

Cobalt diplomacy in Cambodia

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Editors' note: This comment is intended to be read alongside the essay by Jenna Grant (this issue).

Medical diplomacy – ‘the winning of hearts and minds of the people by exploiting medical care, expertise, and personnel to help those who need it most’ (Thompson 2005, 3) – both produces positive health outcomes in the recipient country and helps the donor country to build symbolic capital and prestige, while simultaneously improving relations between the two countries (Feinsilver 2010, 86). Governments are not the only actors to engage in medical diplomacy in global health settings. Since the end of World War II, a myriad of new actors with various agendas have stepped into this emerging field of diplomacy, including multinational corporations selling medical equipment, philanthropic organizations, and nongovernmental organizations (NGOs) (Adams et al. 2008). During my tenure as director of the Division of Human Health at the International Atomic Energy Agency (IAEA) in Vienna, my team and I published a paper on global health diplomacy that reviewed the agency’s program activities in human health, which focus on radiation medicine and cancer, and on the peaceful applications of atomic energy within the context of global health diplomacy (Deatsch-Kratochvil et al. 2013). The idea of reflecting on the role of cobalt radiotherapy machines in medical diplomacy was born from that seminal paper, leading to the title chosen for this current essay.

The Khmer Soviet Friendship Hospital, whose history Jenna Grant considers in this linked essay, falls clearly in the framework of medical or health diplomacy. In the tumultuous decades since Cambodia recovered its independence from France, this hospital has been a

unique place and space for medical diplomacy played by different agents with different agendas. The key technology at the core of these intense diplomatic activities has been cobalt therapy for cancer treatment. In order to provide a clear narrative about the role of cobalt as a tool for both medical treatment and diplomacy, I divide the historical evolution of cobalt therapy into three periods: (1) Cobalt therapy for a world communist revolution, led by the Soviets; (2) cobalt therapy for a postcolonial humanism, led by French NGOs; and (3) multinational product branding, led by a US corporation.

Cobalt therapy for a world communist revolution

In the late 1950s, after the death of Josef Stalin, Nikita Khrushchev reached out to the world to restore the image of his great nation through the transfer of technology in a context of intense science diplomacy (Taubman 2003, 337). Cambodia, under the political leadership of Prince Sihanouk, then a young leader of the nonaligned movement, was a developing country of great interest to Soviet foreign policy. Medicine, medical equipment, and a cobalt-400 machine made their way from Odessa to the port of Phnom Penh via the Mekong River.

On 29 August 1960, Prince Sihanouk cut the ribbon at the inauguration of the Khmer-Soviet Friendship Hospital in Phnom Penh, a gift from the USSR. Soviet doctors came to work and to train their Cambodian colleagues. The hospital became the largest medical teaching center in Southeast Asia, a display of the Soviet technical and medical prowess in the post-Stalin era. The cancer center provided excellent care to Cambodian patients for fifteen years, only to be interrupted abruptly in 1975 when the Khmer Rouge took power. Amid their devastating agrarian revolution, a cobalt-400 machine had no place. The Khmer Rouge denounced 'Western' medical theories and technologies as antirevolutionary tools. While Soviet doctors and technicians left the country, their Cambodian counterparts were sent to the killing fields and were replaced by Khmer Rouge 'barefoot doctors', or Maoist-inspired lay medical providers. The hospital was turned into a medical center to serve the political and military leadership of the newly proclaimed Democratic Kampuchea.

Cobalt therapy for a postcolonial humanism

In the early 2000s, three small French NGOs – *Physicien médical sans frontières*, *Cancérologues sans frontières*, and *Energie sans frontières*, whose mission is 'aid for development' – contributed to the renovation of the cancer center at the Khmer Soviet Friendship Hospital. The Centre d'Oncologie Radiothérapie Marie Curie resumed full operation in May 2003 (Taisant 2013). In this case, medical diplomacy was embraced by NGOs, whose leaders were driven by a humanistic international solidarity with the goal to promote French medical knowledge within the international francophone sphere in Asia and

Africa (Honoré 2011). Over the last decades, French influence in the world has declined and this is quite visible in Cambodia, where English has displaced French as the language of academia, business, and diplomacy. In their many narratives, French politicians are torn between ‘the desire of power and the anguish of decline’ as France wishes ‘to travel first class with a second-class ticket’ (Boniface 2000, 13). It is within this context of waning political influence that we can read the global health diplomacy of French NGOs, that is, as a kind of ‘soft power’ (Nye 2004).

Yet the NGOs’ endeavors were severely constrained by limited funding and human resources. They supplied recycled equipment and substandard training of radiation oncologists (Eav et al. 2012). Such measures may have met immediate needs in the face of an extreme shortage of clinical cancer care, but sustainable development of a comprehensive cancer program requires an approach that does more than ‘winning hearts and minds’: it needs a long-term vision with a proper plan for professional action. Importantly, the development of cancer services requires full consideration of the fundamental issue of radiation protection. During my tenure at the IAEA, funding was purposefully allocated to train an entire Cambodian radiation team – including a radiation oncologist, nuclear medicine physician, medical radiation physicist, radio-pharmacist, and radiation protection officer – for a new national cancer center at Calmette Hospital in Phnom Penh. This choice of Manila as a training place was driven by both the quality of the training programs and the use of English as the medium of instruction. High-quality training and professional facility in English would enable Cambodian specialists to interact with counterparts from neighboring countries in the context of ASEAN economic integration.

It was in 2005, only two years after launching the renovated cancer center, when a medical physicist discovered several cobalt-60 orphan sources buried in the grounds of the Khmer-Soviet Friendship Hospital, outside the center. The Australian Nuclear Science and Technology Organization was called in to help deal with these radiation sources that represented a health risk for patients, family, and health care professionals at the cancer center (Popp et al. 2012). The attempt to remove the radiation sources from the hospital failed because the search for their original supplier, to whom they would be returned, was unsuccessful, despite assistance from the IAEA. This discovery happened to coincide with the scandal at the Jean Monnet Hospital in Epinal, France, where several cancer patients died from an overdose of radiation resulting from the miscalibration of cobalt machines due to medical negligence (Inspection générale des affaires sociales 2007). In the French case, physicians and medical radiation physicists were sentenced to eighteen months in prison for misconduct (Rylands-Monk 2013). In Cambodia, however, no one is sure who should be responsible for taking custody of the radiation sources and hence they remain ‘orphaned’, as Grant describes in her essay.

This example underlines the extreme importance of safety measures that should have been properly coordinated and managed professionally with the support of national regulation bodies and the technical assistance of IAEA. It also reveals that the use of cobalt therapy should not be left to NGOs with limited resources to operate without proper infrastructures. In sum, when cancer care is used for medical diplomatic purposes, it should be conducted in conjunction with national health systems and their frameworks for ensuring safe health care.

Multinational product branding

General Electric's (GE) donation of medical equipment to the Khmer-Soviet Friendship Hospital should be viewed in the context of its corporate social responsibility (CSR) program. Such interventions certainly bring much benefit to patients in developing countries, where biomedical equipment is scarce. This particular program, in collaboration with Engineering World Health, also contributes to the training of local health workers and has been welcomed by the government of Cambodia. Yet one should not lose sight of the marketing objectives of GE through the promotion of its brand to increase business opportunities and profitability. In this particular example, the donation of medical equipment falls into all three types of CSR strategy as defined by Kash Rangan and colleagues (2012): philanthropic giving (serving a social purpose while supporting the company's core business), reengineering the value chain (CSR as a tool for increasing business opportunities and profitability), and transforming the ecosystem (crafting solutions to societal problems for long-term financial returns). Among these three types, philanthropy and long-term financial return seem most relevant to the current socioeconomic status of Cambodia. Equipment donation will certainly not generate much profit because of the small size of the Cambodian market in term of medical equipment needs.

Conclusion

Over the last fifty years, the Khmer-Soviet Friendship Hospital has been an arena for the succession of what Grant (this issue) calls 'technopolitics' and business enterprises, using medical diplomacy, humanitarian aid, and marketing and branding strategies. Her work highlights many aspects of this 'nation branding', including the use of cobalt and other radiological machines as tools to project soft power. Through technologies, the Soviet Union promoted communist ideology, French NGOs addressed their nation's declining regional influence, and GE sought to enlarge the market for its medical equipment. This brief overview reveals that successful medical diplomacy may require the coordinated efforts and participation of all actors of global health diplomacy from governments, the corporate sector, philanthropic organizations, and NGOs. The story of cobalt diplomacy at the Khmer-Soviet Friendship Hospital is not over yet, as one sees looming on the horizon a new

player in health diplomacy: China. In the context of the ‘Belt and Road Initiative’, China is projecting its soft power through the building of hundreds of hospitals in Africa and Asia (Gikiri 2017; Youde 2010), including Preah Kossamak Hospital in Phnom Penh that is currently being renovated and expanded with Chinese funding (Lim 2015) and another hospital east of the capital in the newly established province of Tbong Khmum (Naren 2017).

About the author

Rethy Chhem is a medical doctor, science diplomat, historian of medicine, and educator. He was Professor of Radiology in Canada and in Singapore for twenty years, and Director of the Division of Human Health at the International Atomic Energy Agency from 2008–2014. He holds a MD, a PhD in Education, and a PhD in History. He has published more than one hundred scientific articles and edited seventeen textbooks. He is a distinguished visiting professor at the Research Center for Radiation Disaster Medical Science, a joint project of Nagasaki, Hiroshima, and Fukushima Medical Universities. Chhem is currently Executive Director of the Cambodian Development Resource Institute, a leading think tank in Cambodia.

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