Report on the Current Practice of Diabetes Care and Nursing in Asia

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The 12th International Exchange Committee

I. Objectives

In view of the increase in the number of diabetic patients in Asia, we review the current status of diabetic patients and support systems in Asia and examine the issues to be addressed in order to improve the quality of diabetes education and nursing.

II. Methods

1. Countries and regions covered by the survey

The countries and regions included in the survey were Japan, the Republic of Korea (hereinafter referred to as "South Korea"), the Kingdom of Thailand (hereinafter referred to as "Thailand"), Taiwan, the People's Republic of China (hereinafter referred to as "China"), Hong Kong, Indonesia, and Vietnam in view of the increasing number of diabetic patients and economic development in these areas.

2. Survey method

Information on the survey items was collected through the websites of public organizations in each country and region, the websites of diabetes-related societies in each country and region, and the website of the International Diabetes Federation.

3. Survey items

(1) Public health insurance and healthcare delivery systems in each country or region
(2) Number of diabetic patients, complications, and mortality in each country or region
(3) Qualifications related to diabetes nursing and related societies in each country or region

4. Method of analysis

A table for examination was created based on the survey items, and the relevant data were extracted from the literature and classified. A comparative study was conducted based on the classified data of each country.

Ⅲ. Results

1. Public health insurance and healthcare delivery systems

Public health insurance was introduced in all countries except Hong Kong; however, the timing of its introduction varied. The countries with the highest number of physicians per

1,000 population were China with 2.8 (including physician associates), Japan with 2.4, and South Korea with 2.3, and the countries with the highest number of nurses per 1,000 population were Japan with 10.5, Hong Kong with 7.3, and South Korea with 6.9.

2. The current status of diabetic patients

The highest numbers of diabetic patients (prevalence in percentage) in 2019, in descending order, were 116.4 million (9.2) in China, 16.81 million (6.3) in Indonesia, and 7.39 million (5.6) in Japan. The highest numbers of type 1 diabetic patients aged 0–19 years, in descending order, were 54,000 in China, 8,500 in Indonesia, and 4,500 in Japan. The countries with the highest prevalence of gestational diabetes were Thailand (24.7%) and Vietnam (21.3%), while Japan had a prevalence of 4.2%.

Among the four countries for which data were available, diabetic complications were most commonly found in Japan, with nephropathy at 13.9% and retinopathy at 7.9%, and neuropathy was most commonly found in Indonesia at 17.6%. The countries with the highest percentage of deaths attributable to diabetes in people under 60 years of age were Indonesia (55.4%), Thailand (53.2%), and Vietnam (49.3%).

3. Qualifications related to diabetes nursing and diabetes-related academic societies

Except for Thailand and Vietnam, all countries and regions had qualifications similar to those of Japan's Certified Diabetes Educators in Japan (CDEJs). All countries had their own diabetes-related organizations.

Table 1: Diabetes prevalence, gross domestic product (GDP) per capita, public

	Diabetes mellitus prevalence (%)	Glucose intolerance prevalence (%)	GDP US dollar	Public health insurance	Number of clinical doctors	Number of clinical nurses	Number of beds
Hong Kong	4.5	7.1	46,753	No	1.9	7.3	5.4
Japan	5.6	9.4	40,146	Yes	2.4	11.3	13.1
South Korea	6.9	11.0	31,982	Yes	2.3	6.9	12.3
Taiwan	6.4	14.1	28,306	Yes	2.2	6.8	7.2
China	9.2	4.3	10,484	Yes	2.8	3.2	6.3
Thailand	7.0	15.5	7,190	Yes	0.5	2.7	2.3
Indonesia	6.3	17.8	3,922	Yes	0.1	0.4	1.2
Vietnam	6.0	8.6	3,499	Yes	0.9	1.4	2.9

*The number of clinical doctors, clinical nurses, and hospital beds per 1,000 population

IV. Discussion

Compared to developed countries (OECD countries: Japan and South Korea), countries with lower economic growth had less developed healthcare delivery systems, suggesting less interaction between healthcare providers and patients. In addition, some countries had a high prevalence of gestational diabetes and a large number of patients with type 1 diabetes, suggesting that it is particularly important to improve the approach in regard to young people and that there are issues that need to be addressed for diabetes care and nursing in Asia. In the future, it is necessary to promote human resource development for professionals and education for patients and citizens in cooperation with relevant academic societies in each country.

V.1. Limitations and Challenges of the Survey

This survey investigated the actual status of diabetic patients in eight Asian countries and regions in terms of their healthcare delivery systems and economic conditions; however, it was not possible to analyze the factors behind the data in each country. There is a limit to the amount of research that can be done based on each country's cultural factors, such as food culture, and this is an issue to be addressed in the future. In addition, the actual number of diabetic patients was ascertained based on data from the International Diabetes Federation published in 2019; however, because we used 2019 single-year data, there were limitations in ascertaining the actual status of diabetic patients, such as trends in the number of patients and other factors. In the future, we need to survey trends in the number of diabetes patients.

References

[Public health insurance]

<South Korea, China>

Ministry of Health, Labour and Welfare, 2018 Foreign Affairs Report, accessed March 23, 2021, https://www.mhlw.go.jp/wp/hakusyo/kaigai/19/index.html

<Thailand>

Ministry of Health, Labour and Welfare, 2018 Foreign Affairs Report, accessed June 4, 2020, https://www.mhlw.go.jp/wp/hakusyo/kaigai/19/index.html

Saku University Journal of Nursing, (2015) Learning Outcomes of International Nursing Course at Burapha University, Thailand, accessed June 4, 2020, http://id.nii.ac.jp/1050/00000153/

<Indonesia and Vietnam>

Ministry of Health, Labour and Welfare, 2019 Foreign Affairs Report, accessed March 23, 2021, https://www.mhlw.go.jp/wp/hakusyo/kaigai/20/index.html

<Taiwan>

Kenporen Overseas Medical Security No. 110, (2016), accessed March 23, 2021, https://www.kenporen.com/include/outline/pdf_kaigai_iryo/201606_No110.pdf

<Hong Kong>

Hong Kong Government Website, accessed March 23, 2021, https://www.gov.hk/en/residents/health/hosp/

Voluntary Insurance Scheme Home Page, accessed March 23, 2021, https://www.vhis.gov.hk/en/

<Japan>

Ministry of Health, Labour and Welfare, Health Insurance in Japan, accessed December 18, 2020, https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/iryouhoken/iryouhoken01/index. html

[Healthcare delivery system]

<People's Republic of China>

Department of Planning, Development and Informatization, National Health Commission of the People's Republic of China (2020), 2019 Statistical Bulletin on the Development of Health Business in China, accessed December 28, 2020, http://www.nhc.gov.cn/guihuaxxs/s10748/202006/ ebfe31f24cc145b198dd730603ec4442.shtml

<Hong Kong>

Food and Health Bureau, The Government of the Hong Kong Special Administrative Region, accessed October 25, 2020, https://www.info.gov.hk/gia/general/ 201903/27/P2019032700444.htm

Food and Health Bureau, (2021), Statistics, accessed October 25, 2020, https://www.fhb.gov.hk/statistics/en/health_statistics.htm

Statista, Hospital Bed Density in Hong Kong from 2010 to 2020, accessed October 25, 2020, https://www.statista.com/statistics/318871/hong-kong-hospital- bed-density/

<Thailand>

Fitch Solutions (2019), Worldwide Medical Devices Market Factbook.

<South Korea>

World Health Organization. Regional Office for the Western Pacific. (2015). Republic of Korea Health System Review. WHO Regional Office for the Western Pacific, accessed August 9, 2020, https://apps.who.int/iris/handle/10665/ 208215

<Taiwan>

Statistics Department, Ministry of Health and Welfare, Number of Houses, Number of Beds, and Average Number of Beds per Million Population, accessed April 6, 2021, https://dep.mohw.gov.tw/dos/cp-1735-3244-113.html

Department of Health and Welfare Statistics, Number of Medical Personnel in the Workplace and Number of Medical Personnel in the Population, accessed April 6, 2021. https://dep.mohw.gov.tw/dos/cp-1735-3245-113.html

<Indonesia>

Kementerian Kesehatan Republik Indonesia, (2019) Profil Kesehatan Indonesia Tahun 2019, accessed January 16, 2021, https://www.kemkes.go.id/folder/view /01/structure-publikasi-pusdatin-profil-kesehatan.html

<Vietnam>

General Statistics Office, Health, Culture, Sport, Living Standards, Social Order, Safety and Environment, accessed March 23, 2021, https://www.gso.gov.vn/en/health-culture-sport-living-standards-social-order-safety-and-environment/

<Japan>

Ministry of Finance Website, OECD Health Data 2019, accessed October 25, 2020, https://www.mof.go.jp/

Ministry of Health, Labour and Welfare, 2016 White Paper on Health, Labour and Welfare: Thinking About a Social Model for Overcoming Population Aging, accessed October 25, 2020, https://www.mhlw.go.jp/wp/hakusyo/kousei/16/

International Comparison of Healthcare-Related Data- OECD Health Statistics 2019, accessed October 25, 2020, https://www.jmari.med.or.jp/download/RE077.pdf

[The number of diabetic patients, complications, and mortality in each country] International Diabetes Federation, accessed March 3, 2021, https://diabetesatlas.org/data/en/