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Health-Care Data Collecting, Sharing, and Using in Thailand, China Mainland, South Korea, Taiwan, Japan, and Malaysia

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ABSTRACT

This article sought to describe the health-care data situation in six selected economies in the Asia-Pacific region. Authors from Thailand, China mainland, South Korea, Taiwan, Japan, and Malaysia present their analyses in three parts. The first part of the article describes the data-collection process and the sources of data. The second part of the article presents issues around policies of data sharing with the stakeholders. The third and final part of the article focuses on the extent of health-care data use for policy reform in these different economies. Even though these economies differ in their economic structure and population size, they share some similarities on issues related to health-care data. There are two main institutions that collect and manage the health-care data in these economies. In Thailand, China mainland, Taiwan, and Malaysia, the Ministry of Health is responsible through its various agencies for collecting and managing the health-care data. On the other hand, health insurance is the main institution that collects and stores health-care data in South Korea and Japan. In all economies, sharing of and access to data is an issue. The reasons for limited access to some data are privacy protection, fragmented health-care system, poor quality of routinely collected data, unclear policies and procedures to access the data, and control on the freedom on publication. The primary objective of collecting health-care data in these economies is to aid the policymakers and researchers in policy decision making as well as create an awareness on health-care issues for the general public. The usage of data in monitoring the performance of the heath system is still in the process of development. In conclusion, for the region under discussion, health-care data collection is under the responsibility of the Ministry of Health and health insurance agencies. Data are collected from health-care providers mainly from the public sector. Routinely collected data are supplemented by national surveys. Accessibility to the data is a major issue in most of the economies under discussion. Accurate health-care data are required mainly to support policy making and evidence-based decisions.

Keywords: Asia Pacific, collection, health-care data, sharing, using

Introduction

In the future, the Asia-Pacific region will be the habitat for more than half of the world's population. The economic growth rate of the economies in the region is astonishing. History predicts that as the wealth of an economy improves, there is a high demand for health-care services.

Many economies in the region have already made improvements in their health-care systems in terms of financing and provisions of health-care services. The supply of efficient and well-educated/trained human resource in health care has been substantial. Health-care facilities are continuously improving their capabilities to provide health-care services.

The fundamental foundation that will ensure long-term success in health-care delivery is lacking and, if available, is limited. The availability and accessibility of accurate and necessary data to aid the decision makers in health policy formulation and reforms is a major issue in these economies.

Analysis of health-care data sets translates into good health outcomes and reforms in health systems, thus improving the health-care environment of the economy. Also, the government will be aided in budgeting and allocating of funds and planning for health systems.

Data Collection

Thailand

The health-care system in Thailand is a public-private mix for both financing and providing of health care. Public financing has been increasing over time and has seen a marked increase after the introduction of the universal coverage policy in 2002—from 45% in 1994 to 63% in 2002 and 74% in 2008 [1].

The Ministry of Public Health (MoPH) owns the majority of public settings distributed throughout the country, including health

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Table 1 – Number of ambulatory care settings, hospitals, and beds, by sector in Thailand, 2007.

	Public sector		Private sector
	MoPH	Other public	
Number of ambulatory care settings	9,758	311	16,800
Number of hospitals	882	128	318
Number of beds	88,683	18,391	30,564

Source: The 2007 Health Resources Survey, Ministry of Public Health.

centers, community hospitals, general hospitals, and regional hospitals. The private sector plays a dominant role in Bangkok and its vicinity, especially private hospitals, having 43% of total private hospital beds. The number of ambulatory care settings in the private sector, private clinic, is greater than that in the public sector; however, most of them, 78%, are located outside Bangkok and operated by public doctors before or after their working hours. In total, one-third of hospital beds are in the private sector (Table 1).

Having a centralized health-care system, health-care data of the MoPH facilities are collected and pooled at the ministry who not only acts as the owner of the facilities but is also responsible for the public health system.

An enabling law requires all health facilities to submit reports and information to the ministry. However, there is a lack of strong commitment on the part of the private sector and other public health facilities because the ministry never forces them to comply with the law [2]. Health-care data that are collected and available include routine reports on revenues, expenses, throughputs, and common diseases group of outpatient and inpatient departments; disease surveillance (legally required for notifiable diseases, routine reporting, and specific disease surveillance); patient registry, that is, cancer, diabetes, hypertension, and so on. Among all these data, active surveillance of new emerging communicable diseases, for example, bird flu and 2009 influenza, had better compliance from other public and private providers.

Apart from routine data, some periodic national surveys on health and welfare conducted by various agencies are available. Household income-expenditure surveys, health and welfare surveys, and elderly surveys are conducted by the National Statistic Office while health examination surveys are conducted by the National Health Examination Survey Office. The MoPH is responsible for the conduct of health resources surveys.

Following the development of third-party payer systems during the two previous decades, beneficiary databases have been fully developed for health insurance management. At present the country has different health insurance systems, namely, the Universal Coverage scheme, the Civil Servant Medical Benefit Scheme, and the Social Security Scheme. Administrative databases on inpatient care have been used for the development of a Thai case-mix system called the Thai Diagnosis Related Group [3]. It is currently being implemented in the country as a payment scheme for inpatient care for the beneficiaries of the health insurance systems. The health-care providers rendering health-care services to the beneficiaries of the insurer are not limited only to the MoPH providers but also include other public and private providers. Thus, the inpatient database is huge in terms of coverage. There is an issue, however, on data collection because the country has fragmented health insurance schemes, which has resulted in the separation of data collection. The same is the case with the collection of administrative data on outpatient care. For the Universal Coverage scheme and the Social Security Scheme members, data are also collected from contracted hospitals for additional performance payment by the National Health Security Office and the Social Security Office, respectively. The data component of the Civil Servant Medical Benefit Scheme outpatient database, which is fully used for fee-for-service reimbursement, is still limited. Prescription database has been developed in most big hospitals for dispensing purpose, but it has not been used for reimbursement. However, the Civil Servant Medical Benefit Scheme plans to develop this database for reimbursement and to control the pharmaceutical expenditure of the scheme due to rapid outpatient cost escalation (Table 2).

China mainland

National reforms in the health-care system aim to achieve universal coverage by 2020. The system transition of this round sets five priorities for the next 3 years: 1) expanding the health security system; 2) establishing a national essential medicines system; 3) strengthening the capacity of primary care facilities; 4) promoting equality of public health services; and 5) reviving financing mechanisms of public hospitals by reducing their dependence on drug revenues. In addition, based on the government's 11th Five-Year Plan, which forms the basis for social and economic policies, the requirements for health are the implementation, monitoring, and evaluation of the health reform plan. As a result, the systematic monitoring and evaluation for reform progress and outcomes, as well as common health status indicators, become more crucial in this context, which requires effective communication of information and data to all stakeholders to support evidence-based decision making.

Promotion of and improvement in this system are continually being undertaken. The Country Health Systems Surveillance platform is a multipartner effort that began in 2008, led by the World Health Organization for improving the availability, quality, and utilization of the data needed to inform the country's health-sector reviews and planning processes and to monitor health-system performance [4]. The three dimensions of the Country Health Systems Surveillance platform are strengthening the demand and use of information, improving the supply of quality data and statistics for decision making, and enhancing the institutional capacity for assessment and monitoring of performance [5]. In response to

Table 2 – Coverage of administrative data by collecting agency, Thailand.

Collecting agency	Public providers		Private providers
	MoPH facilities	Other public facilities	
MoPH	OP and IP data of all users	–	–
NHSO	OP and IP data of UC	OP and IP data of UC	OP and IP data of UC from contracted hospitals
SSO	OP and IP data of SS	OP and IP data of SS	OP and IP data of SS from contracted hospitals
CGD	OP and IP data of CS	OP and IP data of CS	–

CGD, Comptroller General's Department; CS, Civil Servant; IP, inpatient; MoPH, Ministry of Public Health; NHSO, National Health Security Office; OP, outpatient; SS, Social Security; SSO, Social Security Office; UC, Universal Coverage.