

North Korea's Healthcare: Current State and Outlook

Sung-Eun Cho
Research Fellow, KIHASA

Introduction

Since the UN Security Council Resolution on North Korea turned into an all-round set of economic sanctions in 2016, the effort to resuscitate the country's healthcare, with the economy hit hard, has slid into an impasse. The effect of the sanctions intensified as UNSCR 2321 eliminated the "livelihood exemption" that was then in place. Subsequently, UNSCR 2371 (August 5, 2017) imposed a full ban on import of natural resources from North Korea. Later in 2017, UNSCR 2375 (September 11, 2017) implemented an expanded ban on North Korean export of textiles and apparels. In yet another turn of the screw, the UN Security Council, with its Resolution 2397 (December 22), prohibited North Korean exports of food, agricultural products, machinery, electrical equipment, raw earth minerals, wood and sea vessels. With exports and imports stymied by the sanctions, the North Korean economy saw a steep decline in growth in 2017 and 2018.

In the meantime, the amount of crude oil North Korea is allowed to import has been capped at the current level of 4 million barrels a year, and a ceiling of 500 thousand barrels per year has been set for imports into North Korea of refined petroleum products.

Interested though they may be in bringing new technologies into their healthcare sector, North Korean authorities find themselves hampered by lack of material resources. The state-run healthcare system, with its resource severely constrained, is suffering a decline in the quality of services it provides. Insufficient as its market-based pharmaceuticals supply is to meet the basic health needs of the population, North Korea needs support from the Republic of Korea and the international community.

North Korea's healthcare system then and now

Built on the principles of free medical care for all, the section doctor system, the combination of Koryo (indigenous) medicine and Western medicine, prophylaxis and public participation, North Korea's healthcare system delivers services through public hospitals and clinics, with most of its funding coming from the government.

The healthcare system dates as far back as to 1946, when the Social Insurance Law first mandated the provision of free healthcare for a certain segment of the population. Later, in 1952, the healthcare system began providing basic healthcare for all North Korean nationals. The North Korean government is reportedly to have announced a complete universal free healthcare system with the expansion of its public health project in 1960.

The section doctor system originated from a 1947 program whereby clinics and hospitals were assigned to provide services to residents in their designated areas. What is known today as the section doctor system was initiated in 1964 by Gyungrym General Hospital in Pyongyang and expanded throughout the country in the 1980s. Preventive medicine is regarded in North Korea as a pivotal means to embody the principle of socialist medicine, as stipulated in Article 56 of

the DPRK Socialist Constitution (1972) and Articles 18–27 of the Public Health Law (1980).

However, the reality is that primary-care providers—local clinics and section doctors—are so bare of basic equipment and supplies that they barely provide what may be called medical consultation. The situation is not much better for secondary-care providers including people's hospitals in cities and counties. A recent survey of physicians who fled from North Korea suggests that the DPRK's healthcare system, although its framework remains what it has been, lacks facilities, medical supplies and infrastructure. Add to this the lack of infrastructure like electricity and transport, and it seems unlikely that the problem North Korea has in its healthcare system will go away in the near-term.

Most medical devices require electricity to function, but the extent of energy shortage in North Korea is such that proper storage of pharmaceuticals that requires refrigeration—vaccines, for example, which can lose their effectiveness and even turn harmful if stored at improper temperatures—is virtually impossible. The main problem of the healthcare system is, as a WHO report ("World Health Statistics 2009") suggested, more about quality than quantity: that is, it is more about lack of medicines, medical devices and associated consumables than the number of healthcare professionals or, for that matter, the number of healthcare establishments.

In a report published in February 2017 ("12 Forgotten Crises to Remember"), the UN Office for the Coordination of Humanitarian Affairs has highlighted that 25 percent of the North Korean population suffer lack of access to essential healthcare, with 1.7 million children, including infants and toddlers, at risk of deadly diseases. Maternal deaths in North Korea are attributed mostly to hemorrhage (30 percent), anemia (13 percent), sepsis (12 percent), and obstructed labor or toxemia (12 percent), suggesting a lack of antibiotics (and other basic pharmaceuticals), improper blood transfusion, poor infection control and mismanagement of complications. For example, as Article 32 of North Korea's Pharmaceutical Affairs Act—which seeks to increase retrieval of drug containers—suggests, basic medical consumables and allied materials are in short supply. This indicates that the reuse of disposable pharmaceutical containers is widely encouraged in healthcare settings in North Korea, putting drug safety at risk. The unsafe practice of reusing pharmaceutical disposables has been reported to have increased cases of infection¹.

Fully aware of how bad a condition their healthcare system is in, North Korean authorities have pitched in to improve the situation. It is hard to say at this point, however, that in a socialist country of which bureaucratic window dressing is characteristic, their efforts have brought any real progress.

At the 7th Workers' Party Congress in 2016, Kim Jong Un, the Party's then first secretary, proposed that "people's hospitals in counties should be renovated and *ri*-level hospitals and clinics should be provided with adequate material support so that they can fulfill their duty as health service providers for people in the districts they are assigned to cover." The North Korean Health Ministry formed a central steering group tasked with leading the project of "renovating people's hospitals in cities and counties." Subsequently, some district healthcare providers have of late been designated as exemplary hospitals and widely trumpeted as such. There was a brief mentioning of year-on-year "improvement in healthcare service conditions" in Kim Jong Un's

¹ WHO. (2008) Assessment of the Local Pharmaceutical Production in DPRK: Mission Report. Alain Kupferman. Geneva: World Health Organization.

New Year's Address for 2018. It seems unlikely that North Korea saw any improvement to speak of in healthcare in 2018, as in the 2019 New Year's Address there was no assessment whatsoever of healthcare services. Instead, in his latest New Year's Address Kim Jong Un made it a priority task "to modernize pharmaceutical and medical device factories and to refurbish hospitals and clinics so as to have people actually see the superiority of the socialist health system."

The fact that the North Korean state-run newspaper *Rodong Sinmun* has repeatedly run articles with titles that invoke the "superiority of the socialist health system" could be thought to demonstrate how detrimental North Korean authorities think a lack of basic healthcare could be to keeping their regime up and running. The same media outlet has even put out an article to the effect that keeping the supply of pharmaceutical ingredients and raw materials coming in is so essential a matter that maintaining the socialist regime depends on it.

With much of the state mechanism of pharmaceutical distribution rendered defunct, more and more people in North Korea today seek the medicines they need from markets. As people with financial means are now able to turn to market-based consumer transactions, disparities in healthcare use have been widening, and therapeutic treatments have become more of a symptomatic relief than an adequate cure.

Ever since the *jangmadang*—a system of consumer markets, legitimate or otherwise—emerged as the backbone of the North Korean informal economy where the whole range of daily essentials are sold and bought, medicines have become available for purchase from various forms of retailers such as state-run drug stores, private pharmacies, market stalls, grocery stores, and peddlers. According to some North Korean defector physicians, it was in the mid-1990s, when the state's pharmaceutical supply system began falling apart, that prescriptions began to be issued by former state-hospital physicians for the purchase of medications from the informal market. Since then it has become a common practice even among current physicians in state-run hospitals to issue prescriptions for drugs that are available on the gray market. Following the lifting of the ban on free markets in 2010 or thereabouts, all North Korean pharmacies, official and unofficial ones alike, have turned into for-profit private businesses. The informal pharmaceutical market has turned into one where consumers seek products with immediate symptomatic relief. Such products are consumed without any proper guidance as to their administration and use, uninformed of their side effects and ingredients. A case in point is of Jing Tong Pian, a China-produced pain reliever which, widely mistaken and often abused as something of a panacea in North Korea, is known to contain narcotics and listed in South Korea as one of the prohibited substances.

The pharmaceutical predicament North Korea is in is attributable in part to the UN sanctions and in part to lack of manufacturing capacity. There are ten or so state-run pharmaceutical manufacturers in North Korea, among them Sunchon Pharmaceuticals (Pyumngnam), Pyongsu Pharmaceuticals (Pyongyang), Pyongyang Pharmaceutical Company, Hamheung Pharmaceutical Manufacturer (Hamheung) and Nanam Pharmaceutical Manufacturer (Chungjun). These factories are known to produce twenty or so types of compounds in all, including three or four antibiotics and sulfas, and in no large quantities, as they are in short supply of electricity and necessary raw materials.

According to the UN's customs database, North Korea imported, between 2011 and 2015, a total of USD104.13 million worth of medical supplies, of which 68.2 percent was from China, with pharmaceuticals accounting for 91.5 percent of the Chinese products. In more recent years,

North Korea's pharmaceutical imports—medicines and pharmaceutical raw materials—declined due to tightened sanctions. North Korean pharmaceutical manufacturers, with their beat-up production machinery neither replaced nor repaired, have been plagued by underperformance, some of them reportedly producing mostly products with high profit-margins such as opiates, Viagra and health supplements. The Sunchon Pharmaceuticals are known to have been producing common medicines like aspirin and penicillin, ordered by the National Defense Commission.

An outlook for North Korea's healthcare system

It is not for want of health professionals and hospitals that North Korea is in the healthcare fix it is in (North Korea is said to have an estimated 329 healthcare workers per 100,000 population, a level higher than in South Korea and much higher than the global average of 142). What matters instead is how well the country is able to harness available raw material resources and new technologies in the delivery of necessary healthcare services. North Korean health authorities have been striving to strengthen their *juche* (self-reliance) in raw material supply for drug production and to achieve quality improvement by making use of new technologies like telemedicine. The success hinges on how fast the economy of North Korea turns to progress.

Upon his visit to the Pyongyang Pharmaceutical Factory, Kim Jong Un proposed to “transform the factory into an exemplary manufacturing hub, a modernized model that all other pharmaceutical factories across the country will seek to emulate,” adding that the “renovating of the Pyongyang Pharmaceutical Factory and the Hu'ngnam Pharmaceutical Factory should be taken on in earnest.” Thereafter *Rodong Sinmum* has time and again published articles about how the Pyongyang Pharmaceutical Factory has turned into an integrated production system that is energy-efficient and ergonomic and keeps to the standards of Good Manufacturing Practice.

In an effort to surmount the challenge of raw material shortages, North Korean health authorities have been working eagerly for some time now toward self-reliance in drug production, which in point of fact is about developing new drugs with natural raw materials that are available in the country. In an article it ran early last year, *Rodong Sinmun* reported how by using domestic natural ingredients such as simples, the North Korean Ministry of Public Health managed to bring about a 1.3-fold year-on-year increase in its production of Koryo medicines.

In an interview with reporters, Kim Hyong Hun, Vice Minister of Public Health, said, likely in response to the problem of raw material shortage, that he would push ahead vigorously with efforts to realize good manufacturing practices (GMP's) and to develop and produce highly-effective Koryo medicines. The Koryo Pharmacological Institute of the North Korean Academy of Koryo Medicine is reported to have said in a newspaper article that its “research and development activities have made it possible to manufacture new hard capsules to replace those that used to be imported, by using natural raw materials that are easily sourced from within the country, embodying scientific progress in the production of some twenty Koryo medicinal extract medicines including Samhyang Wuwhang Chungsim Capsules and Bioactive Insam Extract.”

While portraying itself as a powerhouse of science and technology, North Korea is also looking in earnest to further telemedicine. At the 7th Workers' Party Congress in 2016,

Chairman Kim Jong Un said that “a nationwide telemedicine system was established” and called for stepping up efforts to complete the system. The call Kim Jong Un made in his 2019 New Year’s Address for the “upgrading of medical institutions and medical services” is thought to echo his call for active steps toward making wider use of telemedicine. However, it seems unlikely that, with little infrastructure like electricity supply, such commitments of North Korean authorities will bring about intended results. It is more likely to remain difficult for the North Korean government to bring about intended changes without sanctions relief that is contingent on denuclearization.

Healthcare shift in transition economies

It used to be the norm for socialist countries—North Korea included—to have in place a Semashko healthcare model predicated on the principle of access for all to free health services. As these countries underwent economic reforms and market opening-up, their healthcare system, wanting in resources and found unable to deliver services of appropriate quality to the ever-increasing number of people with non-communicable diseases, shifted to a social insurance scheme based on purchaser-provider split. China is a case in point, where the Semashko model crumbled following a process of reforms, opening up, and a rapid transition to market economy. China today has multiple public health insurance plans that in all cover health services for 95 percent of the population. Apart from North Korea, Cuba is perhaps the only country in the world where the socialist healthcare model persists, though in a troubled state due to the rapid aging of the population.

Prospects of cooperation in healthcare with North Korea

Various non-communicable diseases are on the rise in North Korea and the socialist health system will soon prove inapt to meet the mounting healthcare needs, as has been the case with many transition economies around the world. As it works on toward establishing a sustainable healthcare system, North Korea will have to draw to an increasing extent on support and cooperation from the international community. In an example of ongoing cooperation, the WHO has been working with North Korean authorities based on its multi-year Country Cooperation Strategies, focusing on the five strategic priorities as detailed in Table 1.

[Table 1] Strategic agenda for WHO cooperation with North Korea (2014~2019)

	Priority	Main focus
1	Prevention and control of non-communicable diseases	<ul style="list-style-type: none"> -Strengthen NCD surveillance and support the implementation of the national strategic plan for integrated prevention and control of NCDs -Support national authorities in tobacco control through intersectoral action and implementation of MPOWER measure package.
2	Addressing women's and children's health to reduce vulnerability and promote disaster risk reduction	<ul style="list-style-type: none"> -Support efforts to improve maternal health, emergency obstetric care and neonatal care, and reduce mortality and achieve the MDGs 4 and 5 -Support efforts to further improve the integrated management of childhood illnesses (IMCI) at the primary care and hospital levels -Provide technical support towards the implementation and further development of the national reproductive health strategy -Strengthen coordination of health cluster and building partnership with health, nutrition and water sanitation stakeholders -Integrate all-hazard emergency and disaster risk management for health into new WHO, the United National Strategic Framework and national Health Strategies -Support DRP Korea to apply the WHO survey tool to document the status of all-hazard emergency and disaster risk management for health at country level based on regional benchmarks
3	Prevention and control of communicable diseases	<ul style="list-style-type: none"> -Provide technical support to build capacity for the strengthening of integrated disease surveillance -Provide technical and financial support to sustain high immunization coverage reached with measles, polio, hepatitis B and the pentavalent vaccines and provide support in introduction of new priority vaccines as identified in the comprehensive multi-year plan on (cMYP) immunization -Strengthen health system capacity for improved detection and treatment of TB -Provide further support to reduce morbidity of malaria and build capacity towards its elimination -Support national efforts for prevention and control of sexually transmitted diseases (STDs) including HIV/AIDS -Support implementation of national strategic plan for prevention and control of viral hepatitis -Support implementation of International Health Regulations (IHR 2005) to strengthen national preparedness in detection and response to public health event of international concerns
4	Strengthening health systems to improve service delivery	<ul style="list-style-type: none"> -The comprehensive medium-term strategic plan of development of health sector in DPR Korea provides the policies and strategic directions for partners in health -Strengthen national regulatory authority (NRA) and national control laboratory (NCL) in updating national standards and revising standard operating procedures (SOPs) -Strengthen HMIS towards developing a comprehensive, integrated and sustainable system -Further development of human resources for health, especially mid management and primary healthcare provider levels -Update quality standards for medical services in health facilities especially at primary level -Building medical science and traditional medicine research, to assist evidence-based policy, planning and decision-making
5	Ensuring WHO country presence to support sustainable national health development	<ul style="list-style-type: none"> -Promoting partnerships for health with regional and international cooperation, facilitated by WHO -Promoting mutual support towards sustainable national development of health

Source: WHO. (2016). WHO Country Cooperation Strategy Democratic People's Republic of Korea 2014-2019, pp. 36-45.

Concluding remarks

South-North cooperation in healthcare will need systematically-planned long-term roadmaps

and well-defined implementation activities. This means going beyond what has been done in the past, which mostly involved merely providing support in building a few hospitals and educating North Korean healthcare professionals. North Korea recently has declined, on several occasions, to accept South Korean offers of humanitarian aid. The focus of the South-North relationship is shifting to long-term peace settlement, exchange, and cooperation. The North Korean healthcare sector is in need for mid- to long-term South-North exchange and cooperation, which should proceed, as some argue, based on an inter-governmental treaty. Settling peace on a firm basis on the Korean Peninsula requires helping North Korea to become a normal member of the international community. It is important for South Korea to keep encouraging North Korea to take steps toward reforms, showing its commitment to standing ready to assist in whatever way it can in such efforts. In this regard, South-North cooperation in healthcare will need to go beyond mere words and aid to a well-defined, close partnership. The initial steps to normalizing the North Korean healthcare system may be taken by bringing changes to “the software”—and the governance—rather than “the hardware”.