

2022 한반도 보건의료협력 국제세미나

**북한 코로나19 발생과
감염병 억제를 위한
다자협력 방안**

2022.

7.20.(수)

20:00~22:00

서울대병원 제일제당홀
(어린이병원 B1)

|주최|



서울대학교 의과대학 통일의학센터
Institute for Health and Unification Studies



남북교류협력지원협회
South-North Korea Exchanges And Cooperation Support Association

|후원|



통일부

CONTENTS

| 환영사 |

강영식 회장 (남북교류협력지원협회)

| 축 사 |

김정은 학장 (서울대학교 의과대학)

조비룡 원장 (서울대학교 의과대학 건강사회개발원)

발제 1

북한의 우선순위 건강문제 동향 분석 1

Nagi M. Shafik Public Health Advisor (Harvard Medical School)

발제 2

북한 코로나19 확산과 다자간 협력방안 13

최장호 박사 (대외경제정책연구원)

발제 3

국제 감염병 위기와 남북 보건의료협력의 새로운 기회 모색 21

이종구 위원장 (대한민국의학한림원 COVID-19 특별위원회)

| 지정 토론 및 자유토론 |

안동일 교수 (연세대학교)

김신곤 교수 (고려대학교)

Director (Concern Worldwide)

| 폐회사 |

문진수 소장 (서울의대 통일의학센터)

발제 1

북한의 우선순위 건강문제 동향 분석

National Health Priority Trends in the DPR Korea

Nagi M. Shafik Public Health Advisor (Harvard Medical School)



Trends in National Health Priorities of the Democratic People's Republic of Korea

Nagi M Shafik

International Seminar on Korean Peninsula Health and Medical Cooperation

20 July 2022

DPRK National Health Priority 2004 - 2008

Area	NHP 2004-2008
1	Tuberculosis, malaria, HIV/AIDS
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)
3	Non-communicable diseases (CVD, cancer, oral disease)
4	Tobacco control
5	Maternal & child health, including immunization
6	Food safety
7	Nutrition
8	Mental health
9	Blood safety
10	Health and environment
11	Developing & application of new technology
12	Essential drugs & drug quality assurance
13	Strengthening of health system
14	Training/reorientation of health workers

DPRK National Health Priority 2010 - 2015

Area	NHP 2010–2015
1	Decrease burden of communicable diseases.
2	Delivery of quality medical services.
3	Strengthen household doctor system.
4	Protect and promote maternal, child & elderly health.
5	Strengthen prevention & control of major NCD & risk factors.
6	Provide sufficient medicines (essential medicines & OTC medicines).
7	Strengthen human resources for health.
8	Integrated health management information system.
9	Strengthen emergency preparedness.
10	Intensify international cooperation & partnership.

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

3

DPRK National Health Priority 2016 - 2020

Area	NHP 2016–2020
1	To intensify the development of the Juche-oriented medical science & technology.
2	To establish nation-wide telemedicine system & improve the operational quality.
3	To upgrade the health sector to information oriented one.
4	To strengthen systems for prevention & surveillance of diseases.
5	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	To provide safe & healthy environment.
7	To strengthen section doctor system & improve the quality of health service.
8	To improve the technical competency of health workers.
9	To improve the maternal, child & aged healthcare.
10	To strengthen professional development of midwives for providing quality SRH services.
11	To strengthen the capacity of leadership & management in public health.
12	To develop the capacity for immediate response to emergencies & disasters.

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

4

The three DPRK National Health Priority 2004 - 2020

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

5

The trend of Communicable Diseases 2004 - 2020

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

6

The trend of Non-Communicable Diseases 2004 - 2020

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

7

The trend of Maternal & Child Health 2004 - 2020

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

8

The trend of Health and Environment 2004 - 2020

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

9

The trend in Health System 2004 - 2020

A: Information and Technology:

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

10



DPRK's Telemedicine System



Locally Produced CT scan



Locally produced artificial knee joint

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

11

The trend in Health System 2004 - 2020

B: Medicine including Koryo Traditional Medicine:

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

12

The trend in Health System 2004 - 2020

C: Leadership and Management:

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

13

The trend in Health System 2004 - 2020

D: Human Resources:

Area	NHP 2004-2008	NHP 2010-2015	NHP 2016-2020
1	Tuberculosis, malaria, HIV/AIDS	Decrease burden of communicable diseases.	To intensify the development of the Juche-oriented medical science & technology.
2	Other infectious diseases (hepatitis B, intestinal infectious diseases & parasitosis)	Delivery of quality medical services.	To establish nation-wide telemedicine system & improve the operational quality.
3	Non-communicable diseases (CVD, cancer, oral disease)	Strengthen household doctor system.	To upgrade the health sector to information oriented one.
4	Tobacco control	Protect and promote maternal, child & elderly health.	To strengthen systems for prevention & surveillance of diseases.
5	Maternal & child health, including immunization	Strengthen prevention & control of major NCD & risk factors.	To facilitate the modernisation of medicine manufacture, production of Koryo traditional medicine & modernisation of medical tools, production.
6	Food safety	Provide sufficient medicines (essential medicines & OTC medicines).	To provide safe & healthy environment.
7	Nutrition	Strengthen human resources for health.	To strengthen section doctor system & improve the quality of health service.
8	Mental health	Integrated health management information system.	To improve the technical competency of health workers.
9	Blood safety	Strengthen emergency preparedness.	To improve the maternal, child & aged healthcare.
10	Health and environment	Intensify international cooperation & partnership.	To strengthen professional development of midwives for providing quality SRH services.
11	Developing & application of new technology		To strengthen the capacity of leadership & management in public health.
12	Essential drugs & drug quality assurance		To develop the capacity for immediate response to emergencies & disasters.
13	Strengthening of health system		
14	Training/reorientation of health workers		

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

14

Conclusions

- DPRK has continued to revise its health policy considering the nation’s evolving priorities & learning from wider global health priorities;
- Contrary to the portrayal of the DPRK as a “hermit kingdom,” the country has exhibited openness & willingness to engage & learn;
- Opportunity to further engage & collaborate with the country’s health sector through sharing key knowledge in policy & public health;
- That would definitely lead to substantial advances in the Korean people’s health.

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

15

Further Readings

1. National Health Priority Trends in the Democratic People’s Republic of Korea: [ERIC K. KIM](#), [KEE B. PARK](#) and [NAGI M. SHAFIK](#), APRIL 7, 2022. <https://www.38north.org/2022/04/national-health-priority-trends-in-the-democratic-peoples-republic-of-korea/>
2. Non-communicable Diseases Country Profiles 2011. *World Health Organization*; 2011. <https://apps.who.int/iris/handle/10665/44704>.
3. Non-Communicable diseases country profiles 2018. <https://www.who.int/publications-detail-redirect/9789241514620>
4. McCurry J. “North-South Korea maternal health project to continue.” *The Lancet* 375, no. 9730 (2010): 1953. doi:10.1016/S0140-6736(10)60908-7.
5. Democratic People’s Republic of Korea: Sustainable Development Knowledge Platform. <https://sustainabledevelopment.un.org/memberstates/dempeoplesrepublickorea>
6. “Intended Nationally Determined Contribution of Democratic People’s Republic of Korea.” *United Nations Framework Convention on Climate Change*. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Democratic%20People%27s%20Republic%20of%20Korea%20First/DPRK-INDC%20by%202030.pdf>.
7. Environment UN. Sustainable Development Goals: United Nations Environment Programme:
8. Annual Report 2015. UNEP - UN Environment Programme. Published September 26, 2017. <http://www.unep.org/resources/annual-report/sustainable-development-goals-united-nations-environment-programme-annual>
9. World Health Organization. Regional Office for South-East Asia. *WHO Country Cooperation Strategy Democratic People’s Republic of Korea: 2014-2019*. World Health Organization. Regional Office for South-East Asia; 2016. <https://apps.who.int/iris/handle/10665/250298>
10. North Korea Succeeds in Developing Multi-detector CT Scanner. *Korea IT Times*. Published February 5, 2016. <http://www.koreaitimes.com/news/articleView.html?idxno=58075>
11. Park Kee B. and Ham Edward I. “North Korea’s Surprisingly Robust Healthcare System.” *Global Asia* 16, no. 3 (2021). https://www.globalasia.org/v16no3/cover/north-koreas-surprisingly-robust-healthcare-system_kee-b-parkedward-i-ham.
12. The Section Doctor System in the DPRK - KFAUSA.org. <https://kfausa.org/section-doctor-system-dprk/>
13. Hyon Choe Suk, Nam KY, Sun HC, Garg R, Shrestha SM, Ok KU, Kumar R. “Package of essential noncommunicable disease (PEN) interventions in primary health-care settings in the Democratic People’s Republic of Korea: A feasibility study.” *WHO South East Asia J Public Health* 6, no.2 (September 2017): 69-73. <https://doi.org/10.4103/2224-3151-213794>.
14. Park John J., Lim AY, Ahn HS, et al. “Systematic review of evidence on public health in the Democratic People’s Republic of Korea.” *BMJ Glob Health* 4, no. 2 (2019): e001133. doi:10.1136/bmjgh-2018-001133.
15. “SDG Target 3.8 | Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.” *World Health Organization*. [https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/sdg-target-3.8-achieve-universal-health-coverage-\(uhc\)-including-financial-risk-protection](https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/sdg-target-3.8-achieve-universal-health-coverage-(uhc)-including-financial-risk-protection).

20 July 2022

International Seminar on Korean Peninsula Health and Medical Cooperation

16

감사합니다

발제 2

북한 코로나19 확산과 다자간 협력방안

COVID-19 Outbreaks in North Korea and Multilateral Cooperation Measures

최장호 박사 (대외경제정책연구원)

Jangho Choi (Head of Team, Korea Institute for International Economic Policy)



North Korea's spread of COVID 19 And Multilateral Cooperation

Jangho CHOI, KIEP
2022. 7. 20. (Wed.)

■ North Korea's Corona Virus Policy and Social System

■ Policy: Zero COVID Strategy – No immunity Enhancement Measures

- In January 2020, when Corona started, borders were closed and foreign trade and international cooperation were suspended.
- Emergency Quarantine Act (2020.08): Establish a centralized quarantine system, response plan for each infectious disease risk level, and strengthen legal sanctions and punishments.
- Forced withdrawal of all UN foreign staff (No international organization staff)
 - No way to monitoring NK's COVID 19 situation

■ North Korea's Unique socio-economic isolation system is advantageous for corona prevention

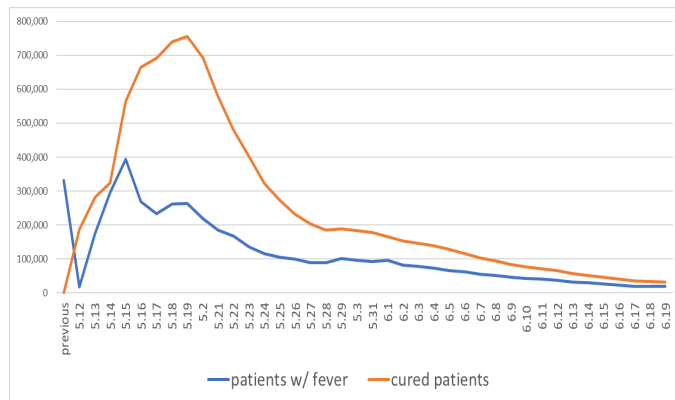
- Minimized Social Contact System:
 - Gathering of more than 3 people is prohibited without permission from the authorities
- Doctor's Zoning System (family doctor system):
 - One doctor regularly checks the health of 130 households of local residents
- Forced Population movement restrictions and low density policies:
 - limiting interregional movement of the population (only 1% of the population moved between regions during 1998-2008)
- Grassroots learning system
 - The message of the authorities is communicated to all individuals, and the individual learns and practices it.

North Korea's Corona Virus Spread Trend

- Jan. 2020~Feb.2022: No confirmed cases of Corona, and even if there was, it did not spread.
 - Strong zero COVID policy was successful until April.2022
 - Oct. 2020~Mar.2021: to hold a large-scale mass gathering at the end and the beginning of the year, all trade between NK and China is suspended (Perfect Border Lockdown)

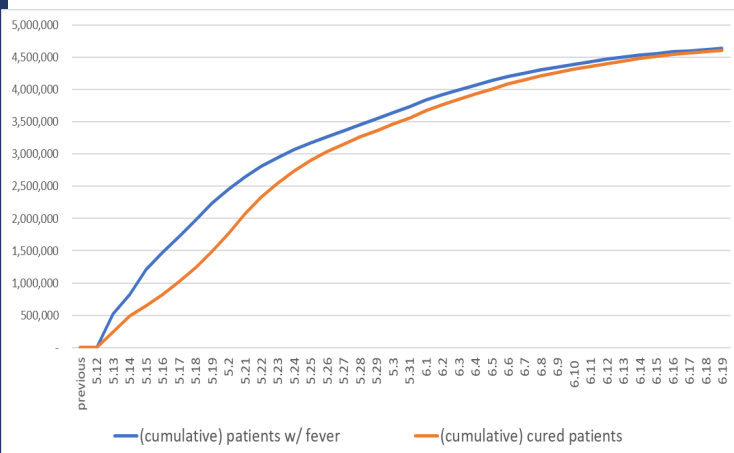
- On May 12, 2022, NK announced the first confirmed case of COVID-19
 - The number of cases of corona fever increased until May 15 and then decreased again.
 - maximum patients: (5.15) 392,920
 - Increasing rate (5.12~5.15): 2,182%
 - Fatality rate: 0.002% (???)

→ As the number of fever patients decreased within a month, the spread of Corona was stably managed in NK



North Korea's Corona Virus Spread Trend (Cont'd)

- About 20% of the NK population has been confirmed with Corona
 - Total Population of NK: 25 millions. (5.12 ~ 6.19)
 - Patients with COVID fever: 4.6 millions. (5.12 ~ 6.19)
 - Total Death: 73 (5.12 ~ 6.19)



NK plenary meeting, June 9. 2022

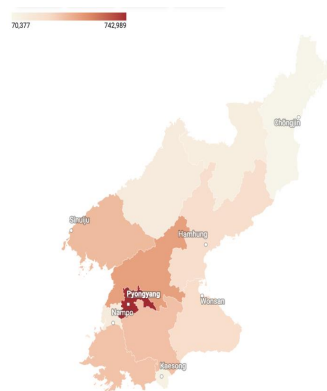
North Korea's Corona Virus Spread Trend (Cont'd)

- Death by ages: Contrary to general case, many deaths under the age of 10 occurred

Date	Under 10	11~20	21~30	31~40	41~50	51~60	Over 61
5.14	6	4	3	4	2	7	16

Source: NK's Chosun Central TV(2022.5.14)

- Regionally, corona virus spreads mainly in Pyongyang, the capital of NK



5

Is there humanitarian aid without political purpose?

- NK is not receiving support from the international community.**
 - COVAX and UNICEF offered NK to provide vaccines and other quarantine supplies, but NK refused.
 - In 2021, COVAX allocated 8.11 million doses of AstraZeneca and 2.97 million doses of Sinovac.
 - In 2022, COVAX allocated 1.3 million doses of AstraZeneca.
 - But, NK fused to accept vaccines for fear of side effects.
- After North Korea announced the outbreak of coronavirus, the Chinese government expressed their will to support NK with all their might as a neighboring country, and NK accept this.**
 - At the request of North Korea, 120 tons of health supplies and medicines were delivered.
- SK expressed its intention to provide humanitarian aid to NK for medical supplies, but NK did not respond.**
- Why?**
 - Because, NK believes there is no political-neutral humanitarian aid especially in regards to denuclearization negotiations and sanctions against NK

6

What happen next?

- **Confidence in the success of the corona epidemic will open up a new phase for NK.**
 - Still questionable whether NK actually succeeded in preventing the corona virus.
 - NK has released statistics since the early days of the outbreak, but from the moment the statistics were released, NK's corona control had no choice but to succeed.
 - However, NK has believed the authoritarian government's resident control is effective in preventing the corona virus.
 - Vaccines prevent the severity of the coronavirus, but authoritative social control systems can prevent corona infection.
 - Minimized Social Contact System:
 - Doctor's Zoning System (family doctor system):
 - Forced Population movement restrictions and low density policies:
 - Grassroot learning system
- ➔ **NK authorities would go its own way refuging international community's humanitarian aids.**
 - There is no reason for NK to receive humanitarian aid for COVID 19, because it has political purpose.
 - It seems that the NK leadership believes that even if a humanitarian crisis occurs, it can be overcome without international support as long as China's support continues.

7

What should the international community do?

- **Continuous interest and monitoring of NK are necessary.**
 - The NK authorities' crisis management capabilities are very limited.
 - NK's corona statistics are unreliable.
 - NK's current coronavirus quarantine policy is not sustainable.
 - Trade suspension due to border blockade is causing serious damage to the North Korean economy.
 - All of these damages are borne by the NK residents.
 - 2nd wave of corona infection would happen in NK, maybe in Nov. or Dec., 2022.
- **Persuade NK to accept humanitarian aid through various channels.**
 - The NK authorities are taking a risky gamble by taking the safety and well-being of the people hostage.
 - If a large-scale humanitarian crisis occurs in NK, China, Southeast Asian countries and South Korea will also suffer.
- **Sanctions against North Korea also need to be flexible in terms of humanitarian aid.**

8

Thank You

발제 3

국제 감염병 위기와 남북 보건의료협력의 새로운 기회 모색

International Infectious Disease Crisis and New Opportunities for
Inter-Korean Health and Medical Cooperation

이종구 위원장 (대한민국의학한림원 COVID-19 특별위원회)

Jong Koo Lee (Chairman, National Academy of Medicine of Korea)



"Seeking new opportunities for South and North Korean health and medical cooperation in the international infectious disease crisis"

1. What is the real situation of DPRK Outbreak of Covid-19?

A. Report from 'Chosun Central News'

- Information on the occurrence of patients is limited, but the fact was reported through a recent media report May 12, 2022: 'Chosun Central News', 1,800 people nationwide in one day Out of 350,000 fever cases, 162,200 were cured, announced by the Chosun Central News Agency in April, including 1 confirmed case of Omicron among the deaths.

- May 18, 2022: 'Chosun Central News', more than 260,000 new cases of fever, 1,978,230 cumulative cases of COVID-19 since the end of April, of which 1,238,000 have recovered, and 74,160 are under treatment, announced the cumulative death toll of 63. A data recently reported on the dashboard of the WHO late (as of June 29, 18:00) As of June 29, according to the data of WHO's South East Asia Region Office¹⁾, According to this report, the number of occurrences per day (24 hours ago) is known to be 4,7300 (0 deaths), and the cumulative number of patients is 4,739,860 (73 deaths).

- However, this report is based on fever patients, and it can be estimated that 'the incidence is twice as high' considering the prodromal or asymptomatic infection as a characteristic of the disease.²⁾

B. Analysis by the international communities

- Incidences and deaths are calculated based on the DPRK announcement³⁾

1) <https://who.maps.arcgis.com/apps/dashboards/73d1d3251de3435cbc0bc586230cc3ef>

2) According to the Journal of the American Medical Association (JAMA Network) As 59% of micron patients are known to spread in the asymptomatic phase (35% before symptom onset, 24% asymptomatic), the actual incidence is likely to be twice as high as at the time of ejaculation

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774707>

3) <https://www.38north.org/2022/07/north-korean-covid-19-fever-data-tracker/>

Number of Active Cases

Daily total of active cases of fever

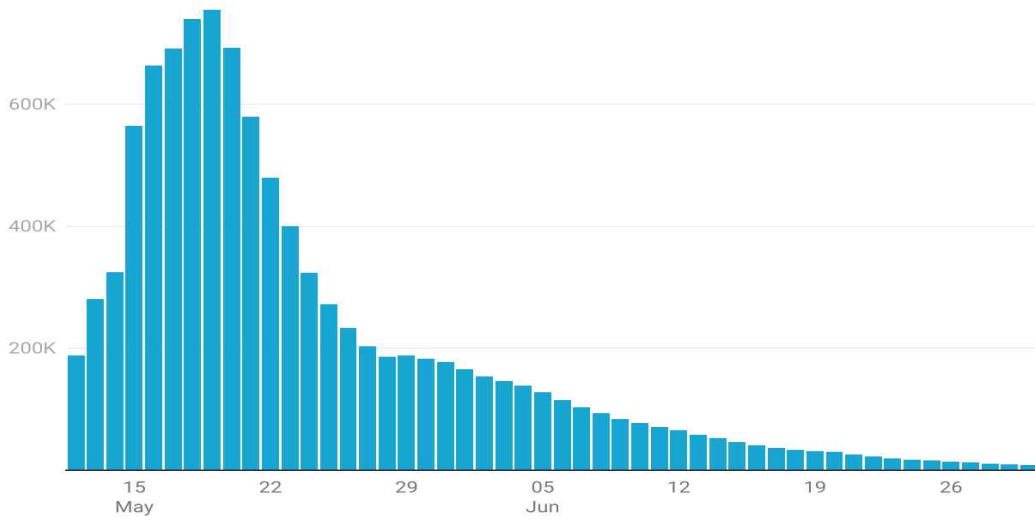


Chart: 38 North / Martyn Williams • Source: Korean Central News Agency • Created with Datawrapper

Daily Deaths

Number of deaths reported in the 24 hours to 6pm on the day noted

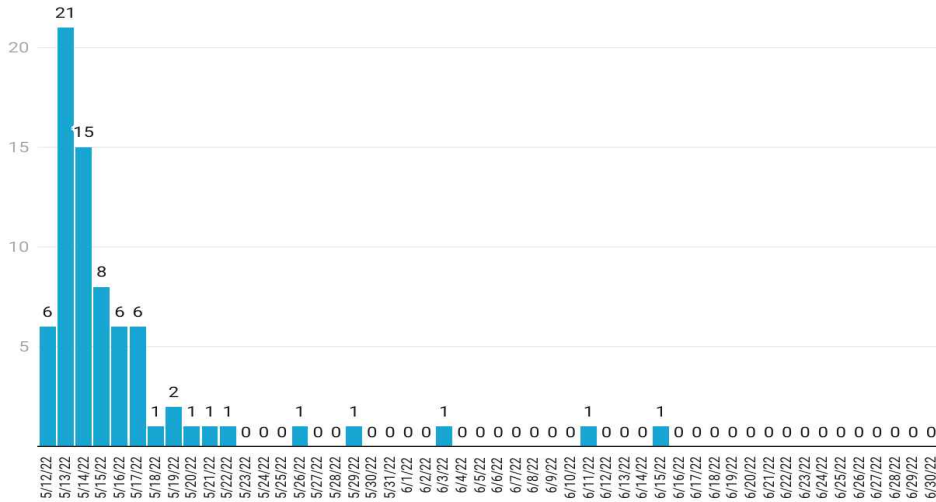


Chart: 38 North / Martyn Williams • Source: Korean Central News Agency • Created with Datawrapper

C. Public Health Measure Policy of DPRK : 'zero-covid policy'

- The control measure policy will continue the same 'zero-covid policy' as in China. In ROK, rather than blocking borders, it guarantees international people and material movement as WHO recommendation, but strengthens quarantine

policy at the border (Point of Entry). Thermal test, PCR negative confirmation, vaccination history, symptom check are used instead of containment. After entry, the so-called 3T (Test-Trace-Treatment) is the same concept as the commonly known TTIQ (Test-Trace-Isolation-Quarantine). It promotes a well-known policy, for self- or facility quarantine, symptom monitoring, and PCR testing. This expedited examination is also cited in Professor Jeffrey Sacks' 2020 UN General Assembly report.

- DPRK has continued to maintain an emergency quarantine system after enacting and promulgating the Emergency Quarantine Act in August 2020.

(1) there are cases of success in China (Wuhan, Shanghai) and New Zealand, so it is highly likely to be judged to be successful even if they follow them.

(2) although it is estimated that a regional mitigation policy will be introduced if the number of patients decreases, it will not be possible to develop a full-scale border.

(3) DPRK will maintain the containment policy, judging that they have nothing to lose because they have already been receiving UN economic sanctions from three years ago and are sufficiently responding to the side effects of the containment policy

- However, the 'emergency release criteria' according to the Emergency Infectious Disease preparedness and Response Act is

(1) when the possibility of an infectious disease entering from abroad is completely eliminated, and

(2) when an infectious disease can be effectively dealt with.

(3) when the risk to the lives and safety of the people is completely eliminated from the infectious disease that has occurred inside DPRK

The second and third criteria are not met even if there is no influx of patients from outside the world as the global epidemic subsides. It will not be easy to open the border as it is judged that it will be difficult to meet

II. Judging North Korea's Response Capability

A. Non-pharmaceutical Interventions (NPIs)

- Contrary to the original announcement, the situation is expected to improve with strict containment policies as there is a recent media report that it is well controlled. WHO WHE program director Michael Ryan, responded to the NHK reporter's question, saying that the situation in North Korea is 'Covid getting worse, not better' and that he appealed to North Korean authorities for more information about the COVID-19 outbreak there

- Currently, it is judged that management is being carried out 'within the infection control network' through measures such as early detection, early isolation, and contact tracing. Therefore, even if quarantine measures and contact isolation are carried out based on fever, it is possible to check whether 'the measure is effective and decision to ease local lockdown after 4 weeks' (2nd week of June), which is twice as long as the maximum incubation period of 14 days.

B. COVOID-19 vaccination policy

- It was originally supposed to be supported by the COVAX Facility, but it is known to have been rejected. According to the aforementioned interview with a foreign correspondent, Michael Ryan said that recently, the WHO had tried to supply at least three times of supplies, including vaccines. There are two types of vaccines licensed for one-dose use, Sputnik Light from Russia and Ad5-nCoV-S (Cornvidecia, CanSino Biologics Inc) from China. WHO may have tried to support those vaccines, which people were used in China and Russia.

C. Diagnostic capability by PCR

- It appears that PCR testing was performed by a limited professional testing agency. That is, 9,373 cases were first tested on December 10, 2020, and after performing the most 8,404 cases on April 1, 2021, it continues to decrease, and after performing an average of 500-700 tests, it continues to increase to 1,421 cases on December 6, 2021, to have been tested at this level. However, no cases were reported. After that, it increased to 2,598 on March 14th and 2,737 on April 11th, suggesting that the number of suspected cases has increased since the end of November last year. Therefore, there is a possibility that the amount of tests has been increased in preparation for the global Omicron epidemic, and it is estimated that it may have contributed to the possibility of the occurrence of patients from that time.

Daily new COVID-19 tests

Comparisons across countries are affected by differences in testing policies and reporting methods



Source: Official data collated by Our World in Data

CC BY

III. Pandemic response strategies of DPRK

A. Early 2020 containment policy

- January 22, 2020: closure of entry of foreign tourists
- January 28, 2020: Proclamation of ‘National Emergency Infectious Disease Preparedness and Response System’
- January 31, 2020: ‘Border closure measures’
- March 17, 2020: Groundbreaking ceremony for ‘Pyongyang General Hospital’, with the purpose of strengthening North Korea’s health capacity in the wave of Corona 19 to order the completion of the hospital by October 2020.
- July 2020: Upgrade to the maximum emergency level of the ‘National Emergency Infectious Disease Preparedness and Response System’
- August 2020: Promulgated the ‘Emergency Infectious Disease Preparedness and Response Act’⁴⁾ instead of amending the Infectious Disease Prevention Act

B. Main contents of Emergency Infectious Disease Preparedness and Response Act

4) Kim Sooyoun, Kim Jieun, Enactment of North Korea “Emergency Dis Infection Law”: North Korea’s Response to Covid-19 and Future Collaboration Post-Covid-19. <https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artid=ART002774875>

- The Emergency Infectious Disease Preparedness and Response Act, which was enacted despite the presence of the Infectious Disease Prevention Act, was governed by the current legal system (Infectious Disease Prevention Act, Food Sanitation Act, Public Sanitation Act, Border Sanitation and Quarantine Act, Border Animal and Plant Quarantine Act, Veterinary Prevention Act, Disaster Prevention and Rescue, It seems that it was newly acquired because it was difficult to do so with the recovery method, etc.).
- It consists of **5 chapters and 70 articles**, and the main contents are as follows.

① **Establishment of a central emergency infectious disease preparedness and response system (declaration of national emergency, national emergency infectious disease preparedness and response command department);** general division, public health measure division, containment and quarantine division, hygiene propaganda division, treatment division, rapid dispatch team, blockade team treatment division, such as subdivisions and mobile teams were organized

② Responses according to infectious disease risk classification

- **1st grade** : If there is a possibility that an infectious disease may enter the country, and it is necessary to restrict border crossings and import animal and plant materials, or to carry out the quarantine project while restricting the number of people, animals, plants, and supplies to the area where an epidemic occurs in the country.

- **urgent** : When there is a risk that an infectious disease may enter the country and the border is closed, or when an epidemic occurs in the country, it is necessary to block the relevant area in the country and proceed with the quarantine project

- **very high urgent** : There is a risk that an infectious disease that has occurred in a neighboring country or region can cause a fatal and destructive disaster for the country, so all spaces including borders, land, sea, and air are blocked, group meetings and studies are suspended, or an epidemic occurs in North Korea. Therefore, when it is necessary to completely block the relevant area and neighboring areas in North Korea and carry out more intensive quarantine projects nationwide.

③ **While strengthening legal sanctions and punishment, the punishments of individuals and groups** are divided, and the types of punishment range from fines (5,000 won to 100,000 won for individuals and 10,000 won to 1 million won for groups), labor education, unpaid labor, dismissal, resignation, The stage, content, and level of punishment are very

specifically stipulated, ranging from correctional punishment to the death penalty.

④ **Strengthen the same legal application and sanctions for foreigners** to impose stronger legal sanctions than North Koreans due to concerns about the introduction of the virus through foreigners who frequently enter and leave the country. charged

- December 2020: Raise the infectious disease risk level to 'very high urgent'
 - ※ 2020.2~12. A total of 10 meetings of the Labor Party on the prevention of COVID-19 pandemic by Chairman Kim Jong-un

C. Between 2021 and April 2022 : As the pandemic situation improved, they were looking for an exit, although temporarily.

- January 2021: 'The 8th Party Congress' emphasized preparation for a long-term fight against COVID-19
- March 2021: Enactment of the 'Imported Material Disinfection Act' to seek a step-by-step exit strategy
 - ※ November Completed construction of a quarantine facility to disinfect imported materials at the Uiju Air Base, the Sinuiju Air Base
 - ※ On January 16 of this year, Sinuiju-Dandong Resumption of inter-freight train service
- December 2021: Transition from stringent public health measure to new public health measure at the '4th Plenary Meeting of the Party Central Committee'
 - ※ concept of advanced public health measure and People's public health measure
- February 2022: New expenditure items to respond to COVID-19 at the '14th 6th Session of the Supreme People's Assembly' (33.3% increase in the public health measure budget compared to the previous year)

D. On May 12, 2022, North Korea strengthened its containment policy after the first report of the coronavirus outbreak.

- May 12, 2022: The decision of the Political Bureau was adopted at the 8th Political Bureau meeting of the 8th Party Central Committee to '*transform the national public health measure system to the maximum emergency level*', as reported by the Chosun Central News Agency (Jungtong), a variant of Omicron formalized that BA.2 was confirmed. The basic purpose of the very high urgent level, such as 'intensive examination of all residents',

'strengthening disinfection business', and 'preliminary mobilization of stockpiled medical supplies' was to provide "stable suppression and management of the corona virus" and "healing of infected people and the shortest period removal of source of transmission as soon as possible."

- **June 1, 2022: The 'Plenary Meeting of the Presidium of the Supreme People's Assembly'** was held and a bill to inspect the medical care system and emergency infectious disease preparedness and response system was passed. The 'Medical Appraisal Act' was adopted, which provides guidance and control over medical appraisal institutions, and the 'Emergency Infectious Disease Preparedness and Response Act' was revised and supplemented, which further specified the establishment and disinfection of the maximum emergency level, and regulations on legal responsibility for violations of the emergency order.

Good scenario

IV. Future perspectives

A. *Best scenario*

- Despite the WHO's mention, the epidemic is more likely to decrease due to stringent control
- In addition, stable management will be carried out with China sharing its experience of lockdown (recent lockdown and lifting and resealing in Shanghai) and supplying essential medicines such as antibiotics and antipyretics (including vaccines).

B. *Worst scenario*

- The occurrence is expected to be temporarily reduced by the containment policy, but it is difficult to sustain in the long term. Therefore, as control is loosened due to difficulties in food distribution, etc., the number of cases and mortality continue to increase (excess mortality, estimated by WHO and World Bank, was to be 2 to 3 times more deaths than reported worldwide) and the number of cases will increase further as it re-emerges from this fall and winter

V. Our responses to DPRK situation

A. **Key principle**

- **Humanitarian Emergency Aid:** It is necessary to make a comprehensive proposal, namely, support for the amount (m-RNA, etc.) that can vaccinate 70% of the population and support for essential medical supplies, PPE, diagnostics. It does not respond positively, so it seems unlikely that it will

happen.

B. In short term

- - In preparation for a re-emergence this fall and winter, it is reasonable to share the value chain of global health security with the world and promote *indirect support of infectious disease control products through China and the WHO*.
- In addition, ROK is conducting Asia pacific region *vaccine-related education programs* in cooperation with WHO and ADB. In this education, DPRK technicians are invited to help improve vaccine capabilities in their own country and also will invite DPRK to *World BIO Summit 2022* on October
- *Vaccines* produced in South Korea will be rolled out through the COVAX facility in cooperation with WHO support to North Korea
 - support for *basic medical supplies* through private NGOs, universities, and hospitals, will be effective, and revitalization of medical personnel education program also important

C. In the medium term

- There will be a way to indirectly help North Korea by having North Korea participate in the WHO's *mRNA vaccine transfer hub and spokes project*⁵⁾ in Asia.
 - The ROK government envisioned and promoted the '**Cooperation System for Pandemic in Northeast Asia**,' including Russia and Mongolia, by expanding the existing system by exchanging information and sharing information with the Korea, China and Japan Ministerial Meeting established in 2007 and infection control agencies. To support this, an '*academic forum*' plan such as education, and research between academics from universities and research institutes is needed and this forum will facilitate the policy dialogue of each country, in which North Korean scholars will be invited and participate.

D. Lastly, since the European and African CDCs have been established, it will be necessary to consider long-term measures to establish a *multilateral cooperation system* with both DPRK and ROK participating in the establishment of this *new international organization in Asia region* related to infectious diseases control.

5) the mRNA vaccine technology hub has the objective of the technology transfer hub is to build capacity in low- middle-income countries to produce mRNA vaccines through a centre of excellence and training

2022 한반도 보건의료협력 국제세미나

**북한 코로나19 발생과
감염병 억제를 위한
다자협력 방안**
