Midwest Surgical Association: Presidential Address

Has medical diplomacy reached an inflection point?

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To my colleagues in the Midwest Surgical Association, distinguished guests, ladies, and gentlemen: thank you for the honor and privilege of serving as your president for the last year. I must also pay homage to 3 giants in the field of surgical oncology, upon whose shoulders I stand today to make my remarks: Edward F. Scanlon, M.D., Murray F. Brennan, M.D., and David P. Winchester, M.D. Without their patient guidance, I would never have had a successful career as a surgical oncologist and as an educator. I also thank my longstanding colleagues at Northwestern University, Evanston Hospital, and the University of Southern California (USC). Their friendship has carried me through some of the interesting times that I will describe today.

I am especially grateful to Susan Eisenhower, Emeritus Director of the Eisenhower Foundation, for providing the inspiration for my remarks. In a speech she gave at USC several months ago, she described 2 events which occurred 75 years ago, little known or recognized at the time but which, as they gathered momentum, reached an inflection point past which they would have endured regardless of the motivating forces behind the concepts. The year was 1938, and the news was...
the coverage of Adolf Hitler and the annexation of Austria to Germany. However, in that same year, the process of nuclear fission was identified. Interestingly enough, fission was discovered in Germany, but it was Leo Szilard and Enrico Fermi in the United States, who appreciated that it could be contained in a nuclear chain reactor and harnessed to create a uranium bomb. Within 4 years after the discovery of fission, an atomic pile was functioning under Stagg Field at the University of Chicago. From discovery until fission’s use in the atomic bomb, only 7 years had elapsed. In the same year of 1938, oil was discovered in Saudi Arabia. And, although it took many years longer, few could argue the importance of oil as a current global geopolitical issue. So, the question that I pose today is whether medical diplomacy has reached an inflection point, past which its importance as a global force cannot be argued.

The Groundwork for Modern Diplomacy

Henry Kissinger, in his book, Diplomacy, described the origins in post-medieval history beginning in the 17th century with the French Cardinal Richelieu, who introduced the modern approach to international relations. During the next 2 centuries, European diplomacy was dominated by Great Britain, which was responsible for the concept of the balance of power. In the latter 19th century, Austria’s Metternich reconstructed Europe, and shortly thereafter Germany’s Bismarck dismantled it, reshaping European diplomacy into a very hard proposition of power politics.

But, it is post-World War II history that laid the groundwork for the modern concept of medical diplomacy. When the Soviets launched Sputnik in October 1957, Krushchev actually believed that a serious change had occurred in the balance of power between countries of socialism and capitalism, in favor of the socialist nations. He sought to translate this perceived change into a diplomatic advantage; his target was Berlin. During 1958, Krushchev delivered a series of ultimatums, challenging the formal arrangement between the United States, France, Great Britain, and the Union of Soviet Socialist Republics for the control of Berlin. By the time John F. Kennedy took office in January 1961, nearly 3 years had passed and nothing had happened in Berlin, reducing the credibility of Krushchev’s threats. However, with the Kennedy Administration’s failure to overthrow Castro in Cuba and its indecision regarding intervention in Laos, Krushchev viewed Kennedy as weak. At a meeting with Kennedy in June 1961 in Vienna at the Hotel Imperial, Krushchev issued his final ultimatum regarding Berlin, which began the most intense period of confrontation of the Cold War. On August 13, 1961, West Berliners awoke to find that a true “Berlin Crisis” existed, as a barbed-wire fence had been built around the entire city, isolating the Soviet sector from those occupied by the 3 Western countries.

This huge dilemma was followed on October 16, 1962 with photographic evidence, convincingly demonstrating that the Soviets had placed missiles with nuclear warheads in Cuba. In his book, Thirteen Days, Robert F. Kennedy described in graphic detail John F. Kennedy’s belief that the “Cuban Missile Crisis” could have culminated in a nuclear war. This was a frightening time. Krushchev and Kennedy had to use all of the diplomatic maneuvers that they could conjure to prevent an armed conflict between the United States and the Union of Soviet Socialist Republics, including a late night stealth meeting between Soviet Ambassador Dobrynin and Robert Kennedy in Washington, District of Columbia.

Armand Hammer, M.D., the Prototype Medical Diplomat

Enter onto the stage an unlikely intermediary, Armand Hammer, M.D., born in 1898 in New York to Russian-born Jewish immigrants. His physician-father, Julius, had moved in 1875 to the Bronx, where he ran a medical practice and owned 5 drugstores. Julius was an avowed socialist, and in 1907 he met and developed a lifelong deep friendship with Vladimir Lenin. After graduating from Columbia Medical College in 1921, Armand used his father’s connections and his entrepreneurial skills, developed exporting pharmaceuticals to the newly formed Union of Soviet Socialist Republics, to broker a deal in the Soviet Union with Lenin to send a shipment of surplus American wheat to the Union of Soviet Socialist Republics. While living there in the 1920s, Hammer brought medical supplies to assist in a typhus epidemic, developed a large business manufacturing pens and pencils for use in the Soviet Union, and even convinced Henry Ford to create a plant in the Union of Soviet Socialist Republics to manufacture the “Fordson” tractor.

When he returned to the United States in 1930, Hammer participated in a diverse array of business endeavors, including investing in US oil production efforts. He subsequently parlayed these investments into a controlling interest of Occidental Petroleum Company. In the midst of these engagements, he met and developed a longtime friendship with Al Gore, Sr, Senator from Tennessee. Throughout his life Hammer continued personal and business relationships and had significant cache with leaders in the Soviet Union, including Krushchev. The relationship between Hammer, Krushchev, and Gore Sr played a significant role in brokering the 1961 summit meeting between Krushchev and Kennedy in Vienna (Vladimir Zelman, M.D., June 2013, University of Southern California, Los Angeles, CA, personal communication).

In his later years, Hammer traveled extensively, working for peace between the United States and Communist countries. In my opinion, Hammer must be regarded as the post-World War II prototype medical diplomat. The Hammer story will come back around later.

Medical Diplomacy During the Second Half of the 20th Century

In subsequent years, a number of organizations arose, which took up the cause of international humanitarian
medical missions. Perhaps the first and best organized was Medecins Sans Frontieres (MSF) (aka Doctors Without Borders), founded by Bernard Kouchner and Raymond Borel in 1971, in response to Biafran secession during the Nigerian Civil War (http://www.msf.org). This small group of French physicians and journalists was motivated by the belief that all people have the right to medical care, and that their needs supersede border considerations. MSF’s first mission was in Managua, Nicaragua, where a 1972 earthquake killed between 10,000 and 30,000 people. MSF received the 1999 Nobel Peace Prize in recognition of continued efforts to provide medical care in acute crises and to raise international awareness of humanitarian disasters. Last year, over 26,000 volunteer medical professionals and water/sanitation engineers provided medical aid in over 60 countries, funded for the most part by individual private donors.

Another example is the Bill and Melinda Gates Foundation, which was founded in 1994 and is the largest private foundation in the world, with an endowment of over $36 billion ($28 billion from Bill Gates; http://www.gatesfoundation.org). In 19 short years, the Foundation has grown into 3 grant-making programs, including Global Health, Global Development, and US-based grants. The Global Health program funds service grants in AIDS, infectious diseases, and immunizations, among others. The Global Development program funds financial services for the poor, agricultural improvement, and earthquake relief.

Public Health Efforts to Control Tobacco

Perhaps the most sustained and largest global public health effort to date has been the attempt to control the use of tobacco products. King James I provided royal opposition to the new addiction as early as 1604, describing smoking as “a custom loathsome to the eye, hateful to the nose, and dangerous to the lungs.” Even though the relationship between smoking and lung cancer was described in Germany in the 1930s, it was not until Sir Richard Doll (United Kingdom) in 1950 and the subsequent Hammond–Horn Study (United States of America) put a fine point on the causal link between the two, that worldwide efforts at tobacco control began. In 1964, the US Surgeon General, Luther Terry, M.D., released the first report of the Surgeon General’s Advisory Committee on Smoking and Health, which concluded that cigarette smoking was a cause of lung cancer. Shortly thereafter, the US Congress adopted the Federal Cigarette Labeling and Advertising Act of 1965 and the Public Health Cigarette Smoking Act of 1969. These laws required health warnings on cigarette packages and banned cigarette advertising in the broadcasting media. Tobacco control advocates quickly banned together from government agencies and nongovernment voluntary health organizations, such as the American Cancer Society (ACS), to form the National Interagency Council on Smoking and Health. Multipronged, comprehensive tobacco control policies were then developed. One of the most visible successes of this advocacy movement was the passage of the Federal Aviation Act with the Durbin Amendment in 1988, making domestic air flights of <2 hours smoke-free (http://www.smokefreeairlines.com/historynosmoking.html). During the next year, Senator Frank Lautenberg (D-NJ) took the battle to the Senate to make longer flights smoke-free. And after years of internal debate, Delta Airlines took the bold step to make all flights worldwide smoke-free in 1995.

Shortly after the Surgeon General’s report was issued, tobacco consumption in the United States began to drop significantly from its peak of 200 packs per capita per year. But, it was not until 1990 that age-adjusted lung cancer death rates began to fall in men. With the implementation of comprehensive tobacco control programs, the per capita annual consumption in the United States dropped even further, with greater declines in states with strong programs, such as Massachusetts and California. The lung cancer death rate among US women, who began regular cigarette smoking later than men, has just peaked nationwide and has begun to decrease in California.

The Framework Convention on Tobacco Control

But, the tobacco industry realized that there was a huge international market for their products, and systematic saturation with private–public collaborations marked the steep growth of tobacco consumption worldwide in the 1990s.

Fueled by the success of the antitobacco movement in the United States, the global response of international tobacco advocates was to become more organized into a confederation through The World Conference on Tobacco or Health (WCTOH). But, it was a master stroke of diplomacy by Ruth Roemer, Allyn Taylor, and Judith Mackay, when their proposal for a multilateral treaty regarding tobacco control was adopted as a conference resolution at the 9th World Conference on Tobacco or Health in 1994. The next year, the World Health Assembly resolved to create an instrument adopted by the United Nations calling for an international convention on tobacco control, the Framework Convention Alliance. When Gro Harlem Brundtland, a Norwegian physician, was elected director general of the World Health Organization in 1998, there was finally enough diplomatic momentum that the World Health Organization fully supported the concept of a binding multilateral treaty on tobacco control, the Framework Convention on Tobacco Control (FCTC). Negotiations for the treaty began in 1999 and were most notable for the unprecedented inclusion of nongovernment organizations throughout the drafting processes. As a past national president of the ACS, I am proud to say that members of the ACS, such as Thomas Glynn, were instrumental in forging a concept, which represents the present day pinnacle of diplomacy on behalf of global public health.
Much of the groundwork for economic justification of the FCTC was done by the World Bank, which asserted that tobacco control would not harm evolving economies.\textsuperscript{13} Despite the vigorous attempts of the tobacco industry and the International Tobacco Growers’ Association to thwart the efforts of the drafters of the FCTC, the treaty was adopted by the World Health Assembly in 2003. It is the first United Nations Treaty to address a public health issue, offering the best chance to globally address tobacco control, and it will continue to generate tobacco control advocacy in every country in the world. The FCTC became an international law in 2005 when 40 countries had ratified it. Currently, 168 countries have signed and ratified the FCTC, representing 86% of the world’s population. Alas, the United States is one of the 9 countries, which have signed but not ratified the treaty, as neither Presidents Bush nor Obama have had the political will to send the treaty to the Senate for ratification. The major provisions of the FCTC were designed to address cross-border issues and include an advertising ban, health warning labels, protection from second-hand smoke, a ban on sale to minors, and legislation to control smuggling of tobacco products.\textsuperscript{14}

**Nongovernment Organizations and Worldwide Breast Health Programs**

On a different but contemporary track, advocacy for international breast health programs was supported by US-based nongovernment voluntary health organizations, such as Susan G. Komen for the Cure and the ACS. Breast cancer is the most common cancer in women in the developing world. It is also the most likely reason that a woman will die of cancer anywhere in the world, except the United States.\textsuperscript{15} Between 1990 and 2010 in the United States, the age-adjusted death rate from breast cancer dropped 33% because of a combination of utilization of improved detection techniques and better adjuvant therapy.\textsuperscript{16} But, in developing countries, most women with breast cancer present with locally advanced or metastatic disease. In that setting, one does not need a mammogram to find a breast cancer; a program on breast awareness and clinical exam will suffice in the early phase of a detection program.

In 2002, under the auspices of Susan G. Komen for the Cure, Benjamin Anderson, M.D., and Leslie Sullivan founded the Breast Health Global Initiative (BHGI), which has become internationally recognized for leading the global movement toward clinical improvement and implementation of “best practices” for breast cancer.\textsuperscript{17} Over the past decade, BHGI has produced model approaches for consensus guidelines, which are comprehensive, resource-stratified, and evidence-based.\textsuperscript{18} The objective was to effectively detect, diagnose, and treat breast cancer in low- and middle-resource countries. These guidelines were the outcomes of 5 global summits and were produced with extensive worldwide scientific collaboration. BHGI pilot projects have tested the feasibility of guideline implementation in Ukraine, Ghana, Columbia, and Israel. The last of these feasibility studies identified that the current breast cancer screening program in Israel is a model for other middle-income countries in South America and Eastern Europe.

Beginning in the mid- to late-1990s, the ACS began a more deliberate engagement in international activities, even though the original articles of confederation dating back to 1913 had mandated a commitment to global health problems. The ACS realized that tobacco control had to be waged on a global scale. But, it also recognized that cancer is a disease without borders. With current international migration and travel patterns, the United States has absorbed the world’s cancer problems. In 2000, there were 6 million deaths worldwide from cancer. Murray and Lopez\textsuperscript{19} have estimated that by 2020 that number will have doubled, with 75% of all cancer deaths occurring in the developing world, the countries least equipped to deal with them. The international program was designed to build capacity for cancer control in the countries with the greatest need and where ACS could have the most impact.

I was a member of the volunteer group, which pushed the international agenda for the ACS. My first foray into humanitarian medical missions began in the mid-1990s, when Mikhail Tolstykh, then a medical student at Moscow State University, visited me at Evanston Hospital, Northwestern University, for an elective rotation. One thing led to another, and in May 1999 a 7-member surgical team spent the first week of several over the ensuing years at the Central Clinical Railroad Hospital Semashko, Moscow State University. Although we were exhilarated by helping a relatively small number of individual patients, we were frustrated by our inability to help the Russian surgeons accomplish systematic change to medical care in Russia. This, and subsequent similar experiences in Latvia and India, taught me a valuable lesson. In order to have the opportunity to make significant change in a country’s health care delivery system, one must have access to both the medical and political leadership. So, when Dr Guangwei Xu, the president of the Chinese Anti-Cancer Association, approached the ACS and me, as president of the ACS, about the possibility of creating a screening program for breast cancer in China, I was especially encouraged by the active involvement in the project by Wu Yi, then Vice-Premier of China.

In the early 2000s, it was realized that there was a bimodal age distribution for breast cancer in China, with peaks in women in their 30s and 60s, and an increasing incidence in urban women. And yet, there was no organized screening program for early detection. After numerous exploratory and planning meetings, an ACS delegation, composed of internationally known experts in breast cancer screening, joined members of the Chinese medical and political hierarchy in an International Forum on Breast Cancer in Beijing in February 2005 to finalize plans for a nationwide breast screening program. The result was the One Million Women Breast Cancer
Screening Project, launched in Spring 2005, with the primary objectives of establishing national breast cancer screening guidelines in China and creating a platform for clinical research in breast cancer detection. We realized that there would probably never be another randomized clinical trial of screening for breast cancer in the United States. And so, any further advances in screening research would most likely have to be done outside of the United States. This was to have been the largest screening program to date comparing mammography with ultrasound. Because of the large fraction of young women with breast cancer in China, women aged 35 to 70 years were to be screened 4 times between 2005 and 2010. Eighty mobile vans, equipped with mammogram and ultrasound units, were created for use in 5 urban areas. All digital images were stored in a PACS unit in Beijing, there was central review of pathology slides, and further diagnostic workups were completed in the cancer hospitals to which the vans were attached. Top Chinese government leadership saw this project as a focal point for change.

In May 2006, as the program was accelerating, another surgical team representing the ACS and Evanston Northwestern Healthcare went to Beijing Cancer Hospital for Chinese–American Surgical Oncology Week, hosted by Dr Jin Gu, vice president of Beijing Cancer Hospital. The goal was to highlight the advantages of breast cancer screening for patient care, demonstrating breast conserving and sentinel node procedures, ultimately creating a shared learning environment for US and Chinese surgeons, anesthesiologists, and nurses. Alas, however, with the retirement of Dr Xu and Vice-Premier Wu Yi, the breast screening program was privatized and lost momentum. Another tough lesson learned: programs designed to change systems and cultures require sustained medical and political leadership.

**Vladimir Zelman, M.D., Ph.D., D.Sc., an Enduring Model of Medical Diplomacy**

And, now I turn to the man for whom this piece is dedicated, Dr Vladimir Zelman.

Like many Jewish families in Eastern Europe in the early 1940s, he fled Ukraine, went to Uzbekistan, and eventually settled in Siberia (Vladimir Zelman, M.D., June 2013, Los Angeles, CA, personal communication). Vladimir grew up there and obtained his M.D. from Novosibirsk State Medical Institute in 1959. Early student research work under the guidance of prominent Russian scientists gave Dr Zelman a unique opportunity to prepare himself for a successful career in clinical and laboratory research. He became interested in anesthesiology and was closely involved in developing new clinical strategies aimed at brain protection during open heart procedures. His publications in this field led him to national recognition in the Soviet Union. He was also a pioneer in developing a helicopter air ambulance transport system in Northern Siberia. He was then recruited in 1969 to direct a research program in Moscow as chief of anesthesiology and critical care under the auspices of the Russian Academy of Sciences Institute of Neurology/Neurosurgery to study cerebral blood flow auto-regulation and brain metabolism.

Here is where the Hammer story comes back around. In 1976, Armand Hammer was visiting Moscow and became ill with an intense respiratory virus. Dr Zelman cared for Dr Hammer in a critical care unit, and subsequently Dr Zelman was brought to the United States as Dr Hammer’s personal physician. After completing a US residency in Anesthesiology, Dr Zelman joined the faculty at USC, where he has served in various leadership capacities in his department to this day. However, Vladimir has maintained the especially strong ties that he established within the Russian Academy of Sciences and the medical establishment. He is renowned and revered in Russia for his active participation in humanitarian medical missions, including the Chernobyl nuclear power plant catastrophe with Dr Hammer in 1986, earthquake in Armenia, and gas pipeline explosion in Bashkortostan, Russia. He has most recently been a key intellectual influence in the development of Skolkovo, a unique model of private–public collaboration with the Russian Academy of Sciences to develop a national basic science research program in Russia.

So, it was no surprise that, when the wife of the chancellor of St Petersburg University ruptured a cerebral aneurysm some years ago, Dr Zelman was called to her aid. She survived, neurologically intact. Today, that lady is Svetlana Medvedev, and her husband is Dmitry Medvedev, who went on from chancellor of St Petersburg University to become the president of Russia. Dr Zelman has maintained a close personal relationship with the Medvedevs. When Mrs Medvedev was deciding how to create a legacy program as wife of the Russian president, she sought counsel from Dr Zelman. As I had recently moved from Northwestern University to USC, Dr Zelman was aware of the past ACS history and interest of Dr Christy Russell and me in international cancer control programs. We recommended that Mrs Medvedev establish a national breast cancer screening program and Human Papilloma Virus (HPV) immunization/cervical cancer detection programs, based on the high incidence of breast and cervical cancer in Russian women. Finally, with all of the previous lessons learned during international medical missions, it was apparent that we had come full circle in Russia. This was the missing link in our attempts to establish a breast cancer screening program in Russia in the late 1990s—access to what we hoped was sustained medical and political leadership. Drs Zelman, Russell, and I embarked on a series of conversations with Mrs Medvedev, which to date have resulted in a pilot demonstration mammogram project and the provision of HPV vaccinations in St Petersburg, robust discussions regarding the inclusion of vaccination for young boys and girls in the Russian national vaccination program, and plans for a rehabilitation program after breast cancer treatment.

Everyone who knows Dr Zelman remains amazed at the depth of his contacts and understanding of international
medical diplomacy. He has my personal gratitude for a life of service as a very powerful force for good. Here is a man who is not interested in money or glory, just in proving that he is serious about changing the world.

Quo Vadit?

So, has medical diplomacy reached an inflection point? Will people like Vladimir Zelman take up the torch in the next generation? All we have to do is look around us in July 2013 to know that this movement will continue. In the June 7, 2013 issue of SCIENCE, the Japanese government announced a global effort to contain infectious diseases by forming a Global Health Innovative Technology Fund with the Bill and Melinda Gates Foundation.20 In the June 2013 issue of the Journal of the American College of Surgeons, surgeons from Abu Dhabi reported outcomes from data submitted to the American College of Surgeons National Surgical Quality Improvement Program.21 Also, in the June 2013 American College of Surgeons Bulletin, a network of US kidney transplant surgeons, with Guyanese health care professionals and philanthropists, reported on a program, delivering free kidney transplants to patients in Guyana.22

After a nearly 20-year experience, many issues continue to capture my interest and maintain my enthusiasm for participating in international cancer control programs. However, it simply boils down to this: Margaret Mead’s well-worn but apt maxim keeps me coming back. “Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”23

References

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