REVIEW

ASSISTANCE OF THE UNITED STATES OF AMERICA IN THE DEVELOPMENT OF THE HEALTH CARE SYSTEM OF GEORGIA

Tengiz VERULAVA¹⊠, Avtandil JORBENADZE²

- ¹ School of Business, Caucasus University, Tbilisi, Georgia
- ² Chapidze Emergency Cardiology Center, Tbilisi, Georgia

Received 23th Nov 2023, Accepted 25th Febr 2024 https://doi.org/10.31688/ABMU.2024.59.1.12

ABSTRACT

After gaining independence in 1991, during the first years, Georgia experienced a difficult period of patriotic and civil wars, severe economic crises created after the collapse of the Soviet Union. The USA was Georgia's primary source of financial, humanitarian, and technical support since its first days of independence. The American people and government have made essential contributions to Georgia's political, economic, and social growth. During this most difficult period, American assistance was crucial to Georgia. This assistance can be divided into three parts: humanitarian aid (medicines and medical consumables), technical assistance (bringing new medical directions to the country, raising the education of medical personnel and society), promoting healthcare system improvement (via combined projects, programs and research with numerous USA organizations, foundations, and scientific research institutions). This fact confirms the USA consistent dedication to assisting the Georgian people in their efforts to establish a democratic society. Over the past 30 years, Georgia and the USA have been constructing friendship and mutual respect bridges based on shared values, common strategic interests, and mutually beneficial cooperation. It is in the interests of both Georgia and the USA to

RÉSUMÉ

Assistance des États-Unis au développement du système de soins de santé de Géorgie

Après avoir accédé à l'indépendance en 1991, la Géorgie a connu au cours des premières années une période difficile de guerres patriotiques et civiles, de graves crises économiques créées après l'effondrement de l'Union soviétique. Les États-Unis ont été la principale source de soutien financier, humanitaire et technique de la Géorgie depuis les premiers jours de son indépendance. Le peuple et le gouvernement américains ont apporté des contributions essentielles à la croissance politique, économique et sociale de la Géorgie. Durant cette période des plus difficiles, l'aide américaine a été cruciale pour la Géorgie, qui peut être divisée en trois parties: l'aide humanitaire (médicaments et consommables médicaux), assistance technique (apportant de nouvelles orientations médicales au pays, améliorant la formation du personnel médical et de la société), promotion de l'amélioration du système de santé (via des projets, des programmes et des recherches combinés avec de nombreuses organisations, fondations et instituts de recherche scientifique américains). Ce fait confirme la cohérence des États-Unis dévouement à aider le peuple géorgien dans ses efforts

deepen relations between each other, to have a reliable partnership and alliance. The fact that Georgia consistently experienced an attitude of equal interaction while working with American and European governmental and public institutions is especially notable.

Keywords: Georgia, USA, health care system, humanitarian aid, technical assistance

Introduction

After gaining independence in 1991, during the first four years, Georgia experienced a difficult period of patriotic and civil wars, severe economic crises created after the collapse of the Soviet Union. According to experts' calculations, between 1990 and 1994, the gross domestic product (GDP) per capita decreased from about \$8,000 to \$2,200, or 70%, which was one of the lowest rates among Eurasian countries. In 1994, the annual inflation rate exceeded 7840%, and industrial production decreased by more than half1.

The healthcare system fell apart as a result of the severe economic crisis. Health-care funding from the government has been significantly reduced. The funds provided by the state to finance health care were much less than the bare minimum of medical services required. In the early 1990s, the share of health in the state budget decreased from 13.2% (1991) to 0.54% (1994)². In 1995, the state's share of total health care expenditures decreased to 4.9%³. Health care costs per capita in 1985 amounted to 95.5 US dollars, in 1990 to 13 dollars, and by 1994 it fell to 0.90 dollars⁴.

As a result of the current economic crisis, medical personnel's salary became so symbolic that the annual income was less than the monthly subsistence minimum. The number of nurses has substantially dropped as a result of inadequate compensation. Many famous specialists left the profession and the country because of inadequate salary and unstable economic situations⁵.

Due to the low level of government investment on healthcare, people had to pay for medical services out of their financial resources. The population in a vulnerable condition was unable to receive essential medical care because of a lack of funding.

pour établir une société démocratique. Au cours des 30 dernières années, la Géorgie et les États-Unis ont construit des ponts d'amitié et de respect mutuel basés sur des valeurs partagées, des intérêts stratégiques communs et une coopération mutuellement bénéfique. les intérêts de la Géorgie et des États-Unis à approfondir leurs relations, à établir un partenariat et une alliance fiables. Il est particulièrement remarquable que la Géorgie ait constamment adopté une attitude d'interaction égale dans sa collaboration avec les institutions gouvernementales et publiques américaines et européennes.

Mots-clés: Géorgie, États-Unis, système de santé, aide humanitaire, assistance technique

Population's demographic indicators deteriorated: morbidity increased, birth rate decreased and the number of dangerous illnesses grew. In 1995, the average life expectancy was 70.3 years, down 3 years from the previous year⁶. The health of mothers and children has gotten worse. In the period from 1990 to 1995, maternal mortality increased from 20.5 to 55.1 (per 100,000 live births), and child mortality increased from 20.7 to 28.6. Better health care management, according to experts, could have prevented 57% of child fatalities⁷. Of the stillbirths, 74.2% died before delivery, while 72% of patients under 1 year old were hospitalized 36-48 hours late.

The USA was Georgia's primary source of financial, humanitarian, and technical support since its very first days of independence. The United States recognized Georgia's independence on December 25, 1991, during the presidency of Zviad Gamsakhurdia. Georgian-American relations officially started on this day.

AMERICAN ASSISTANCE TO GEORGIA DURING THE FIRST YEARS OF INDEPENDENCE

During this most difficult period, American assistance was crucial to Georgia, and can be divided into three parts:

- Humanitarian aid (medicines and medical consumables):
- Technical assistance (bringing new medical directions to the country, raising the education of medical personnel and society);
- Promoting healthcare system improvement (via combined projects, programs and research with numerous US organizations, foundations, and scientific research institutions).

The most challenging issue that developed after gaining independence was the supply of essential medications and medical consumables. Emergency operations were literally delayed due to the lack of appropriate materials. There were issues with the management of both acute and chronic patients. The most difficult situation was for those sick and disabled people who need constant replacement therapy and government-supplied medications. An extremely difficult situation was created in the supply of insulin for both children and adults with diabetes.

The situation was further complicated by the large number of wounded people who were left without vital medicines as a result of the ongoing hostilities in Abkhazia and Samachablo. The country desperately required medical humanitarian aid.

The USA help might be seen as a series of actions for the survival of the Georgian people during this most difficult period of time.

It should be emphasized that the USA was supplying Georgia with humanitarian help long before diplomatic relations were established. On January 22, 1992, George Bush (Senior) declared at the International Conference on Humanitarian Aid to the Republics of the Former Soviet Union that Washington would give the former Soviet republics, including Georgia, \$600 million in technical and humanitarian aid.

"Our mission is to respond together to the dramatic revolution that demolished Soviet Communism, leaving 12 new nations struggling to find their place in the world and feed their people this winter, spring, and beyond. The ultimate success or failure of these new nations is determined by their efforts and intelligence. They cannot, however, win on their own. All of the continents must come together in support of these 12 new nations. At a time when these new states are fighting for the ideals on which America was founded, the United States cannot back down"8.

Two months after this announcement, on March 23, 1992, the United States provided medical and humanitarian aid to Georgia⁹.

After Eduard Shevardnadze's return to Georgia, American-Georgian ties reached a particularly high level. Diplomatic relations between Georgia and the USA were established on April 23, 1992, and US Secretary of State James Baker made an official state visit to Georgia on May 25 of the same year. The visit of the American Secretary of State was crucial for the country that had been freed from the totalitarian rule of the Soviet Union and was going through a severe political, social, and economic crisis. This visit played a decisive role in breaking the isolation and emphasized Washington's interest in the newly independent state. This was a clear message from the USA that Georgia was a part of its geopolitical

interests. The Friends of Georgia organization, founded by James Baker and other famous figures, played a significant role in bringing humanitarian aid to the country. Upon returning to his homeland, Baker provided first aid to Georgia. President George H. W. Bush sent 100,000 tons of wheat. Undoubtedly, in a country where a civil war was raging and a big portion of the population had to stand in line for hours for bread, this was the most essential help.

The humanitarian missions of American governmental and non-governmental groups have increased since the establishing of diplomatic relations between Georgia and the USA. Georgia's membership in international organizations, such as the International Monetary Fund and the World Bank, was supported by the USA¹⁰.

Since 1992, the Georgian mission of the US International Development Agency (USAID), which was mainly a coordinator of non-military international aid, started working in Georgia. It is a US government organization that aims to help people from various countries who are attempting to overcome poverty, improve their living conditions, recover from accident damage, and develop a free and democratic country.

Since then, the American people have provided 1.8 billion dollars to Georgia through USAID. The US government allocated around \$50 million per year to 55 different programs through successful partnerships. These programs supported Georgia's democratic, free market economy and Western-oriented development.

On May 4, 1992, two planes of medical aid and three planes of food aid landed in Georgia¹¹, and on May 28, White House press secretary Marlene Fitzwater made a statement about humanitarian aid to displaced people in the Caucasus¹². The statement claims that the USA provided \$4 million in aid "to those affected by the conflicts in the Caucasus region". In the statement, it was emphasized that "in the past two years, ethnic conflicts have increased in the Caucasus region, which has led to armed conflicts in the Nagorno-Karabakh region of Azerbaijan and South Ossetia of Georgia". The goal of humanitarian aid was to provide medical and social services to internally displaced people.

As mentioned before, a critical situation has arisen in the supply of insulin for diabetic children and adults. The number of insulin-dependent diabetics in Georgia exceeded 40,000. The current situation was especially aggravated by the condition of diabetic children (more than 300 children under the age of 14). Due to the country's terrible economic circumstances, the government was unable to purchase

insulin, resulting in the deaths of tens of thousands of diabetics.

Eduard Shevardnadze, the head of Georgia's government, personally requested that US Secretary of State James Baker solve the most acute issue. He did not hesitate to help. On June 21, 1992, plane C141 landed in Georgia from the state of New Jersey. Georgians received 194,000 vials of insulin and 500,000 needles as part of the medical and humanitarian mission (Tutwiler, 1992f). Tens of thousands of lives were saved thanks to this effort, which provided Georgia in 1992–1994 with insulin worth \$15 million that was brought from the USA in a humanitarian manner.

It is important to highlight the special contribution of William Taylor, the US State Department's coordinator of aid for Eastern Europe and the former Soviet Union, through whom a large batch of medicines and medical equipment arrived from America and was distributed to medical institutions and hospitals in Georgia.

The United Methodist Committee on Relief (UMCOR) should be recognized for its assistance for children's medical care, the provision of medicines for specific patients, and other medical care programs for the helpless through the following projects:

- Self-reimbursing healthcare program Anti-epileptic medications were purchased and supplied free of charge to all under 3-year-old and socially vulnerable children under the age of 15 who were registered in the Institute of Neurology.
- Distribution of humanitarian medicines distribution of essential medicines and medical consumables in Tbilisi and Imereti region, improving the knowledge of doctors and society.

During Bill Clinton's presidency (1993–2001), cooperation between Georgia and the USA was significantly deepened. To strengthen relations between the USA and Georgia and bilateral trade connections, memoranda were signed (The White House, 1994). In 1994, Georgia began enacting radical reforms. The USA offered the Georgian side a plan that would help the country overcome the current crisis and carry out financial and economic reforms. The plan included a decrease in government spending, the elimination of inefficient state agencies, a reduction in the number of state personnel and their budgets and the introduction and advancement of market economy concepts. It should be emphasized that technical help has long since replaced US humanitarian aid.

Fight against infectious diseases

Infectious disease rates significantly rose in the 1990s as a result of the healthcare system's collapse, the degradation of the sanitary-epidemiological environment, and the failure of preventive efforts.

Children and adolescents did not receive their recommended vaccinations on time, which made the situation even more challenging and resulted in an outbreak of diphtheria and other deadly infections.

Due to the generous support of the governments of the USA, Japan, and other developed nations, especially the United Nations Children's Fund, it was possible to begin scheduled vaccinations followed by mass vaccination of the population during this challenging time. With the help of these organizations, in 1995-1996, a campaign of mass immunization of the population aged 3-60 with TD vaccine was carried out in the country and reached 83% of the population¹³. With their support, in 1995, a serological study of the population of different ages was conducted in Kakheti on the presence of immunity against diphtheria after a booster dose. It turned out that the population aged 30-49 years old lacked protective immunity. Based on the research, in 1997, this age group was vaccinated with the 2nd booster dose of TD vaccine, which covered 86%. As a result, the diphtheria outbreak has been under control since 1998.

As a result of numerous outbreaks of waterborne intestinal diseases, hepatitis and typhoid (Akhaltsikhe, Poti, Batumi, Kobuleti, Khoni, Rustavi...), effective anti-epidemic measures were undertaken.

Anthony Fauci, director of the American National Institute of Allergy and Infectious Diseases, made a special contribution to the fight against AIDS and the formation of the safe blood program.

Georgia received the status of a poliomyelitis-free zone in June 2002 from the WHO's European Region Certification Commission, as a result of achieving a high level of immunization, our nation still holds this distinction today.

It is worth noting the cooperation started with the US National Center for Aeronautics and Space Research, which provided for the initiation of epidemiological studies from space, the creation of communication systems for telemedicine. With the help of the center, it became possible to gather details about the spread of Georgia's microbial flora through space scanning, enabling us to forecast a specific group of diseases. Within the framework of the program, epidemiological studies were carried out in Akhalkalaki and Akhaltsikhe (the natural center of black plague) and Lagodekhi (the natural center of malaria). Daniel Goldin, the director of the US National Aeronautics and Space Agency, and Arnaul Nikogosian, the top medical expert at the same organization, both made significant achievements in this regard.

Reorientation of the healthcare system

Since the mid-1990s, the issue of fundamental reorganization, the implementation of a fundamentally new model, has been on the table in order to get out of the severe crisis situation created in the field of health care.

The development of the healthcare system reorientation project included the involvement of world-class international consultants and experts. One of the first with whom the Minister of Health held a meeting was the Director of the Department of Health Policy and Management at Emory University (Atlanta, Georgia), Richard Saltman, Professor of Health Policy and Management at the School of Public Health. Richard Saltman's worldwide recognition can be demonstrated by the fact that he founded the European Observatory on Health Systems and Policies in Brussels. The meeting resulted in the establishment and agreement of reorientation priorities, measures, and indicators, as well as the planning of intense bilateral and technical working group meetings with sectoral stakeholders. Richard Saltman highly appreciated the reorientation project of the Georgian health care system and the willingness of the Minister of Health to be one of the first in the post-Soviet space to implement the most difficult reforms in the field. According to him, "it is impossible to implement the reform without the intellectual support of experts, because Georgia could not begin the work corresponding to this type of reorientation under the current socioeconomic development conditions." The involvement of world-renowned experts in the field in the process of developing the healthcare system reorientation project provided an opportunity to attract more support from international organizations.

Cooperation together with the World Health Organization, the American International Health Association and the US Agency for International Development laid the foundation for the World Bank's involvement in the Georgian health system project. It is remarkable in this regard that James Smith, the executive director of the American International Health Alliance (AIHA), provided significant assistance in arranging the first meeting between the Minister of Health and the World Bank. This meeting greatly determined the start of fundamental reforms in the health care system in Georgia and its successful implementation. For his contributions to Georgia, James Smith, executive director of the American International Health Alliance, was given the Medal of Honor.

During the meeting, the World Bank representatives agreed to take part in the health care system's reorientation project after noting that the main directions of the project outlined by the minister of health coincide with their vision. The World Bank has allocated a special mission working on the reorientation project. The Republic of Georgia's Ministry of Health Protection developed a health care system

reorientation project as a result of a one-year intensive collaboration with World Bank leading professionals and invited international consultants and experts. In this regard, it is important to highlight the contributions of World Bank President James Wolfenson, World Bank South Caucasus Division Head Judy O'Connor, and mission members of the World Bank Georgia Health Project Antonio Campos, Laura Rose, and Akhti Kalikormi.

The partnership with the World Bank, in turn, piqued the International Monetary Fund's attention and unequivocal support for the reform process.

The concept of total reorganization of Georgia's health-care system was introduced in October 1994. The idea included all components of the health care system's reorganizing and defined the legal basis for the changes that would be executed in the following years, as well as the principles of organizational arrangement and the financing of the field¹⁴.

The concept of reorganization passed theoretical approval at international scientific-practical conferences held in Borjomi in 1994-1995. Leading specialists from the World Bank's health department, as well as US ambassadors to Georgia Kent Brown and William Courtney, actively participated in the panel discussion during the conference, which was organized as an open conversation between international experts. At the conferences, the process of establishing an action plan for the reorientation of the healthcare system was officially launched. The US Agency for International Development, the International Monetary Fund, the World Health Organization, the World Bank, and the governments of the United States, Japan, Germany, Sweden, and the United Kingdom all contributed to the process of structural and qualitative reform in the healthcare system.

The assistance of the US Agency for International Development in the medical field was of great importance for the country, which was implemented in two directions:

- Emergency aid, humanitarian medicines, children's food and others, which make up 70-75% of medicines consumed in medical institutions of Georgia.
- Special programs that consider the development and implementation of specialized training programs. The Atlanta-Tbilisi partnership program, for instance, was quite fascinating and essential since it provides for the construction of new types of medical institutions, information provision, and participation in medical education and science reforms.

Development of public health

In order to develop a modern public health system in Georgia, organizations like the World Bank, WHO, the US Center for Disease Control and Prevention, Israel's public health, and especially US Secretary of Health and Human Services Mrs. Donna Edna Shaleila, have made significant contributions. With the help of Mrs. Donna Edna Shaleila, the visit of the Minister of Health to the US Center for Disease Control and Prevention (CDC) was carried out. The center promised to help in the construction of a modern public health system in Georgia, for which a special representative, the head of the US Center for Disease Control and Prevention, Dr. Stanley Music, was appointed. The first mission of the US Centers for Disease Control and Prevention in Georgia was carried out in 1994-1996 and was led by Stanley Music.

The foundation was prepared for a new approach to public health that includes the departments of public health, sanitary monitoring, and hygienic norms as a result of the reorientation started in Georgia's healthcare system. The Department of Public Health was divided into three divisions: the National Center for Disease Control, the Center for Health Promotion and Disease Prevention, and the Center for Medical Statistics and Information. A two-level system of public health services was formed at the central level and at the local/municipal level in order to decentralize. Finance for public health was dispersed at the central and municipal levels, while the management and administration were distributed at the central, regional, and municipal levels. A framework for coordinating population health promotion initiatives, medical-prophylactic population examinations, and the promotion of a healthy lifestyle was introduced. The establishment of a public health network in Georgia was of great importance, both in terms of organizing epidemic surveillance and improving the disease control system, as well as in terms of predicting epidemics and developing and implementing adequate preventive measures.

It should be emphasized that numerous other countries, particularly those in Eastern Europe, developed public health services with similar functions and names in the following years. It should be mentioned that, apart from the Baltic countries, Georgia was the only nation that rejected the Soviet sanitary-epidemiological system, fully rebuilt it, and established a new public health infrastructure based on European principles¹⁵.

The National Center for Disease Control established training programs for hospital epidemiologists and experienced nurses as part of the Tbilisi-Minneapolis (Minnesota) partnership program, with the aim of enhancing hospital infection control. Within the framework of the program, it was possible to train the first cohort of Georgian epidemiologists in accordance with modern standards.

A special note should be made of the Tbilisi-San Francisco (California) partnership program, whose goal was to establish a public institution that could function independently and supply Georgians with safe blood and blood components (blood bank).

It is particularly significant that the Lugar Center was founded in 1997 right after the conclusion of the biosafety agreement signed by the presidents of the USA and Georgia. It was about the non-proliferation of nuclear, chemical and biological weapons in the world and was one of the main components of the country's biological security. The agreement facilitated in the development of such programs not only in Georgia, but also throughout Eastern Europe. The establishment of the center in Georgia was especially lobbied by the well-known Republican Senator Richard Lugar. The decision to establish Lugar's laboratory was made during Lugar's first meeting with President Eduard Shevardnadze in 1998. Considering that the Lugar Center is one of the main and important tools of the health care system, in 2002, at a meeting between Richard Lugar and the Minister of State, it was agreed that the Lugar Center would be under the jurisdiction of the health sector and integrate into the public health system.

The Lugar Center is currently one of the most prominent centers in the Caucasus for scientific research in the fields of biomedicine and biosafety. The center is equipped to the highest standards and has been awarded the third level of biosafety, meaning that nearly all species of microbes are examined here. The third-level laboratory of Georgia can also diagnose the coronavirus, which provides an opportunity for timely detection and management of this infection. Its role is especially important in the era of modern pandemics.

Reforming primary care

Several pilot programs aimed at enhancing the primary health care system have been launched since 1995. Programs were created with the primary purpose of training doctors to become family doctors¹⁶.

The development of rural primary health care was financed by the United States Agency for International Development (USAID) and implemented by the program of the American International Health Alliance (AIHA) and the International Medical Corps (IMC).

Since 2002, the World Bank has started supporting the further reform of the primary health care sector. It was intended to train the staff in family medicine. As part of the primary health care strengthening policy, a rational and cost-effective medication prescription project was implemented with the support of the UK Department for International Development and the World Health Organization.

The World Bank's second project, which was aimed at developing the network of primary healthcare, was launched at the same time. The USAID has begun to develop primary health care projects in Shida Kartli, Guria, and Mtskheta Mtianeti regions. It was possible to train several hundred doctors and nurses in the field of family medicine thanks to the assistance of the governments of the European Union, Great Britain, Sweden, and Japan.

The Mtskheta-Mtianeti-Milwaukee (Wisconsin) partnership program started functioning, the goal of which was to improve the primary health care system in the Mtskheta-Mtianeti region. Within the framework of the program, the first family medicine center was built in Mtskheta with resources allocated from the Daniel Meehan Family Foundation, a partner organization of the American International Health Alliance (AIHA), which was staffed by doctors and nurses trained at the Family Medicine Center in Milwaukee, Wisconsin. Twenty doctors and nurses were trained in the USA as part of the abovementioned project. The family medicine center established with American assistance was one of the first significant investments in the development of the country's primary health care system, which is still functioning successfully today.

With the support of The United Methodist Committee on Relief (UMCOR), a project for the development of primary links of health care was implemented, which provided for the rehabilitation of primary link institutions of health care in Imereti districts (Tskaltubo, Terjola) and training of medical personnel.

The material base of primary health care facilities has undergone serious updating. Physical infrastructure development projects were started with the support of international organizations. International organizations assisted to launch physical infrastructure development projects. The World Bank, the US Agency for International Development, the European Union, the governments of Great Britain and Japan planned and began the rehabilitation of primary health care facilities, as well as the provision of technical equipment. About 200 clinics were renovated and equipped with modern technology thanks to the abovementioned efforts.

Reforming the hospital sector

One of the key reorientation directions was hospital sector reform, in which international organizations actively participated, providing Georgia with financial and expert assistance. Hospital sector optimization actually began in 1999. For Georgia, the World Bank created a "Hospital Restructuring Program" that determined which hospitals should

remain open and which ones should be closed down or added to the list of privatized facilities¹⁷.

According to one of the main points in the World Bank's plan, a special structure should be created, which would ensure the regulation of legal issues related to the optimization of the hospital sector and the administration of the "Hospital Sector Restructuring Fund". Funds acquired from the privatization of Group B hospitals would be put into the foundation, which would later be used to enhance the healthcare sector's infrastructure and equipment. In addition, one-time compensation will be paid to dismissed medical staff. The creation of the Fund for Restructuring of Georgian Hospitals in 2000 allowed for the collection of funds through asset sales and leases for the purpose of rehabilitating high-priority facilities. Later, in 2006, the Foundation merged with Georgia's Center for Implementation of Health and Social Protection Projects, along with the National Institute of Social and Health. The USAID played a key role in the development of the hospital accreditation system.

The hospital reform envisaged the promotion of the development of various forms of ownership of medical organizations, both state and private for-profit and non-profit medical organizations¹⁸. Thus, the competition between the forms of ownership of medical organizations would increase, which would contribute to the possibility for the patient to choose the medical institution he wants, which is financially available, to increase the quality of medical services and to contain the costs of health care^{19,20}.

On September 16, 1996, Jo Ann University Hospital was formed as a diagnostic and treatment facility for pediatric cardiology and congenital heart defects in order to support the development of numerous types of ownership of medical organizations in Georgia. Jo Ann Medical Center is the first non-commercial, non-profit medical organization in Georgia.

Development of the field of cardiac surgery

The Deborah Heart and Lung Center's contribution to Georgia is one example of US technical assistance. The Deborah Center is a hospital specializing in the diagnosis and treatment of congenital and acquired heart, lung, and vascular diseases. Children with cardiac problems could not be treated in Georgia at the time. During the year, 10 children with heart defects were brought to the US for treatment, but many more children needed this type of treatment.

One of the inspirations for the development of the field of children's cardiac surgery in Georgia is the president of the US non-governmental organization GLOBAL HEALING, Mrs. Jo Anne McGowan. The Ministry of healthcare of Georgia and Jo Ann McGowan signed an agreement on October 11, 1994.

The Georgian side agreed to allocate and renovate the clinic's space on its own, while the American side agreed to equip it and train the staff. Leading American professionals in the field strongly supported the concept of establishing a children's cardiac surgery center in Georgia. They took an active role in upgrading the qualifications of Georgian professionals and adopting innovative therapeutic approaches. On September 16, 1996, the clinic opened as a diagnostic and treatment facility for children's cardiology and congenital heart defects at the base of the 2nd Tbilisi Children's Hospital. The clinic comprised a twenty-bed cardiac surgery unit, an eight-bed cardiac resuscitation unit, two operating rooms, one express laboratory, and an office unit stretched across 1,300 square meters. The Global Healing Corporation provided the clinic with all of the essential equipment, medical supplies, and consumables, as well as clinical staff training, at a total cost of \$5 million US dollars. The clinic's capacity was designed to treat 200 newborns per year.

Jo Ann McGowan died of a heart attack on September 23, 1996, exactly one week after opening the Children's Cardiology and Heart Surgery Clinic in Georgia. According to the will of Jo Ann McGowan, her organs were used for transplantation, and the ashes were divided into three parts and buried in California, St. Petersburg and Tbilisi (in the yard of the Jo Ann Medical Center clinic). Thanks to the Joe Ann Center, the rate of infant and child mortality and morbidity has decreased in the country. Today, the center is a modern clinic for early diagnosis, treatment and monitoring of children's heart diseases and related problems.

Implementation of maternal and child survival programs

In the 1990s, an acute demographic crisis appeared in Georgia²¹. The birth rate fell dramatically, the proportion of the first child among the births increased sharply, the child mortality rate was increased. Women and children were under the most challenging circumstances since they were the most fragile and tender segment of society. The implementation of state programs to save mothers and children in such circumstances faced numerous difficulties. The American International Health Alliance's (AIHA) commitment to the protection of mother and child health during that time was particularly significant. The implementation of the neonatal resuscitation project in Georgia began with help from American partners and from the American Agency for International Development, with the aim of enhancing the professional knowledge of neonatologists and obstetrician-gynecologists and improving their practical skills in the management of neonatal emergencies.

Many partner institutes of AIHA sent highly qualified specialists to Georgia to participate in the process of teaching newborn resuscitation issues. Professionals from Emory University School of Medicine and Atlanta Children's Health School came to help the Georgian doctors and participated in the training. On the basis of the Children's Republican Hospital in Tbilisi, a children's emergency center, the first modern pediatric emergency in the South Caucasus region, was established with the assistance of AIHA and the cooperation of partner medical institutions. Professor Stephen Lansky, who worked at the Children's Health Center in Egleston and had a major role in the training of medical personnel, as he participated in the formation of the pediatric emergency department.

On the basis of the children's hospital N3 and the maternity hospital N5, American experts who had received additional training in the USA led training sessions in neonatal resuscitation and fetal monitoring in 1997 as part of the Atlanta-Tbilisi medical partnership program.

The prenatal, delivery, and postnatal care levels have increased as a result of the aforementioned actions taken with the support of the Americans, significantly reducing the rates of mother and infant mortality.

Development of medical education

Among the 13 directions of the concept of reorganizing the health care system, the improvement of medical education was one of the most crucial. It enabled the regulation of chaotic processes in the field of medical education, the training of medical staff and raised the standards for professional training²².

Together with World Bank experts, the reform of medical education was established while taking into consideration the global issues of the day. The World Bank established specific requirements that had to be completed by the Georgian side in order to modernize the medical educational system. These conditions included the adoption of regulatory standards for residency programs in specific fields of medicine, i.e., post-graduate training, the adoption of normative acts for the accreditation and licensing of medical staff and medical higher and secondary educational institutions, and, most importantly, the establishment of an annual quota limit for medical educational institutions. Residency programs were jointly developed by international experts and Ministry of Health personnel under the aegis of the World Bank.

The reorientation of the medical education system was based on the strictest regulations tested in the world's leading countries, as well as the market principle of "demand-supply," i.e., the maintenance

and training of competitive healthcare workers, which can be achieved by providing continuous medical education, quality control, and regulatory mechanisms. Such mechanisms were certification, licensing and accreditation procedures.

The leading medical institutions in Atlanta made significant contribution to the implementation of long-term technical assistance projects. With their support, the Atlanta-Tbilisi partnership program was created, the coordinator of which was the greatest friend of the Georgian people, Henry Kenneth Walker, professor of medicine and neurology at the University School of Medicine, professor of global health at the Rollins School of Public Health.

Professor Ken Walker initially visited Georgia in 1992 as part of the USAID "Georgia to Georgia" program. Walker led the Atlanta-Tbilisi partnership of educational and health institutions as executive director of the American business ("Partners for International Development" - PfiD). As a result of the successful cooperation between Tbilisi State Medical University and Emory University School of Medicine, at the initiative of Kenneth Volker, the American program of a graduated physician was implemented, which takes into account the model of modern Western-style medical education. At Emory University Medical School, exchange programs for students, clinical residents, young specialists, and academic staff are still effectively carried out thanks to the program. Students in the program have already achieved success on the United States Medical Licensing Examination (USMLE). The improvement of Georgia's healthcare system and the education of future generations of doctors will both benefit from collaboration within the framework of the Georgia-Atlantic partnership.

Kenneth Walker's support enabled the establishment of a nursing training school at Tbilisi State Medical University, as well as the advancement of rehabilitation, AIDS, and tuberculosis research in Georgia. For his services to Georgia, Henry Kenneth Walker was awarded the title of Honorary Citizen of Tbilisi and Georgia and Honorary Doctorate of Tbilisi State Medical University.

The US National Institutes of Health (NIH), which is part of the Department of Health and Human Services and is charged for biomedical and public health research, played an active role in the reorientation of the medical education and science system. To improve the management and financing of medical science, a method of funding scientific research works through grants was created with the assistance of the US National Institutes of Health. The institute held special workshops for Georgian

scientists where methods for obtaining research grants were discussed.

The Institute's support for increased integration of our scientific research into global medical-biological issues must be emphasized in particular. The approval of the Ministry of Health and Social Protection's 2000 science and education development program was aimed at improving this process, which includes active promotion of the process of recruiting international partners and integrating research for our scientists. As a result, the number of grants obtained increases year after year, which is evidence that our intellectual capacity is being recognized internationally. Our scientists have begun successful partnerships with foreign partners.

Guidelines for physicians, nurses, public health and medical personnel, and families were published in the Georgian language as part of the Global Asthma Initiative with support from the US National Heart, Lung, and Blood Institute.

Middle-ranking managers and administrators play a significant role in the health-care system. In this regard, the Tbilisi-Scranton (Pennsylvania) partnership program began actions, with the goal of developing and implementing training and retraining programs for healthcare managers at the National Center for Healthcare Management's Center for Continuing Education.

The necessity for a new description of the position and function of the medical staff was brought to light during the process of the healthcare system's reorientation. The International Health Alliance of America, which organized nurse training in nursing schools abroad (such as the Atlanta School of Nursing in the US state of Georgia), helped to strengthen nursing programs in Georgia.

On March 15, 1998, as a result of the work conducted by American partners with the World Bank, the segment of continuing nursing education was opened at the National Center for Health Care Management in Tbilisi.

Representatives from Grady Hospital conducted a course on cardiopulmonary resuscitation, intravenous therapy, and nursing assessment from March 16–19, 1998. The training course was attended by 47 nurses from clinics in Tbilisi and other parts of Georgia.

In May 1998, three representatives visited Georgia State University to become acquainted with the work of the Higher School of Nursing and to develop curricula for the Faculty of Nursing at Tbilisi State University.

In June 1998, American experts visited Georgia as a result of a higher nursing school establishment. The nursing school curriculum was developed as

part of the "Atlanta-Tbilisi Medical Partnership." Curriculum for midwifery and general practice nurse training courses was developed.

The "Leader Nurse" preparatory course was developed as part of the Atlanta-Tbilisi medical partnership collaboration initiative, and it was carried out with the assistance of experts from the University of Scranton (USA). The main goal of the course was to set up the fundamentals on which new forms and techniques of enhancing nurses' knowledge should be rapidly introduced.

Establishment of a national information training center

A national information training center was established in Georgia under the guidance and direct leadership of James Smith and Kenneth Walker as part of the "Tbilisi-Atlanta Partnership Program" of the American International Health Alliance. This center served as a gateway for Georgians working in the biomedical fields to access contemporary global information resources.

The National Information Training Center's implementation of a radio modem at the start of 1998 increased the availability of the Internet for medical users. 239 people used the Internet and Medline services; 162 trainees took part in 38 courses; 217 users took advantage of printed resources; 172 searches were conducted; and 165 scientific articles were received from Emory University.

The website of the Ministry of Health in Georgian and English was prepared and placed on the Internet. The Ministry's organizational structure, departments, and functions were all detailed on the website, along with websites for the State Medical Insurance Company and the National Center for Health Care Management, as well as a complete list of medical institutions located in the city of Tbilisi. The web pages of individual medical projects and the national or international organizations that support them, as well as relevant facts about Georgia (history, culture, nature, resorts), have been posted.

The Microsoft NetMeeting 2.1 program was downloaded from the Internet as part of "Preparation and implementation of the first stage of the distance medical education/telemedicine project," and digital video cameras were bought (with a Soros grant). 27 telesessions were held with the University of Maryland and 4 with the University of Cincinnati.

The "Three Georgia Telemedicine" initiative was developed in collaboration with the "Partnership for Peace Information Management System" and Emory University to arrange telemedicine mobile sites in Georgia's mountainous areas (Adjara, Svaneti, Khevsureti, and Samachablo).

The project "Teleconsultations in invasive cardiology" was launched, which provides for the delivery of the results of angiographic examinations conducted at the emergency cardiology center of the Ministry of Health via e-mail and the Internet to various cardiology clinics in Germany, the USA, and Turkey, in order to receive appropriate consultations from there, such as clarifying the patient's diagnosis, also about the best alternatives for his future cardiac surgical treatment.

Reforming the pharmaceutical sector

The World Bank and the World Health Organization actively supported the government in developing a pharmaceutical policy; in this regard, American specialists and advisors maintained close links with the Ministry of Health's relevant services. With their support, the Ministry of Health developed pharmaceutical legislation, by-laws for medicinal products, which include the issues of production, import and export of medicinal substances, registration, quality control of medicinal products, pricing and payment of prices, and most importantly, aspects of the strategy and tactics of the use of medicinal substances.

The United Methodist Committee on Relief (UMCOR) carried out the rehabilitation of the Tbilisi pharmaceutical factory.

Particularly remarkable are the measures made to guarantee the quality of the medicines circulating in the entire country. With the help of the World Bank health project, in the second half of 1998, a drug quality control laboratory was purchased and specialists provided consulting assistance. The medication quality control laboratory has made an important contribution to the country's supply of high-quality drugs.

Conclusions

The American people and government have made essential contributions to Georgia's, political, economic, and social growth. The USA's role in Georgia's health care system's reformation and development after it emerged from crisis in the early years of independence is also crucial. Many people were saved from hunger, illness, and death during this tremendously difficult time with the help of the USA. According to the US Congressional Research Service report, Georgia received \$4,348,400,000 (four billion three forty-eight million four hundred thousand) in aid for various purposes from the US for 28 years, from 1992 to 2020. According to CRS data, among European and Eurasian countries, Georgia is the leading recipient of US aid. This fact confirms the USA's consistent dedication to assisting the Georgian people in their efforts to establish a democratic society. From this perspective, US support is critical for our country's well-being, economic prosperity, and security.

Over the past 30 years, Georgia and the USA have been constructing friendship and mutual respect bridges based on shared values, common strategic interests, and mutually beneficial cooperation. It is in the interests of both Georgia and the USA to deepen relations between each other, to have a reliable partnership and alliance. We have an excellent history of a very successful partnership, and there is much more to prove the great connection we have formed through the years of working together.

No changes can be made to Georgia's Euro-Atlantic choice. Georgian population and government are not united regarding this decision.

The fact that we consistently experienced an attitude of equality and equal interaction while working with American and European governmental and public institutions is especially notable. While handling any problem, they took into account Georgian traditions, values, and principles and never rejected their viewpoints. Our relationships have always relied primarily on discussion, consensus, and compromise. It would be great if modern politicians, not just those in Georgia, could work with these principles in the future.

Author Contributions:

T.V. conceived the original draft preparation. T.V. and A.J. were responsible for conception and design of the review. T.V. and A.J. were responsible for the data acquisition. T.V. were responsible for the collection and assembly of the articles/published data, and their inclusion and interpretation in this review. T.V. and A.J. contributed equally to the present work. All authors contributed to the critical revision of the manuscript for valuable intellectual content. All authors have read and agreed with the final version of the manuscript.

Compliance with Ethics Requirements:

"The authors declare no conflict of interest regarding this article"

"The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law."

"No funding for this study"

Acknowledgements:

None

REFERENCES

- Papava V. Economic Reforms in Post-Communist Georgia: Twenty Years After (Caucasus Region Political, Economic and Security Issues). Nova Science Pub Inc; UK ed. 2013.
- World Bank. Georgia, Health Sector Development Project. Washington, D.C.: World Bank Group. 2012.
- Gzirishvili D. Independent Georgia Social and Health Care Systems, Analytical Review. Foundation Open Society Georgia. Tbilisi. 2012.
- 4 . Gamkrelidze A, Atun R, Gotsadze G, MacLehose L. Health Care Systems in Transition – Georgia 2002. Copenhagen: European Observatory on Health Care Systems. 2002.
- 5 . Kalandadze T. Bregvadze I, Takaishvili R, Archvadze A, Moroshkina N. Development of state health insurance system in Georgia. Croatian Medical Journal. 1999;40(2).
- Verulava T, Jorbenadze A. Development of public health in Georgia: challenges and policy issues. Arch Balk Med Union 2022;57(2):179-184.
- 7 . WHO. Aide Memoir on Health Sector in Georgia. Tbilisi. 1996
- Bush G. Remarks at the International Conference on Humanitarian Assistance to the Former U.S.S.R, presidency.ucsb.edu. 1992.
- 9 . Tutwiler M. The U.S. Department of State Daily Briefing #97: Wednesday. 1992.
- Fitzwater M. US Department of State, Statement by Press Secretary Fitzwater on Humanitarian Assistance to Refugees in Yugoslavia and the Caucasus. 1992.
- 11 . Tutwiler M. The U.S. Department of State Daily Briefing #67. 1992.
- 12 . Fitzwater M. Statement by Press Secretary Fitzwater on Diplomatic Relations with the Republic of Georgia. 1992b.
- 13 . Verulava T, Maglakelidze T. Health financing policy in the South Caucasus: Georgia, Armenia, Azerbaijan. Bulletin of the Georgian National Academy of Sciences, 2017;11(2):143-150.
- 14 . Verulava T, Jorbenadze A. Context and issues of social health insurance introduction in Georgia. Arch Balk Med Union. 2021;56(3):349-357.
- 15 . Rechel B, Richardson E, McKee M. Health system trends in the former Soviet countries. Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2014.
- Verulava T, Jorbenadze A. Primary health care reforms in Georgia: the experience and challenges. Arch Balk Med Union. 2022;57(4):384-389.
- 17 . Gzirishvili D. Mataradze G. Health Care Reforms in Georgia, Tbilisi. 1997.
- Verulava T, Lordkipanidze A, Besiashvili N, et al. Obstacles in the development of nonprofit hospitals in Georgia. Hospital Topics. 2019;97(2):39-45.
- 19 . Verulava T. Managed competition and health insurance reforms in Georgia. Bulletin of the Georgian National Academy of Sciences. 2023;17(1):175-180.
- 20 . Verulava T, Jorbenadze R, Dangadze B. The role of non-profit organizations in healthcare system: world practice and Georgia. Georgian Medical News. 2018;278(1):178-182.
- 21 21. Verulava T, Jorbenadze R. Family support policy in Georgia: challenges and reform options. Bulletin of the Georgian National Academy of Sciences. 2020;14(4):131-138.
- 22 . Verulava T, Jorbenadze A. Development of social health insurance in Georgia: challenges and lessons. *Bulletin of the Georgian National Academy of Sciences*. 2022;16(1):127-134.