

A Strategy Toward Reconstructing the Healthcare System of a Unified Korea

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This road map aims to establish a stable and integrated healthcare system for the Korean Peninsula by improving health conditions and building a foundation for healthcare in North Korea through a series of effective healthcare programs. With a basic time frame extending from the present in stages towards unification, the roadmap is composed of four successive phases. The first and second phases, each expected to last five years, respectively, focus on disease treatment and nutritional treatment. These phases would thereby safeguard the health of the most vulnerable populations in North Korea, while fulfilling the basic health needs of other groups by modernizing existing medical facilities. Based on the gains of the first two phases, the third phase, for ten years, would prepare for unification of the Koreas by promoting the health of all the North Korean people and improving basic infrastructural elements such as health workforce capacity and medical institutions. The fourth phase, assuming that unification will take place, provides fundamental principles and directions for establishing an integrated healthcare system across the Korean Peninsula. We are hoping to increase the consistency of the program and overcome several existing concerns of the current program with this roadmap.

Key words: Democratic People's Republic of Korea, Health planning, Delivery of health care

INTRODUCTION

Current Status of Healthcare in North Korea

The healthcare system in North Korea has degenerated, becoming an impotent system incapable of providing even minimal services to its citizens. Specifically, the integrated provision

of services via a system of free medical care and "section doctors" appears to be non-existent, as most functions, including those performed by medical institutions, have been impaired [1-3].

The most pressing problem is that the government of North Korea has failed to demonstrate willingness to address failures in its healthcare system. As part of a socialist system, the provision of resources depends solely on governmental effort, and it is impossible to innovate within the limits of the healthcare system of North Korea.

Meanwhile, the North Korean people are in very poor health with a high disease burden, and the health outcome gap between South and North Korea is large and has been increasing over time [4]. The health and living conditions of children and women are particularly threatened, and non-communicable

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diseases have imposed an increasing burden on North Korea as the magnitude and severity of communicable diseases linger although the prevalence of communicable diseases has improved due to international contributions [5-7].

Ongoing Problems With Humanitarian Aid to North Korea

To help North Koreans suffering due to the collapsed healthcare system, international organizations and the South Korean government have provided ongoing support to North Korea since 1995 [8,9]. However, the programs that have been implemented have faced several problems, such as an inadequate long-term budget, a low level of coordination among providers, and an inability to monitor the distribution system. Lack of a monitoring mechanism because of resistance by the North Korean government has been an important concern, as the international community has been unsure whether the support was being distributed to those in need.

Another key issue is the role of participating agencies. The South Korean government underwrites most of the budget for many of the international health programs running in North Korea; however, South Korea has had a very limited role so far and has not developed any long-term plan or roadmap. The nongovernmental organizations (NGOs) that have initiated the current inter-Korean partnerships and have played a significant role in increasing trust, even in times of political and diplomatic tension, have only limited access to some areas in North Korea such as Pyongyang and its suburbs.

Necessity of a Long-term Roadmap for Healthcare in a Unified Korea

From the perspective of South Korea, preparing for and seeking the unification of Korean peninsula, it is crucial to improve the health status of the North Korean people, which would contribute to the unification processes with maximized human security and to integrate two healthcare systems into a harmonized one, which is needed for more stable unification.

At this point, we need new strategies to develop an effective support program for North Korea that can be incorporated into a long-term roadmap for healthcare system integration of the two Koreas while ensuring a systematic partnership among the participating agencies and stakeholders.

In this article, based on the clear understanding of the situations mentioned above, we developed the following concise

road map for healthcare programs in North Korea and to prepare for an integrated healthcare system between South and North Korea at the time of unification.

OVERVIEW OF THE ROADMAP

Timeframe and Goals

This road map aims to establish a stable and integrated healthcare system for the Korean Peninsula by improving health conditions and building a foundation for healthcare in North Korea through a series of effective healthcare programs (Table 1). This roadmap is based on the scenario by the Ministry of Unification on "Building an infrastructure program for North Korea" which assumes unification in 10, 20, or 30 years [10]. This roadmap specifically focuses on the scenario of unification in twenty years.

With a basic time frame ranging from the present in stages towards unification, the roadmap is composed of four successive phases. The first and second phases, each expected to last five years, focus on disease treatment and nutritional treatment, respectively. These phases would thereby safeguard the health of the most vulnerable populations in North Korea, while fulfilling the basic health needs of other groups by modernizing existing medical facilities.

Based on the gains of the first two phases, the third phase, which would last for ten years, would prepare for unification of the Koreas by promoting health of all the North Korean people and improving basic infrastructural elements such as health workforce capacity and medical institutions. The fourth phase, assuming that unification will take place, provides fundamental principles and directions for establishing an integrated healthcare system across the Korean Peninsula.

Key Strategy 1: Modernization of City/County Hospitals as the Base of Healthcare Services

According to our scenario, due to the strained inter-Korean relationship, a limited range of programs would initially be carried out based on principles of selection and concentration, and gradually be expanded to comprise a nationwide omnidirectional program. In terms of content, the city and/or county would be established as a base for healthcare services, and the functions of city/county-level hospitals would be revitalized to implement and provide disease treatment, nutrition treatment, and health promotion services in North Korea.

All cities and counties of North Korea have at least one hos-

Table 1. Roadmap for health-care aid to North Korea and reconstructing the health care system in a unified Korea

Period	Phase 1 (5 y)	Phase 2 (5 y)	Phase 3 (10 y)	Phase 4
Goals	Treat those in urgent need, especially children and women	Treat those with life-threatening problems, and provide basic health care services for the whole population	Provide basic health promotion services for the whole population and prepare infrastructure for health care system integration	Integrate health care system between South and North Korea
Affected population	6 Million	10 Million	24 Million	75 Million
Strategy	Choose 5 cities/counties in each province and set up health bases	Set up health bases throughout every city/county	Run nationwide health promotion programs Train health care professionals and renovate the tertiary hospitals	Start a national health care system in a specific area Then disseminate
Details	Modernize the function of pediatrics, obstetrics, and internal medicine in city/county hospitals	Continue phase 1 Add specialties in about 5 to 10 health bases	Education program for the workforce Screening program for those at risk of non-communicable disease Renovate the tertiary hospitals with medical schools (having more than 500 beds)	
Governance	Establish North Korea Healthcare Foundation, which has a technical support team	Operate North Korea Healthcare Foundation	Operate Korea Healthcare Foundation	Operate Korea Healthcare Foundation
Roles	South Korean government Create the institution that will have a relationship with international organizations or NGOs International organizations Hospital modernization project and infectious disease control project NGOs Hospital modernization project as a consortium	South Korean government Agreement on nationwide health care program International organizations Hospital modernization project and infectious disease control project NGOs Hospital modernization project as a consortium	South Korean government Health promotion program for North Koreans and building health-care infrastructure NGOs Hospital modernization project and health professional training program	

NGO, nongovernmental organization.

pital designated to serve the local people, and therefore, modernization of these hospitals can act as the key strategy for providing health services. Then over time, the number of modernized hospitals can be increased, and they will provide more services for more people.

Key Strategy 2: Founding a New Institution as a Control Tower

An institution provisionally named the 'North Korea Healthcare Foundation' must be founded to oversee the roadmap. Creating this institution would have several advantages: to maintain consistency of policy throughout the period; to maintain a steady relationship with international organizations working with North Korea; and to simplify and consolidate the collection of information about current North Korean health-care issues.

From phase 3, the institution should transition to having North Korean officials and experts as its members or staff because more a cooperative and nationwide program would be

launched, and it will be better to change its name to the 'Korea Healthcare Foundation.'

ROADMAP DESCRIPTIONS FOR EACH PHASE

Phase 1: Set up the Base Hospitals and Treat Those in Urgent Need (5 Years)

Five city/county hospitals in each province would be selected, considering access to care. The selected 50 hospitals nationwide will provide life-saving care for those in urgent need including children, pregnant women, and those with contagious diseases.

To serve the target population, selected hospitals will modernize with a focus on inpatient care and outpatient care facilities for pediatrics, obstetrics, and infectious diseases, and will perform prenatal care, delivery services, vaccination for children, and treatment of contagious diseases such as tuberculosis or malaria.

Phase 2: Increase the Number of Base Hospitals and Add Other Specialty Services (5 Years)

The number of base hospitals will be increased up to the number of all of the city/county hospitals, and this will improve the access to care dramatically. In addition, more specialized health services such as surgery and medication for chronic disease could be provided. For these services, hospital renovation will focus on operating rooms and sufficient supplies for operation. Patients with cardiovascular disease or diabetes will receive priority care because it is suspected that these chronic conditions are widespread in North Korea [6]. Signing an agreement between South and North Korea for healthcare services is a crucial goal by the end of this phase. Implementing a national level health enhancing program will be another important step.

Phase 3: Run the Nationwide Health Promotion Program and Build the Healthcare Infrastructure for Integration (10 Years)

Through improvement in the inter-Korean relationship and implementation of an inter-Korean agreement regarding healthcare, the third phase would provide an omnidirectional healthcare program to all citizens of North Korea as well as other basic healthcare/medical infrastructure. Phase 3 will focus on preventive care to minimize the health outcome gap between South and North Korea. Two main programs will be executed—a public education program for quitting smoking and binge drinking, and another to start exercise. A screening program to identify patients suffering from metabolic syndrome will be commenced when possible.

For the preparation of healthcare system integration, in this phase, implementing more elaborate and systematic programs for enhancing the health workforce and medical facilities, which are the main resources of a sound healthcare system, will be needed. These tasks will be conducted efficiently through the renovation of the tertiary hospitals, including medical schools, which are responsible for medical education and general guidance to the lower level institutions.

Phase 4: Integration for One System

Complete integration of the healthcare system between the South and North is the goal. A national health insurance system in a specific area will be operated as a test for a smooth transition. In the beginning, the North Korean healthcare system will be preserved to some degree and South Korean pro-

fessionals or hospitals might gradually start to operate in North Korea.

ROLES OF KOREAN GOVERNMENT, INTERNATIONAL AGENCIES, AND NONGOVERNMENTAL ORGANIZATIONS

South Korean Government

It is important to create the North Korea Healthcare Foundation as early as possible. The North Korea Healthcare Foundation will control the whole process throughout the period and will partner with international organizations and NGOs.

The roles of the North Korea Health Care Foundation are the selection of the base hospitals and the operation of training programs for North Korean healthcare professionals. During phase 1 and 2, the North Korea Healthcare Foundation will work closely with international organizations or NGOs that have experience working with North Korea and build a stable relationship with its North Korean counterparts. As phase 3 begins, the North Korea Healthcare Foundation will take the initiative for all of the programs by using public and private funding available in South Korea to run the programs.

International Agencies and Korean Nongovernmental Organizations

The World Health Organization (WHO) will run a hospital modernization program as an infant and children program [9], and the North Korea Healthcare Foundation will be a partner with the WHO to maximize their experience. Dividing roles among international organizations and NGOs is desirable. NGOs have limited access while international organizations have relatively unrestricted access to the whole country. If international organizations cover areas not accessible to NGOs, it will maximize the equal exposure of the program throughout North Korea. Under this scenario, NGOs will cover Pyeongyang and its suburbs, and the WHO will cover other areas in the northeast of the country.

Currently the WHO and the United Nations Children's Fund run a program for those with tuberculosis and malaria throughout North Korea, funded by a global fund and a world vaccination association. Parasitic diseases will be treated by both preventive and curative methods. The South Korean government will provide parasite pills for all students and educate them to prevent possible infection. For the general population health bases, they will provide a major contribution for the control of

parasitic diseases, and it is likely that NGOs will have access to Pyeongyang and its suburbs. The advantage of using Korean NGOs as opposed to international organizations is that there are relatively similar cultures and no language barrier. Hopefully, the NGOs will develop a good partnership with North Korea during the program and can then execute the program independently with North Korea later. The creation of a consortium of Korean NGOs would be advisable.

CONCLUSION

This roadmap includes step-by-step procedures needed for an integrated healthcare system between South and North Korea and detailed strategies for each phase to overcome several existing issues with humanitarian health programs in North Korea. With this long-term roadmap, we are hoping to increase the consistency of the program and setting up a clear role for each agency would minimize coordination issues. The South Korean government can perform the role of manager of the whole North Korea support program based on this roadmap.

Out of several important considerations for the roadmap, the current and future political relationship between South and North Korea is the most crucial one. The roadmap can work properly only if North Korean authorities accept the plan and cooperate with sincerity, but due to the current tension in the inter-Korean relationship, it is difficult to even initiate such a long-term project. In the context of such an unpredictable relationship, a coherent and planned program aligned with clear principles like this roadmap is needed more than ever. For the acceptance and implementation of an effective healthcare program in North Korea, the government of South Korea must consistently persuade relevant stake holders, including the government of North Korea. At the starting point, it would be desirable for international agencies to take the initiative to launch and conduct this plan like the program they are currently running for women and children in North Korea.

In this process, such a 'planned' roadmap is a necessity, and our proposed roadmap would allow South and North Korea to both play important roles cooperatively in controlling the entire process of implementing an effective health program and

improving the healthcare status of North Korea. Through this, the two Koreas would be one step closer to unification.

CONFLICT OF INTEREST

The authors have no conflicts of interest with the material presented in this paper.

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