluation

The primary partners in this reform effort include:

- Ministry of Health

- Public Health and Reform Center
- Health Project Implementation Unit (PIU)
- World Health Organization
- World Bank
- Primary Health Care Strengthening Project (USAID)

### **Interviews Conducted** (See Appendix 1 & 2 for Schedule)

#### *World Health Organization*

Dr Kamran Garakhanov – Head of WHO Country Office  
 3, UN 50<sup>th</sup> Anniversary Street, AZ 1001, Baku Azerbaijan  
 99412 498 9888 (ext 159)  
 garakhanovk@euro.who.int  
[www.euro.who.int](http://www.euro.who.int)

The WHO is closely involved in efforts to reform the health care system in Azerbaijan. Dr. Garakhanov was most helpful in identifying the key organizations (above) involved in this effort, particularly the efforts to expand primary health care delivery especially in rural areas of the country.

#### *Ministry of Health – Drug Control Office*

Dr. Telman Maddadhasanov

The Drug Control office is responsible for determining need for opioids and other psychotropic drugs for Azerbaijan. Dr. Maddadhasanov reports that there is a strict system of return that ensures opioids for medical use are not diverted to non-medical uses. Morphine can be used in the home setting but only injectable can be used and all ampoules must be returned to the pharmacy. Likewise fentanyl patches can be used in the home setting but the used patches must be returned. Dr. Maddadhasanov is concerned about use of oral opioid medications due to fears of diversion but was open to the idea that if there were close supervision of drug use by mobile teams it might be possible. This also could lessen the costs associated with frequent use of expensive fentanyl patches. He believes clinicians need to be sent to other countries for training.

January 2010: A second meeting was held with Dr. Maddadhasanov January 18<sup>th</sup> to discuss inclusion of oral opioids in Azerbaijan. It appears that he is not in favor of adding these medications, however it is not his role to decide this. He is responsible for ensuring that approved drugs are supplied and that they are not adulterated in any way. They conduct rigorous testing of medications obtained outside of the country. To involve his office in the process of developing ‘controls’ over distribution of oral opioids we offered to have them represented on a larger PCWG.

*Struggle with AIDS – Public Union*

Mr. Nofal Sharifov

Tel: 99455 7338705

[aidsngo@azeronline.com](mailto:aidsngo@azeronline.com)

[www.ecuo.org](http://www.ecuo.org)

Mr. Sharifov is Chief of the NGO that is working with HIV/AIDS patients primarily in Baku. They are part of the “East Europe and Central Asia Union of People Living with HIV.” Their organization provides mostly psychosocial assistance to PLWHA and they work closely with the National AIDS Center. They had a pilot program for one year that provided mobile team services at home but had to discontinue the service due to lack of funding. The mobile team included a physician, an HIV+ social worker and an attorney. Outpatient services are now provided. They also noted problems with staff stress. There are varying figures on the number of HIV patients in Azerbaijan and the reason for infection but for their caseload 64% were IV drug users, 22.6% from heterosexual transmission (mainly wives) 11.7% unknown, 0.6% mother to child transmission, 0.6% homosexual sex, and 0.1% donor blood.

*Charity Center “Havva” – Jewish Women’s Organization*

Dr. Solmaz Yusifova

K, Safaraliyeva str. 25

Baku, Azerbaijan

99450 328 1017 (cell)

[diana1033@yahoo.com](mailto:diana1033@yahoo.com)

This organization was the first to offer home based hospice care in Azerbaijan in 2001. With OSIAFA funding they ran a mobile team of 2 MD’s, 6 psychologists, and 10 attendants for 35 patients at a time and also provided medications and food packets. After the pilot funding ran out in one year a wealthy Jewish businessman from Moscow sponsored the mobile team for 3 years. The funding was discontinued due to economic conditions. The mobile team has been mothballed but could be reactivated with funding in a matter of weeks.

*Global Fund – Project Implementation Unit – Ministry of Health*

Rasul Efendiyev, PIU Director

3, T. Alyarbeeyov str.

Baku, AZ1005 Azerbaijan

Tel: 99412 498 2016

[refendiyev@graidz.az](mailto:refendiyev@graidz.az)

Global Fund for HIV/TB/Malaria is the primary funder for the National AIDS Control Center in Baku. According to GF the official number of HIV patients in Azerbaijan is 1860 however the unofficial number is twice that amount. Funding for their program will cease at the end of 2009 unless they receive new allocation in the 9<sup>th</sup>

round of funding. Their application has been submitted but they will not find out for some time. About 170 patients are currently on ARV's and these will continue to receive treatment if core funding is discontinued. The estimated need for ARV treatment in Azerbaijan is 500.

January 2010: 9<sup>th</sup> round Global Fund funding has been obtained and will support HIV/programs over the next 5 years, including some pilot projects for palliative care for people living with HIV.

*Open Society Institute Assistance Foundation Azerbaijan*

Farda Asadov, Executive Director [fasadov@osi-az.org](mailto:fasadov@osi-az.org)

Leyla Imanova, Public Health Program Director [limanova@osi-az.org](mailto:limanova@osi-az.org)

Sharafat Ismayilova, Public Health Program Coordinator [sismaylova@osi-az.org](mailto:sismaylova@osi-az.org)

Baku AZ1110, Azerbaijan

"Akademik Hasan Aliyev" str. 117a

Tel: (99412)564 34 65

OSIAFA has a history of including palliative care in its public health program. They have an excellent record of funding Havva (2001 – 2002), AIDS Center (September 2006 – September 2007), and the “Struggle with AIDS” Public Union. The last two projects OSI supported as sub-recipient of GF 5-th Round Grant in Azerbaijan. They are currently interested in support for the development of a national strategy for implementation of palliative care and will support the working group that we will work with to develop national standards for palliative care. The Public Health Program staff is effective in coordinating the working group and very knowledgeable about the health care situation in the country. Ms. Imanova highly regarded by all the key individuals in the country health care reform effort.

January 2010: Numerous meetings with Ms. Imanova on plans for including palliative care in Azerbaijan and for OSI-AF to include palliative care in their public health program for 2010.

*Center for Public Health and Reform – Ministry of Health*

Jayhun Mammedov, Center Director

Baku, AZ 1122, Zerdabi proslekti, 96

Tel: 99412 430 5267

[Jayhun.mammadov@isim.az](mailto:Jayhun.mammadov@isim.az)

[www.isim.az](http://www.isim.az)

Dr. Mammedov is the key individual overseeing the potential inclusion of palliative care in the Azerbaijani health care system. After a year of discussion a memo from the Dr. Mammedov on behalf of Round Table's participants to the Minister of Health established the palliative care working group with support from OSIAFA. He expressed to me a sincere desire to include palliative care in Azerbaijan and agreed with our plans to begin by establishing National Standards for palliative care.

January 2010 – Dr. Mammedov continues to express his support for including palliative care in Azerbaijan’s health care system. He attended an in-service on palliative care that I conducted and expressed his support for palliative care publically.

*Azerbaijan AIDS Control Center – Ministry of Health*

Prof. Hagigat Gadirova, Director

Baku, AZ 1022, Mir-Gasimov str 1/8

Tel: 99412 494 7353

[Dr\\_Kadyrova@inbox.az](mailto:Dr_Kadyrova@inbox.az)

Dr. Gadirova heads the national AIDS Control Center and is a proponent of palliative care. At present the only palliative care services in Azerbaijan are provided by this Center. They have a 20-bed inpatient facility that also houses one of the only 2-methadone maintenance clinics in the country, an outpatient clinic for AIDS patients, and a home care team. They do not have designated palliative care beds but use a floating bed approach when they have a patient that needs palliative care. Average LOS is 12 days and on my visit there were only 3 inpatients none of which were receiving palliative care.

They have been doing palliative care for the past 3 years with funding from Global Fund as GF sub-sub recipients from OSI (2006 – 2007) and GF sub-recipient (2008 till now) and are concerned that the possibility of loss of GF funding will mean discontinuation of the program at the end of the year. The home care team essentially does nothing but palliative care and currently has a caseload of 17 patients. I spoke with the team psychologist while visiting who was conducting an outpatient counseling session and he indicated that he did regular home visits. The team consists of MD, nurse, social worker, psychologist, and they use both an Imam and a Christian chaplain. There is also support staff including attendants, drivers, and so forth. The Center, as of July 1<sup>st</sup>, had cared for a total of 843 patients, 250 of which had received inpatient care. They are also responsible for primary care for 36 prisoners on ARV therapy.

*National Cancer Center*

Dr. Rasim Zeynalov, Chief of Chemotherapy Department

Dr. Murad Mamedov, deputy director of National Cancer Center

Dr. Fuad Mardanli, main oncologist of Ministry of Health

We met with Dr. Zeynalov, the main oncologist and the deputy director of the *National Cancer Center* at the Baku City cancer clinic of the *National Cancer Center* Baku, the main cancer treatment center in the country. All meeting participants were keen to discuss how palliative care was being delivered, especially in other former Soviet countries. They were very interested in expanding palliative care for cancer patients but, as physicians trained in Russia, they had a very hard time

visualizing how this could occur. They could not understand how care was managed and controlled centrally. Who was in charge and would make all decisions about who got palliative care, how much etc. Back in the 1970's the Minister of Health in Moscow gave an order that palliative care was to be provided to all cancer patients by decree. However there was no guidance as to what palliative care was to be delivered and no education as to what palliative care was (also an unfunded mandate). These physicians appeared to fear the use of opioids outside the hospital but were eager to learn more about palliative care.

*Ministry of Health – World Bank – Health Sector Reform Project – Project Implementation Unit*

Gulara Efendiyeva, MD, MBA, Health Finance Coordinator  
H. Zerdabi str. 96 AZ 1122, Baku, Azerbaijan  
Tel: 99412 431 1968  
[g.efendiyeva@hsrp.az](mailto:g.efendiyeva@hsrp.az)

Dr. Efendiyeva is a key individual in Azerbaijani health care reform. She is part of the reform Project Implementation Unit, responsible for carrying out reform efforts with support from the World Bank. She is also the methodological coordinator of the newly formed Palliative Care Working Group, under the auspices of the MOH Center for Public Health and Reform. Dr. Efendiyeva has received training in palliative care at the Salzburg Center and has a unique background as an anesthesiologist with a masters degree in business administration. Much of the health care reform effort is focused on rural areas where an effort is underway to develop a primary care network and to rebuild and consolidate the Soviet style health care facilities.

Many small, underutilized hospitals in the country are being closed or consolidated. Criteria being used that dispensaries should be accessible within 15 minutes drive and hospitals 20 minutes. Hospitals with utilization under 30% are being closed. A train the trainer program has been developed that sent 10 physicians and 10 nurses to Turkey for extensive training in Family Medicine. These trainers are now back in Azerbaijan and want to begin training other physicians and nurses under this program. The curricular outline for their training includes a part of one module on palliative care. They are currently identifying curricula for each module and we have an opportunity to provide them with palliative care protocols that have to be in Russian or Azerbaijani.

January 2010: Ms. Efendiyeva and I had several meetings in to review the Guidelines she drafted and the work plans for the PCWG. She is the technical chair of the PCWG and it appears she has done a great deal of work to develop a comprehensive set of Guidelines. The term Guidelines is preferred to Standards in Azerbaijan culture. I have edited the draft Guidelines and Standards and sent suggested changes to Ms. Efendiyeva. They need some significant modifications but when completed will be a useful tool to guide implementation of palliative care in Azerbaijan.

*Merkez Klinika*

Dr. Shirin Kazimov, Chief of Standardization and Quality Control Department

76 Parliament Ave. Baku, Azerbaijan AZ 1006

Tel: 99412 492 1092

[s.kazimov@merkezklinika.az](mailto:s.kazimov@merkezklinika.az)

[www.merkeziklinika.az](http://www.merkeziklinika.az)

Dr. Kazimov works in “Mərkəzi Klinika”, the largest private hospital/clinic in Baku. He works in the Standardization and Quality Control Department.

Dr. Kazimov is also involved in the health care reform projects and efforts to improve the collection of accurate information on health care services and outcomes. He was part of the Roundtable meeting on Palliative care held last year. Currently there are no electronic systems for health care reports all is done on paper. There is believed to be considerable underreporting of problems. They have started to use ICD10 diagnostic coding, but statisticians in medical facilities are the ones who code diagnoses, not physicians. In the Soviet system there was no quality monitoring. There was considerable data collection and reporting in great detail, however this information was never analyzed or used to improve or measure quality just used for comparative purposes.

Technically the national health care system is free for all, but patients usually pay for services out of pocket.

*UNICEF*

Aytakin Huseynli – National Advisor on Child Protection Reform.

Ms. Huseynli is also considered the country expert on social work. She has been working to establish a national organization for social workers in Azerbaijan. There is no licensure or code of ethics. There are only a small number of professional social workers in the country (7 professionals and 5 fellows). They have all been trained in other countries. Ms. Huseynli was an OSI social work fellow.

In 2005 an MSW program was established at Baku State University (currently 3-4 students). In 2008 a BSW program was also established and 25 students are currently enrolled; no courses on death, dying, or grief. There is a large group of people referred to as social workers in the country (about 1,600), however they have no social work training and are really home care attendants. There is no national child protection system it is all done locally.

*USAID/Primary Healthcare Strengthening Project – Abt Associates*

Dinara Abbas, MD, MBA – Health Policy Program Manager [dinara@phc-az.org](mailto:dinara@phc-az.org)

Kamala Suleymanova – PCHS Program Manager [kamala@phc-az.org](mailto:kamala@phc-az.org)

14/16 Khagani St, apt 41, Baku, AZ 1005 Azerbaijan

Tel: 99412 498 1008

Dr. Abbas and Ms. Suleymanova run the Healthcare Strengthening Program funded by USAID to establish primary family medicine services in Azerbaijan, especially in rural areas. They are part of the country coordinating mechanism and were receptive to inclusion of palliative care in the country, particularly if it is linked to primary care. The curricula that is being developed for the train the trainer program previously mentioned, includes a small palliative care component. There is a need to provide training material on palliative care that can be included in the curricula. They were receptive to receiving such materials from OSI.

### **Additional Interviews January 2010**

*Baku State University*

Professor Hikmet Alizade

050 3335314 510 56 44

Dean of Schools of Social Work, Psychology, and Sociology

We met with Dr. Alizade to discuss the important role of social workers and psychologists in the delivery of palliative care and the possibility of inclusion of palliative care in the teaching curricula of the University. After informing him about palliative care he was receptive to finding some ways to include teaching at the University. Adding curricula is always difficult but he was confident and expressed support for doing so.

*Legal Department MH&RC*

Mr. Sabuhi Abdullayev

Mr. Abdullayev is a lawyer on staff at MH&RC and is a member of the PCWG. He is interested in assisting in the development of legal language for inclusion of palliative care in Azerbaijan. We met to discuss parallel efforts in other former soviet republics and I will send him and Gulara examples from other countries.

*National Academy of Sciences*

Professor Bakir A. Nabiyeu

AZ 1143, Baku City

H. Javid Ave., 31, V Floor

Tel: +99412 510 3425

Email: [adib@as.ab.az](mailto:adib@as.ab.az)

Professor Nabiyeu is a prominent academician who also sits on the Scientific and Religious Board for Caucasus Muslims, for the National Academy. We sought a meeting with him to help us to ensure that the Muslim clergy would accept aspects of palliative care. There was some concern that activities like telling patients their diagnosis or prognosis might be determined to be not acceptable to the Mullahs and by having a dialogue in advance this could be prevented. He was very gracious and pledged his support in gaining acceptance of palliative care by the religious

community in Azerbaijan. We agreed, if possible for me to have an opportunity to speak with the Board during my next visit.

## **Seminars**

While in Baku I conducted two 3-hour seminars on palliative care. The first was an “Introduction to Palliative Care” for the physicians and nurses who are the national ‘train the trainers’ to introduce the practice of Family Medicine in Azerbaijan provinces. This is part of the World Bank, Health System Strengthening project. There were 15 medical staff in attendance at the PH&RC.

The second 3-hour training was a seminar titled “Perspectives on Palliative Care in Azerbaijan. This session was for AIDS Center specialists, Red Crescent, PCWG members, and staff from Sumgayit Clinic.

## **Findings**

- The total patients per year who could benefit from palliative care services is estimated at 45,000 or about 7,500 patients per day on average. To serve the cancer population of 7,074 deaths per year would be about 1.160 patients per day.
- The government of Azerbaijan has committed to a major reform of the health care system focusing on dismantling the old Soviet based health facilities to a more primary care public health approach that increases the effectiveness and efficiency of the system.
- It is critical to make sure that palliative care is included in the country health care reform effort from the outset and to obtain consent for such inclusion directly from the Minister of Health.
- There is only one functioning palliative care service in the country based at the national AIDS Control Center.
- Opioids and other psychoactive medications are tightly controlled and difficult to obtain. Only oncologists can prescribe injectable opioids and no oral opioids can be prescribed. There is some availability of fentanyl patches.
- There are no existing home-based care programs in the country. Addition of home based palliative care with inpatient back up will require a reallocation of resources from inefficient facilities and may increase the cost of health care at least initially. An analysis of the costs and benefits of palliative care is needed that makes an argument for the value of including palliative care.
- A palliative care working group has been established under the Ministry of Health’s Center for Public Health and Reform. The group is now starting to meet regularly and will focus initially on national standards for palliative care and then on recommendations for implementation. Copies of National Standards from various countries have been provided (Romania, US, Moldova, Russia) and a draft set of Guidelines for the Development of Palliative Care in Azerbaijan has been prepared.

## **Recommendations / Next Steps**

- The Palliative Care Working Group began developing National Standards for Palliative Care; and a draft was completed by January 2010.
- The IPCI Palliative Care Consultant provided support to the Working Group on development of the Standards.
- OSIAFA will support the work of the Working Group and will assist with conducting a review of laws and regulations that will impact the implementation of palliative care.
- The legal analysis needs to include development of recommendations for the use of oral opioids with sufficient controls to prevent diversion or misuse for non-medical purposes.
- After completion of the Standards, the Working Group met in January of 2010 to begin work on the national palliative care implementation plan recommendations. It is expected that the implementation could occur over a 5-year period. The IPCI consultant attended and will continue to assist with development of these plans.
- Further work is needed to update the initial palliative care needs assessment done by Dr. John Ely. This is needed to assist the working group when it undertakes development of implementation plans.
- In addition a financial analysis of the impact of including palliative care needs to be undertaken.
- Palliative care training modules, preferably in Russian, were provided to the USAID Primary Healthcare Strengthening Project for use in physician and nursing curricula and an inservice on palliative care was given.

**APPENDIX 1**

**IPCI expert Stephen Connor visits' agenda.**

**Baku, Azerbaijan, 27 – 30 July, 2009**

| <b>DATE</b> | <b>NAME</b>  | <b>TIEM AND PLACE</b>                           |
|-------------|--|---|
| 27/07/2009  | Interpreter Musa Mustafayev  | 10.30<br>HOTEL EUROPE                           |
| 27/07/2009  | Leyla Imanova; Sharafat Ismayilova - OSI   | 11.00 – 11.30<br>HOTEL EUROPE                   |
| 27/07/2009  | Struggle With AIDS – Public Union - Nofal Sharifov, chief  | 11.30 – 13.00<br>B.Safaroqlu, 160               |
|             | LUNCH  | 13.00 – 14.30                                   |
| 27/07/2009  | Telman Mammadhasanov (MoH Drug Control)  | 15.00 – 17.00<br>C.Cabbarli, 34                 |
| 28/07/2009  | OSI – AF executive director – Farda Asadov   | 11.00 – 11.30<br>OSI - AF                       |
| 28/07/2009  | Solmaz Yusifova – “Havva” NGO on mobile service on PC  | 12.00 – 13.00                                   |
| 28/07/2009  | Lunch  | 13.00 – 14.30                                   |
| 28/07/2009  | Global Fund Project Implementation Unit - Rasul Efendiyev  | 14.30 – 15.30<br>Aliyarbekov street,3           |
| 28/07/2009  | MOH, Center for Public Health and Reforms – Jeyhun Mamedov, compere of Round Table   | 16.00 – 17.00<br>20 January Circle              |
| 28/07/2009  | Working Group  | 17.00 – 20.00                                   |
| 29/07/2009  | AIDS Center, chief – Haqiqat Qadirova. She was presentator at the Round Table  | 09.00 – 09.45<br>AIDS Center fro Papanin street |
| 29/07/2009  | National Cancer Center:<br>1. Murad Mamedov – deputy director of center<br>2. Fuad Mardanli – chief oncologist of Ministry of health | 10.00 – 11.00                                   |

|                   |  |                                   |
|-------------------|--|-----------------------------------|
|                   | <b>3. Rasim Zeynalov – Chief of Chemotherapy Department. He was also presentator at the Round Table</b>  |                                   |
| <b>29/07/2009</b> | <b>WHO – Kamran Qaraxanov</b>  | <b>11.30 – 13.00<br/>UN Team</b>  |
| <b>29/07/2009</b> | <b>Lunch</b>   | <b>13.30 – 15.00</b>              |
| <b>29/07/2009</b> | <b>UNICEF expert on Social Work, WG member – Aytekin Huseynli</b>  | <b>15.20 – 16.30<br/>OSI - AF</b> |
| <b>29/07/2009</b> | <b>Gulara Efendiyeva, MD, MBA. Health Financing Coordinator, the Ministry of Health and the World Bank. Health Sector Reform Project. Project Implementation Unit, Methodical coordinator of WG.</b> | <b>17.00 – 18.00<br/>OSI – AF</b> |
| <b>29/07/2009</b> | <b>Shirin Kazimov – Central Clinic Hiospital, chief of standardization department of presidential clinic</b>   | <b>18.00 – 19.00</b>              |
| <b>30/07/2009</b> | <b>Dinara Asadova<br/>Kamala Suleymanova<br/>Abt. Ass.</b>   | <b>10.00 – 11.00</b>              |
|                   | <b>OSI Health staff</b>  | <b>13.00 – 15.00</b>              |

## Appendix 2

### AGENDA FOR STEPHEN O'CONNOR JANUARY, 2010 VISIT

|  |
|--|
| <b><u>17/01/2010</u></b> – arrival. 20.10  |
| <b><u>18/01/2010</u></b>   |
| 10.00 – 10.30 - <u>Park Inn</u> Hall. Meeting with OSI staff and interpreter Afsana Latifova   |
| 10.45 - 11.45 – <u>Baku State University</u> , Faculty of Social Sciences and Psychology. Dean of Faculty Hikmet Alizade. 050 3335314 510 56 44. 2-nd corp., 9-th floor.   |
| 12.00 – 15.00 – Meeting with Gulara Efendiyeva and Tofiq Musayev – WG coordinators. Public Health & Reforms Center of MoH (PH&RC)  |
| 15.30 – 17.00 - The Center of Analytical Expertise of Medicines of MoH. Head of department Dr. Telman Mammahsanov. Location: <u>Cafar Cabbarli street, 34</u> . Mob: 0503738088  |
| <b><u>19/01/2010</u></b>   |
| 10.30 – departure to Sumgayit clinic   |
| 11.00 - 13.45 – Visit <u>Sumgayit</u> clinic   |
| 13.45 – departure to Baku  |
| 14.15 – 14.45 – Lunch  |
| 14.45 – 15.05 – meeting with Sabuhi Abdullayev – WG lawyer   |
| 15.10 – 17.00 – meeting with PC WG members   |
| 17.00 – 17.45 – meeting with Jeyhun Mammadov - PH&RC director  |
| <b><u>20/01/2010</u></b>   |
| 10.00 – 16.00 – In preparation to upcoming seminar and training  |
| 16.00 – 18.00 – Meeting in Park with Leyla Imanova and Gulara Efendiyeva   |
| <b><u>21/01/2010</u></b>   |
| 10.00 – 10.45 – Meeting with the member of Scientific – Religious Board of Caucasus Muslims . Location: National Academy of Sciences of AR.  |
| 11.00 – 14.00 – Training “Introduction to Palliative Care” for the head of medical School #2 and medical staff (nurses and physicians) of WB Health Care Strengthening Project – part Family Medicine – to incorporate PC into the Primary health Care services. Location: PH&RC |
| 14.00 – 15.00 - Lunch  |
| 15.00 – 18.00 – Seminar “Perspectives of PC in Azerbaijan – potential, practice and future” for specialists from AIDS center, Red Crescent, WG, Sumgayit clinic, “Havva” ??? . Location: PH&RC   |

**22/01/2010 - departure**

Next items will be discussed during the visit:

1. Satellit seminar on PC (October, 2010)
2. Pilot project construction (to be started on March, 2010)
3. Methodical Instructions – Guidelines
4. Study visit project to St-Petersburg and Romania for the WG members and Sumgayit clinic staff members – in total 15 persons
5. PC and GF issues
6. WB primary health care strengthening project (Train the Trainer program) – PC in curricula

## APPENDIX 3 HEALTH STATISTICS

### Main indicators of health (at the beginning of year)

|  | 2001  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008 <sup>1)</sup>  |
|--|-------|-------|-------|-------|-------|-------|---------------------|
| Number of physicians of all specializations, thsd. person  | 29    | 29.5  | 29.7  | 30.1  | 30.6  | 30.8  | 32.4 <sup>1)</sup>  |
| per 10 000 population  | 36.5  | 36.5  | 36.4  | 36.6  | 36.8  | 36.6  | 38.1                |
| Paramedical staff, thsd. person  | 60    | 59.1  | 59.5  | 59.7  | 60.8  | 61.6  | 62.2 <sup>1)</sup>  |
| per 10 000 population  | 75.4  | 73.1  | 73.1  | 72.6  | 73.1  | 73.2  | 73.1                |
| Number of hospitals  | 735   | 738   | 734   | 732   | 729   | 726   | 748 <sup>1)</sup>   |
| Number of hospital beds, thsd.   | 69.9  | 68.7  | 68.1  | 68.4  | 68.9  | 68.4  | 68.1 <sup>1)</sup>  |
| per 10 000 population  | 87.8  | 85    | 83.6  | 83.1  | 82.9  | 81.3  | 80                  |
| Number of beds for children, thsd.   | 11.9  | 11.4  | 11.7  | 11.7  | 11.7  | 11.5  | 11.4                |
| Number of ambulatory-polyclinic organizations  | 1614  | 1603  | 1591  | 1594  | 1595  | 1589  | 1692 <sup>1)</sup>  |
| Capacity of ambulatory-polyclinic service organizations (number of attendances in a shift), thsd.                                      | 105.6 | 105.9 | 105   | 105.3 | 104.1 | 103.9 | 104.7 <sup>1)</sup> |
| per 10 000 population  | 132.7 | 131   | 128.9 | 127.9 | 125.2 | 123.5 | 123                 |
| Number of antenatal clinics, children in polyclinics and ambulatory (included in the structure of independent and other organizations) | 913   | 917   | 916   | 922   | 923   | 914   | 904 <sup>1)</sup>   |
| Number of beds for pregnant and childbirth women (including medical and gynaecological beds), thsd.                                    | 7.5   | 7.4   | 7.4   | 7.4   | 7.4   | 7.4   | 7.4                 |
| Number of nurseries  | 4     | 4     | 4     | 4     | 4     | 4     | 4                   |
| of which:  |       |       |       |       |       |       |                     |
| number of places   | 400   | 400   | 370   | 370   | 370   | 370   | 356                 |
| number of children, person   | 197   | 173   | 152   | 144   | 156   | 142   | 105                 |
| including number of orphans  | 107   | 85    | 57    | 55    | 59    | 61    | 38                  |

<sup>1)</sup> Including non-state medical institutions

### Number of physicians by main specialization (at the beginning of year, person)

|                              | 2001  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008 <sup>1)</sup> |
|------------------------------|-------|-------|-------|-------|-------|-------|--------------------|
| <b>Physicians - total</b>    | 29033 | 29481 | 29687 | 30051 | 30584 | 30766 | 32388              |
| including by specialization: |       |       |       |       |       |       |                    |
| therapist                    | 8231  | 8351  | 8279  | 8094  | 8093  | 8287  | 8528               |
| surgeon                      | 3297  | 3437  | 3419  | 3445  | 3566  | 3624  | 3793               |
| gynaecologist                | 1809  | 1891  | 1922  | 1932  | 1940  | 1952  | 2073               |
| pediatrists                  | 4219  | 4228  | 4255  | 4287  | 4323  | 4423  | 4415               |

|   |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ophthalmologist                                   | 690         | 727         | 728         | 751         | 773         | 779         | 811         |
| otolaryngologist                                  | 525         | 422         | 519         | 525         | 542         | 533         | 555         |
| neuropathologist                                  | 770         | 821         | 835         | 854         | 868         | 876         | 953         |
| psychiatrist                                      | 428         | 440         | 435         | 436         | 437         | 444         | 445         |
| phthisiatrician                                   | 326         | 324         | 322         | 336         | 320         | 329         | 324         |
| specialist in skin and veneral diseases           | 471         | 488         | 504         | 516         | 519         | 519         | 526         |
| rontgenologist-radiologist                        | 476         | 484         | 483         | 484         | 495         | 487         | 557         |
| physicians on physical training                   | 124         | 124         | 124         | 125         | 134         | 150         | 147         |
| stomatologist-dentist                             | 2234        | 2325        | 2275        | 2321        | 2393        | 2431        | 2522        |
| epidemiologist                                    | 1403        | 1299        | 1400        | 1407        | 1431        | 1446        | 1457        |
| other   | 4030        | 4120        | 4187        | 4538        | 4750        | 4486        | 5282        |
| <b>Number of physicians per 10 000 population</b> | <b>36,6</b> | <b>36,5</b> | <b>36,4</b> | <b>36,6</b> | <b>36,8</b> | <b>36,6</b> | <b>38,1</b> |
| including by specialization:                      |             |             |             |             |             |             |             |
| therapist   | 10,4        | 10,3        | 10,2        | 9,8         | 9,7         | 9,9         | 10,0        |
| surgeon   | 4,2         | 4,2         | 4,2         | 4,2         | 4,3         | 4,3         | 4,5         |
| gynaecologist <sup>2)</sup>                       | 4,5         | 4,6         | 4,6         | 4,6         | 4,6         | 4,6         | 4,8         |
| pediatrists <sup>3)</sup>                         | 14,5        | 15,1        | 15,6        | 16,0        | 16,4        | 17,1        | 17,3        |
| ophthalmologist                                   | 0,9         | 0,9         | 0,9         | 0,9         | 0,9         | 0,9         | 1,0         |
| otolaryngologist                                  | 0,7         | 0,5         | 0,6         | 0,6         | 0,7         | 0,6         | 0,7         |
| neuropathologist                                  | 1,0         | 1,0         | 1,0         | 1,0         | 1,0         | 1,0         | 1,1         |
| psychiatrist                                      | 0,5         | 0,5         | 0,5         | 0,5         | 0,5         | 0,5         | 0,5         |
| phthisiatrician                                   | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         |
| specialist in skin and veneral diseases           | 0,6         | 0,6         | 0,6         | 0,6         | 0,6         | 0,6         | 0,6         |
| rontgenologist-radiologist                        | 0,6         | 0,6         | 0,6         | 0,6         | 0,6         | 0,6         | 0,7         |
| physicians on physical training                   | 0,2         | 0,2         | 0,2         | 0,2         | 0,2         | 0,2         | 0,2         |
| stomatologist-dentist                             | 2,8         | 2,9         | 2,8         | 2,8         | 2,9         | 2,9         | 3,0         |
| epidemiologist                                    | 1,8         | 1,6         | 1,7         | 1,7         | 1,7         | 1,7         | 1,7         |
| other   | 5,1         | 5,1         | 5,1         | 5,5         | 5,7         | 5,3         | 6,2         |

<sup>1)</sup> Including non-state medical institutions

<sup>2)</sup> Per 10 000 women

<sup>3)</sup> Per 10 000 children at age of 0-17

#### Number of paramedical staff by specialization (person)

|  | 2001        | 2003        | 2004        | 2005        | 2006        | 2007        | 2008 <sup>1)</sup> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|
| <b>Total</b>                           | 60031       | 59101       | 59531       | 59746       | 60778       | 61582       | 61444              |
| including by specialization:           |             |             |             |             |             |             |                    |
| medical attendant                      | 9117        | 9217        | 8606        | 8468        | 8677        | 8732        | 8826               |
| midwife                                | 10321       | 10033       | 9803        | 9464        | 9599        | 9683        | 9588               |
| nurse                                  | 31604       | 31367       | 32015       | 32338       | 33048       | 33406       | 33379              |
| medical attendant-laboratory assistant | 3724        | 3431        | 3761        | 3821        | 3780        | 3867        | 3840               |
| x-ray laboratory assistant             | 471         | 453         | 486         | 461         | 463         | 451         | 446                |
| other                                  | 4794        | 4600        | 4860        | 5194        | 5211        | 5443        | 5365               |
| <b>Per 10 000 population - total</b>   | <b>75,7</b> | <b>73,1</b> | <b>73,1</b> | <b>72,6</b> | <b>73,1</b> | <b>73,2</b> | <b>72,2</b>        |
| including by specialization:           |             |             |             |             |             |             |                    |
| medical attendant                      | 11,5        | 11,4        | 10,6        | 10,3        | 10,4        | 10,4        | 10,4               |
| midwife <sup>2)</sup>                  | 25,4        | 24,4        | 23,6        | 22,6        | 22,7        | 22,7        | 22,2               |
| nurse                                  | 39,9        | 38,8        | 39,3        | 39,3        | 39,7        | 39,7        | 39,2               |
| medical attendant-laboratory           | 4,7         | 4,2         | 4,6         | 4,6         | 4,5         | 4,6         | 4,5                |

|                            |     |     |     |     |     |     |     |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|
| assistant                  |     |     |     |     |     |     |     |
| x-ray laboratory assistant | 0,6 | 0,6 | 0,6 | 0,6 | 0,6 | 0,5 | 0,5 |
| other                      | 6,0 | 5,7 | 6,0 | 6,3 | 6,3 | 6,5 | 6,3 |

1) Including non-state medical institutions

2) Per 10 000 women

### Specialization of the bed fund

|  | 2001  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008 <sup>1)</sup> |
|--|-------|-------|-------|-------|-------|-------|--------------------|
| <b>Hospital beds - total</b>   | 69903 | 68681 | 68117 | 68442 | 68902 | 68356 | 68076              |
| including:   |       |       |       |       |       |       |                    |
| therapeutic  | 20123 | 19715 | 19560 | 19485 | 19622 | 19433 | 19086              |
| surgical   | 11023 | 11004 | 11026 | 11039 | 11399 | 11049 | 11343              |
| oncological  | 1095  | 1055  | 1006  | 1006  | 1016  | 1016  | 1048               |
| gynaecological   | 2676  | 2626  | 2609  | 2614  | 2627  | 2596  | 2736               |
| consumptive  | 2360  | 2360  | 2350  | 2350  | 2306  | 2360  | 2347               |
| infectious   | 4340  | 4423  | 4305  | 4310  | 4385  | 4445  | 4433               |
| ophthalmologic   | 1499  | 1557  | 1497  | 1497  | 1497  | 1494  | 1386               |
| otolaryngologic  | 1630  | 1678  | 1546  | 1566  | 1581  | 1546  | 1523               |
| dermatovenerologic   | 1495  | 1555  | 1555  | 1560  | 1565  | 1505  | 1505               |
| psychiatric  | 3915  | 3705  | 3745  | 4115  | 4115  | 4135  | 4141               |
| narcological   | 550   | 550   | 550   | 550   | 550   | 535   | 534                |
| neurologic   | 2845  | 2821  | 2738  | 2738  | 2743  | 2758  | 2716               |
| pregnant and childbirth women  | 7484  | 7408  | 7420  | 7419  | 7442  | 7398  | 7393               |
| total beds   | 65    | 159   | 149   | 164   | 154   | 153   | 163                |
| others   | 8803  | 8065  | 8061  | 8029  | 7900  | 7933  | 7722               |
| Beds for diseased children from total number of hospital beds, total               | 11880 | 11432 | 11707 | 11652 | 11741 | 11484 | 11435              |
| <b>Number of beds per 10 000 population - total</b>                                | 87,8  | 85,0  | 83,6  | 83,2  | 82,9  | 81,3  | 80,0               |
| including:   |       |       |       |       |       |       |                    |
| therapeutic  | 25,3  | 24,4  | 24,0  | 23,7  | 23,6  | 23,1  | 22,4               |
| surgical   | 13,8  | 13,6  | 13,5  | 13,4  | 13,7  | 13,1  | 13,3               |
| oncological  | 1,4   | 1,3   | 1,2   | 1,2   | 1,2   | 1,2   | 1,2                |
| gynaecological   | 3,4   | 3,2   | 3,2   | 3,2   | 3,2   | 3,1   | 3,2                |
| consumptive  | 3,0   | 2,9   | 2,9   | 2,9   | 2,8   | 2,8   | 2,8                |
| infectious   | 5,5   | 5,5   | 5,3   | 5,2   | 5,3   | 5,3   | 5,2                |
| ophthalmologic   | 1,9   | 1,9   | 1,8   | 1,8   | 1,8   | 1,8   | 1,6                |
| otolaryngologic  | 2,0   | 2,1   | 1,9   | 1,9   | 1,9   | 1,8   | 1,8                |
| dermatovenerologic   | 1,9   | 1,9   | 1,9   | 1,9   | 1,9   | 1,8   | 1,8                |
| psychiatric  | 4,9   | 4,6   | 4,6   | 5,0   | 4,9   | 4,9   | 4,9                |
| narcological   | 0,7   | 0,7   | 0,7   | 0,7   | 0,7   | 0,6   | 0,6                |
| neurologic   | 3,6   | 3,5   | 3,4   | 3,3   | 3,3   | 3,3   | 3,2                |
| pregnant and childbirth women <sup>2)</sup>  | 33,9  | 30,8  | 30,2  | 29,6  | 29,2  | 28,7  | 28,4               |
| common beds  | 0,1   | 0,2   | 0,2   | 0,2   | 0,2   | 0,2   | 0,2                |
| others   | 11,1  | 10,0  | 9,9   | 9,8   | 9,5   | 9,4   | 9,1                |
| Beds for diseased children from total number of hospital beds, total <sup>3)</sup> | 40,7  | 40,9  | 42,9  | 43,6  | 44,6  | 44,3  | 44,8               |

1) Including non-state medical institutions

2) per 10 000 women of age 15-49

3) per 10 000 children of age 0-17

**Graduates of state higher educational institutions by medical specialization  
(person)**

|                         | 2000 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------|------|------|------|------|------|------|------|
| <b>Total</b>            | 1332 | 1207 | 1308 | 1331 | 1334 | 1211 | 1229 |
| including:              |      |      |      |      |      |      |      |
| medical work            | 957  | 868  | 858  | 635  | 678  | 629  | 618  |
| pediatrics              | -    | -    | -    | 267  | 287  | 227  | 277  |
| medical prophylactic    | 90   | 1    | -    | 98   | 75   | 79   | 72   |
| stomatology             | 173  | 154  | 181  | 209  | 176  | 156  | 151  |
| pharmaceutics           | 69   | 65   | 158  | 71   | 90   | 89   | 78   |
| pharmacology            | -    | -    | -    | -    | -    | -    | 1    |
| technology of medicines | -    | -    | -    | -    | -    | -    | 2    |
| medical biology         | 43   | 119  | 111  | 51   | 28   | 31   | 30   |

**Graduates of state specialized secondary educational institutions by medical specialization  
(person)**

|                        | 2000 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|------------------------|------|------|------|------|------|------|------|
| <b>Total</b>           | 4076 | 3510 | 3529 | 2924 | 2662 | 2924 | 2914 |
| including:             |      |      |      |      |      |      |      |
| medical work           | 1040 | 895  | 946  | 870  | 717  | 740  | 713  |
| obstetrical work       | 782  | 644  | 621  | 615  | 530  | 568  | 774  |
| medical prophylactic   | 161  | 184  | 173  | 147  | 87   | 128  | 141  |
| stomatology            | 304  | 215  | 216  | 210  | 203  | 226  | 123  |
| pharmaceutics          | 224  | 252  | 268  | 233  | 226  | 288  | 272  |
| nurse                  | 1369 | 1142 | 1121 | 731  | 776  | 848  | 758  |
| laboratory diagnostics | 196  | 178  | 184  | 118  | 123  | 126  | 133  |

**Number of medical and pharmaceutical scientists  
(person)**

| Years | Total | of them who have academic degree: |                        |
|-------|-------|-----------------------------------|------------------------|
|       |       | doctors of sciences               | candidates of sciences |
| 1995  | 1740  | 187                               | 753                    |
| 1996  | 1696  | 194                               | 738                    |
| 1997  | 1751  | 187                               | 776                    |
| 1998  | 1747  | 190                               | 792                    |
| 1999  | 1717  | 190                               | 800                    |
| 2000  | 1735  | 184                               | 805                    |
| 2001  | 1833  | 183                               | 805                    |
| 2002  | 1867  | 176                               | 794                    |
| 2003  | 1938  | 173                               | 800                    |
| 2004  | 1938  | 181                               | 773                    |
| 2005  | 1986  | 183                               | 814                    |
| 2006  | 1998  | 181                               | 814                    |

|             |      |     |     |
|-------------|------|-----|-----|
| <b>2007</b> | 2033 | 186 | 858 |
|-------------|------|-----|-----|

**Financial expenditures of the state budget of Azerbaijan Republic  
on social-cultural measurements in 2007**

|  | <b>doctors<br/>of<br/>sciences</b> | <b>candidates<br/>of<br/>sciences</b> |
|--|------------------------------------|---------------------------------------|
| <b>Expenditures - total</b>                                  | 6059,5                             | 24,0                                  |
| of which:  |                                    |                                       |
| social-cultural activities                                   | 1670,3                             | 6,6                                   |
| including:   |                                    |                                       |
| education  | 723,0                              | 2,9                                   |
| as percent to expenditures for<br>social-cultural activities | 43,3                               | x                                     |
| culture and art, mass media,<br>sport                        | 95,3                               | 0,4                                   |
| as percent to expenditures for<br>social-cultural activities | 5,7                                | x                                     |
| <b>health care</b>   | 257,2                              | 1,0                                   |
| as percent to expenditures for<br>social-cultural activities | 15,4                               | x                                     |
| social protection  | 578,4                              | 2,3                                   |
| as percent to expenditures for<br>social-cultural activities | 34,6                               | x                                     |
| social security  | 16,4                               | 0,1                                   |
| as percent to expenditures for<br>social-cultural activities | 1,0                                | x                                     |

**Population morbidity by main diseases groups <sup>1)</sup>  
(registration of patients with newly emerged cases)**

|  | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>All diseases - total, person</b>  | 1354071     | 1388783     | 1447322     | 1503824     | 1475056     | 1557804     |
| of which:  |             |             |             |             |             |             |
| some infectious and parasitic<br>diseases  | 128423      | 115411      | 120819      | 129299      | 131541      | 136612      |
| neoplasms  | 7293        | 7584        | 7688        | 7405        | 7901        | 8324        |
| endocrine system diseases,<br>malnutrition, metabolism   | 30275       | 31911       | 33684       | 34213       | 37387       | 39128       |
| blood and hematogenic organs<br>diseases and separate disturbances<br>of normal process of immune system | 28253       | 32606       | 34873       | 38005       | 36916       | 43484       |

|  |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|
| mechanism  |        |        |        |        |        |        |
| diseases of the nervous system   | 44581  | 43788  | 47202  | 48740  | 42689  | 45471  |
| diseases of the eye and adnexa   | 27567  | 27343  | 28573  | 29304  | 33573  | 38289  |
| diseases of the ear and mastoid process  | 24332  | 26731  | 28268  | 29034  | 32061  | 32729  |
| diseases of the circulatory system   | 102239 | 107440 | 110346 | 117345 | 116755 | 109487 |
| diseases of the respiratory system   | 617222 | 632892 | 658513 | 677123 | 643741 | 695066 |
| diseases of the digestive system   | 83525  | 89474  | 97787  | 107162 | 109487 | 109990 |
| diseases of urogenital system  | 50666  | 53944  | 55875  | 58978  | 58427  | 63792  |
| diseases of skin and subskin tissues   | 38610  | 42854  | 43864  | 44242  | 44745  | 45265  |
| pregnancy, labor and postpartum  | 13515  | 15745  | 17643  | 19190  | 24481  | 29340  |
| diseases of osteomuscular systems and connective tissues   | 13073  | 14078  | 15290  | 15749  | 17557  | 18200  |
| congenital anomalies (developmental defects)   | 2198   | 2546   | 2618   | 2694   | 2857   | 2753   |
| injuries, poisoning and some other results of impact of external reasons                                     | 113653 | 114595 | 115881 | 116122 | 101608 | 107174 |
| Number of diseases per 10 000 population - total   | 1681,7 | 1711,6 | 1767,9 | 1818,0 | 1763,5 | 1841,1 |
| of which:  |        |        |        |        |        |        |
| some infectious and parasitic diseases   | 159,5  | 142,2  | 147,6  | 156,3  | 157,3  | 161,5  |
| neoplasms  | 9,1    | 9,3    | 9,4    | 9,0    | 9,4    | 9,8    |
| endocrine system diseases, malnutrition, metabolism  | 37,6   | 39,3   | 41,1   | 41,4   | 44,7   | 46,2   |
| blood and hematogenic organs diseases and separate disturbances of normal process of immune system mechanism | 35,1   | 40,2   | 42,6   | 45,9   | 44,1   | 51,4   |
| diseases of the nervous system   | 55,4   | 54,0   | 57,7   | 58,9   | 51,0   | 53,7   |
| diseases of the eye and adnexa   | 34,2   | 33,7   | 34,9   | 35,4   | 40,1   | 45,3   |
| diseases of the ear and mastoid process  | 30,2   | 32,9   | 34,5   | 35,1   | 38,3   | 38,7   |
| diseases of the circulatory system   | 127,0  | 132,4  | 134,8  | 141,9  | 139,6  | 129,4  |
| diseases of the respiratory system   | 766,5  | 780,0  | 804,4  | 818,6  | 769,6  | 821,5  |
| diseases of the digestive system   | 103,7  | 110,3  | 119,4  | 129,5  | 130,9  | 130,0  |
| diseases of urogenital system  | 62,9   | 66,5   | 68,3   | 71,3   | 69,9   | 75,4   |
| diseases of skin and subskin tissues   | 48,0   | 52,8   | 53,6   | 53,5   | 53,5   | 53,5   |
| pregnancy, labor and postpartum <sup>2)</sup>  | 56,7   | 64,7   | 71,1   | 76,0   | 95,6   | 113,2  |
| diseases of osteomuscular systems and connective tissues   | 16,2   | 17,4   | 18,7   | 19,0   | 21,0   | 21,5   |
| congenital anomalies (developmental defects)   | 2,7    | 3,1    | 3,2    | 3,3    | 3,4    | 3,3    |
| injuries, poisoning and some other results of impact of external reasons                                     | 141,1  | 141,2  | 141,6  | 140,4  | 121,5  | 126,7  |

<sup>1)</sup> Data are indicated on the base of International Diseases Classification - X revision

<sup>2)</sup> per 10 000 women of age 15-49

**Morbidity of population by main diseases groups  
and by ages in 2007<sup>1)</sup>  
(registration of patients with newly emerged cases)**

|  | <b>0-13<br/>years old</b> | <b>14-29<br/>years old</b> | <b>30 years<br/>old and<br/>over</b> |
|--|---------------------------|----------------------------|--------------------------------------|
| <b>All diseases - total, person</b>  | <b>642302</b>             | <b>280115</b>              | <b>635387</b>                        |
| of which:  |                           |                            |                                      |
| some infectious and parasitic diseases   | 80108                     | 21966                      | 34538                                |
| neoplasms  | 286                       | 681                        | 7357                                 |
| endocrine system diseases, malnutrition, metabolism  | 14972                     | 4446                       | 19710                                |
| blood and hematogenic organs diseases and separate disturbances of normal process of immune system mechanism | 21176                     | 10668                      | 11640                                |
| diseases of the nervous system   | 20832                     | 7230                       | 17409                                |
| diseases of the eye and adnexa   | 15402                     | 7550                       | 15337                                |
| diseases of the ear and mastoid process  | 13447                     | 6231                       | 13051                                |
| diseases of the circulatory system   | 8569                      | 12218                      | 88700                                |
| diseases of the respiratory system   | 344471                    | 115086                     | 235509                               |
| diseases of the digestive system   | 37122                     | 20257                      | 52611                                |
| diseases of urogenital system  | 10547                     | 17181                      | 36064                                |
| diseases of skin and subskin tissues   | 18156                     | 9215                       | 17894                                |
| pregnancy, labor and postpartum  | -                         | 16525                      | 12815                                |
| diseases of osteomuscular systems and connective tissues   | 4419                      | 3181                       | 10600                                |
| congenital anomalies (developmental defects)   | 1801                      | 604                        | 348                                  |
| injuries, poisoning and some other results of impact of external reasons                                     | 33693                     | 21991                      | 51490                                |
| <b>All diseases - total, person</b>  | <b>3492,7</b>             | <b>1047,7</b>              | <b>1561,6</b>                        |
| of which:  |                           |                            |                                      |
| some infectious and parasitic diseases   | 435,6                     | 82,2                       | 84,9                                 |
| neoplasms  | 1,6                       | 2,5                        | 18,1                                 |
| endocrine system diseases, malnutrition, metabolism  | 81,4                      | 16,6                       | 48,4                                 |
| blood and hematogenic organs diseases and separate disturbances of normal process of immune system mechanism | 115,1                     | 39,9                       | 28,6                                 |
| diseases of the nervous system   | 113,3                     | 27,0                       | 42,8                                 |
| diseases of the eye and adnexa   | 83,8                      | 28,2                       | 37,7                                 |
| diseases of the ear and mastoid process  | 73,1                      | 23,3                       | 32,1                                 |
| diseases of the circulatory system   | 46,6                      | 45,7                       | 218,0                                |
| diseases of the respiratory system   | 1873,1                    | 430,5                      | 578,8                                |
| diseases of the digestive system   | 201,9                     | 75,8                       | 129,3                                |

|  |       |       |       |
|--|-------|-------|-------|
| diseases of urogenital system  | 57,4  | 64,3  | 88,6  |
| diseases of skin and subskin tissues                                     | 98,7  | 34,5  | 44,0  |
| pregnancy, labor and postpartum <sup>2)</sup>                            | -     | 134,3 | 94,1  |
| diseases of osteomuscular systems and connective tissues                 | 24,0  | 11,9  | 26,1  |
| congenital anomalies (developmental defects)                             | 9,8   | 2,3   | 0,9   |
| injuries, poisoning and some other results of impact of external reasons | 183,2 | 82,3  | 126,5 |

<sup>1)</sup> Data are indicated on the base of International Diseases Classification - X revision

<sup>2)</sup> Per 1000 women aged 15-29 years old and 30-49 years old

### Morbidity of population with malignant neoplasm by age and sex groups

|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|------|------|------|------|------|------|------|
| <b>Number of newly emerged cases, person</b> |      |      |      |      |      |      |      |
| total  | 4804 | 5086 | 5303 | 5591 | 6109 | 6277 | 6758 |
| men  | 2373 | 2497 | 2567 | 2796 | 2926 | 3135 | 3340 |
| women  | 2431 | 2589 | 2736 | 2795 | 3183 | 3142 | 3418 |
| including:                                   |      |      |      |      |      |      |      |
| <b>0-14</b>                                  |      |      |      |      |      |      |      |
| total  | 108  | 108  | 80   | 106  | 88   | 98   | 85   |
| boys   | 55   | 56   | 57   | 66   | 55   | 66   | 57   |
| girls  | 53   | 52   | 23   | 40   | 33   | 32   | 28   |
| <b>15-19</b>                                 |      |      |      |      |      |      |      |
| total  | 34   | 41   | 56   | 49   | 73   | 91   | 70   |
| boys   | 26   | 26   | 39   | 42   | 44   | 59   | 48   |
| girls  | 8    | 15   | 17   | 7    | 29   | 32   | 22   |
| <b>20-24</b>                                 |      |      |      |      |      |      |      |
| total  | 31   | 51   | 63   | 62   | 90   | 87   | 73   |
| men  | 26   | 20   | 38   | 34   | 46   | 40   | 34   |
| women  | 5    | 31   | 25   | 28   | 44   | 47   | 39   |
| <b>25-29</b>                                 |      |      |      |      |      |      |      |
| total  | 55   | 58   | 79   | 78   | 99   | 93   | 121  |
| men  | 26   | 20   | 32   | 38   | 53   | 51   | 53   |
| women  | 29   | 38   | 47   | 40   | 46   | 42   | 68   |
| <b>30-34</b>                                 |      |      |      |      |      |      |      |
| total  | 130  | 132  | 157  | 167  | 266  | 147  | 178  |
| men  | 51   | 42   | 49   | 76   | 125  | 50   | 68   |
| women  | 79   | 90   | 108  | 91   | 141  | 97   | 110  |
| <b>35-39</b>                                 |      |      |      |      |      |      |      |
| total  | 245  | 242  | 309  | 324  | 415  | 325  | 286  |
| men  | 95   | 92   | 99   | 109  | 170  | 114  | 93   |
| women  | 150  | 150  | 210  | 215  | 245  | 211  | 193  |
| <b>40-59</b>                                 |      |      |      |      |      |      |      |
| total  | 1733 | 1861 | 2091 | 2282 | 2615 | 2679 | 3084 |
| men  | 780  | 825  | 877  | 1006 | 1096 | 1190 | 1346 |
| women  | 953  | 1036 | 1214 | 1276 | 1519 | 1489 | 1738 |
| <b>60 and over</b>                           |      |      |      |      |      |      |      |

|   |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|
| total   | 2468  | 2593  | 2468  | 2523  | 2463  | 2757  | 2861  |
| men   | 1314  | 1416  | 1376  | 1425  | 1337  | 1565  | 1641  |
| women   | 1154  | 1177  | 1092  | 1098  | 1126  | 1192  | 1220  |
| <b>Per 100 000 population of the same sex and age group</b> |       |       |       |       |       |       |       |
| total   | 60.6  | 63.6  | 65.9  | 68.9  | 74.6  | 75.9  | 80.8  |
| men   | 61.2  | 63.8  | 65    | 70.2  | 72.7  | 77    | 81.1  |
| women   | 60    | 63.5  | 66.7  | 67.7  | 76.5  | 74.8  | 80.5  |
| including:  |       |       |       |       |       |       |       |
| <b>0-14</b>   |       |       |       |       |       |       |       |
| total   | 4.4   | 4.6   | 3.5   | 4.8   | 4.1   | 4.7   | 4.1   |
| boys  | 4.4   | 4.6   | 4.8   | 5.7   | 4.9   | 6     | 5.3   |
| girls   | 4.5   | 4.6   | 2.1   | 3.8   | 3.2   | 3.2   | 2.9   |
| <b>15-19</b>  |       |       |       |       |       |       |       |
| total   | 4.2   | 4.9   | 6.5   | 5.5   | 8.1   | 9.9   | 7.5   |
| boys  | 6.4   | 6.1   | 8.9   | 9.3   | 9.5   | 12.5  | 10.1  |
| girls   | 2     | 3.7   | 4     | 1.6   | 6.5   | 7.1   | 4.9   |
| <b>20-24</b>  |       |       |       |       |       |       |       |
| total   | 4.6   | 7.3   | 8.8   | 8.4   | 11.7  | 10.9  | 8.8   |
| men   | 7.9   | 5.8   | 10.7  | 9.2   | 11.9  | 9.9   | 8.1   |
| women   | 1.5   | 8.8   | 7     | 7.6   | 11.6  | 12    | 9.6   |
| <b>25-29</b>  |       |       |       |       |       |       |       |
| total   | 8.9   | 9.4   | 12.7  | 12.3  | 15.2  | 13.9  | 17.5  |
| men   | 8.9   | 6.8   | 10.8  | 12.5  | 16.8  | 15.6  | 15.6  |
| women   | 8.9   | 11.8  | 14.5  | 12.2  | 13.7  | 12.3  | 19.4  |
| <b>30-34</b>  |       |       |       |       |       |       |       |
| total   | 19.5  | 20.1  | 24.2  | 26.3  | 42.9  | 24    | 29.2  |
| men   | 16.2  | 13.5  | 16    | 25.4  | 42.6  | 17.3  | 23.5  |
| women   | 22.4  | 25.9  | 31.6  | 27.2  | 43.1  | 30.1  | 34.3  |
| <b>35-39</b>  |       |       |       |       |       |       |       |
| total   | 3.5   | 34.9  | 45.1  | 47.9  | 61.9  | 49.1  | 43.8  |
| men   | 28.5  | 28    | 30.6  | 34.2  | 53.9  | 36.6  | 30.2  |
| women   | 40.9  | 41.1  | 58.1  | 60.1  | 69.1  | 60.2  | 55.9  |
| <b>40-59</b>  |       |       |       |       |       |       |       |
| total   | 123.9 | 125.3 | 132.6 | 135.8 | 146.4 | 141.8 | 155.4 |
| men   | 115.5 | 107.4 | 115.3 | 124.4 | 127.9 | 131.6 | 142.1 |
| women   | 131.8 | 144.5 | 148.7 | 146.4 | 163.5 | 151.2 | 167.6 |
| <b>60 and over</b>  |       |       |       |       |       |       |       |
| total   | 329.3 | 338.8 | 319.8 | 329   | 326.4 | 370.1 | 386.1 |
| men   | 409   | 431.1 | 415.6 | 434.1 | 414.4 | 491.8 | 519.3 |
| women   | 269.5 | 269.4 | 247.8 | 250.3 | 260.7 | 279.4 | 287.1 |

**Morbidity of population with malignant neoplasm by age and sex groups in 2007**

| 2007   |      |
|--|------|
| <b>Number of newly emerged cases, person</b> |      |
| total  | 7027 |
| men  | 3500 |
| women  | 3527 |
| including:                                   |      |
| <b>0-13</b>                                  |      |
| total  | 70   |

|   |       |
|---|-------|
| boys  | 49    |
| girls   | 21    |
| <b>14-17</b>  |       |
| total   | 59    |
| boys  | 34    |
| girls   | 25    |
| <b>18-29</b>  |       |
| total   | 197   |
| men   | 98    |
| women   | 99    |
| <b>30-34</b>  |       |
| total   | 181   |
| men   | 61    |
| women   | 120   |
| <b>35-39</b>  |       |
| total   | 317   |
| men   | 108   |
| women   | 209   |
| <b>40-59</b>  |       |
| total   | 3216  |
| men   | 1442  |
| women   | 1774  |
| <b>60 and over</b>  |       |
| total   | 2987  |
| men   | 1708  |
| women   | 1279  |
| <b>Per 100 000 population of the same sex and age group</b> |       |
| total   | 83,0  |
| men   | 83,9  |
| women   | 82,3  |
| including:  |       |
| <b>0-13</b>   |       |
| total   | 3,8   |
| boys  | 5,0   |
| girls   | 2,4   |
| <b>14-17</b>  |       |
| total   | 8,0   |
| boys  | 9,0   |
| girls   | 7,0   |
| <b>18-29</b>  |       |
| total   | 10,2  |
| men   | 10,0  |
| women   | 10,3  |
| <b>30-34</b>  |       |
| total   | 29,3  |
| men   | 20,7  |
| women   | 37,2  |
| <b>35-39</b>  |       |
| total   | 49,3  |
| men   | 35,6  |
| women   | 61,5  |
| <b>40-59</b>  |       |
| total   | 155,8 |

|                    |       |
|--------------------|-------|
| men                | 146,7 |
| women              | 164,1 |
| <b>60 and over</b> |       |
| total              | 400,9 |
| men                | 537,3 |
| women              | 299,5 |

**Morbidity of population with malignant neoplasm by different localizations  
(newly emerged cases)**

|   | 2000        | 2002        | 2003        | 2004        | 2005        | 2006        | 2007        |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Newly emerged cases with neoplasms - total, person</b> | <b>4804</b> | <b>5303</b> | <b>5591</b> | <b>6109</b> | <b>6277</b> | <b>6758</b> | <b>7027</b> |
| of them:  |             |             |             |             |             |             |             |
| mouth cavity  | 81          | 103         | 121         | 136         | 116         | 121         | 152         |
| lips  | 26          | 26          | 38          | 38          | 41          | 26          | 32          |
| gullet  | 260         | 262         | 289         | 303         | 293         | 340         | 344         |
| stomach   | 574         | 717         | 703         | 732         | 715         | 777         | 816         |
| rectum  | 170         | 198         | 196         | 235         | 234         | 259         | 258         |
| larynx  | 143         | 111         | 136         | 164         | 154         | 161         | 162         |
| trachea of bronchial tubes and lungs                      | 606         | 615         | 655         | 690         | 765         | 831         | 884         |
| mummy   | 669         | 814         | 844         | 970         | 958         | 1064        | 1070        |
| melanoma of skin  | 21          | 18          | 31          | 27          | 32          | 23          | 30          |
| <b>Per 100 000 population - total</b>                     | <b>60,6</b> | <b>65,9</b> | <b>68,9</b> | <b>74,6</b> | <b>75,9</b> | <b>80,8</b> | <b>83,0</b> |
| of them:  |             |             |             |             |             |             |             |
| mouth cavity  | 1,0         | 1,3         | 1,5         | 1,7         | 1,4         | 1,4         | 1,8         |
| lips  | 0,3         | 0,3         | 0,5         | 0,5         | 0,5         | 0,3         | 0,4         |
| gullet  | 3,3         | 3,3         | 3,6         | 3,7         | 3,5         | 4,1         | 4,1         |
| stomach   | 7,2         | 8,9         | 8,7         | 8,9         | 8,6         | 9,3         | 9,6         |
| rectum  | 2,1         | 2,5         | 2,4         | 2,9         | 2,8         | 3,1         | 3,0         |
| larynx  | 1,8         | 1,4         | 1,7         | 2,0         | 1,9         | 1,9         | 1,9         |
| trachea of bronchial tubes and lungs                      | 7,6         | 7,6         | 8,1         | 8,4         | 9,2         | 9,9         | 10,4        |
| mummy   | 8,4         | 10,1        | 10,4        | 11,8        | 11,6        | 12,7        | 12,6        |
| melanoma of skin  | 0,3         | 0,2         | 0,4         | 0,3         | 0,4         | 0,3         | 0,4         |

**Morbidity of population by malignant neoplasm**

|   | 2000         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007         |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Number of newly emerged cases, person</b>                            | <b>4804</b>  | <b>5303</b>  | <b>5591</b>  | <b>6109</b>  | <b>6277</b>  | <b>6758</b>  | <b>7027</b>  |
| per 100 000 population  | 60,6         | 65,9         | 68,9         | 74,6         | 75,9         | 80,8         | 83,0         |
| <b>Number of cases registered by medical-prophylactic institutions,</b> | <b>21088</b> | <b>20099</b> | <b>21183</b> | <b>22165</b> | <b>23088</b> | <b>24286</b> | <b>24431</b> |

|                           |     |       |       |       |       |       |       |
|---------------------------|-----|-------|-------|-------|-------|-------|-------|
| <b>person</b>             |     |       |       |       |       |       |       |
| per 100 000<br>population | 266 | 249,6 | 261,1 | 270,8 | 279,1 | 290,3 | 288,7 |