

## SPECIAL REPORT

## CURRENT STATUS OF REHABILITATION MEDICINE IN ASIA: A REPORT FROM NEW MILLENNIUM ASIAN SYMPOSIUM ON REHABILITATION MEDICINE

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**With the aim of promoting rehabilitation medicine in Asian countries, where the number of persons with disability occupies a significant proportion in the world, New Millennium Asian Symposium on Rehabilitation Medicine was held in February 2001 in Tokyo, under the sponsorship of the Japanese Association of Rehabilitation Medicine. Twenty-three guest speakers from 14 Asian countries and regions participated in the 2-day meeting. With a structured questionnaire that was sent to the participants beforehand, demographic data related to rehabilitation practice and information on training and certification in rehabilitation medicine in the participating countries were collected, and presented at the meeting. Based on these data, the current status of rehabilitation medicine in Asia was summarized. The symposium marked an important step forward for the promotion of rehabilitation medicine in Asia.**

*Key words:* demographics, postgraduate training, international cooperation, community-based rehabilitation, research.

J Rehabil Med 2002; 34: 1–4

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Accepted August 23, 2001

### INTRODUCTION

The population in Asia is estimated as approximately 36 billion in 2000, or about 60% of the world's population (1). Although accurate statistics are not available, the proportion of persons with disability is estimated as 5–10% of the population (2). In contrast to developed countries, malnutrition, infectious diseases, traffic accident, labor accident, natural disaster, and war still play an important role as causes of disability in this region (2). In developing countries such as most of the Asian nations, where the resources for health care and welfare services are limited, community-based rehabilitation (CBR) has been adopted and practiced as a strategy for development for the rehabilitation, equalization of opportunities and social integra-

tion of all people with disabilities (3). Although literature is abundant regarding CBR in Asia (4–9), information about medical rehabilitation in this region is lacking except for Japan (10).

At the turn of the millennium, New Millennium Asian Symposium on Rehabilitation Medicine was held in February 2001 in Tokyo, Japan, with the aim of exchanging and sharing experiences in the field of rehabilitation medicine in Asia. In addition, demographic data related to rehabilitation practice in the 14 participating Asian countries and regions were compiled for the first time to facilitate our understanding of the current status of rehabilitation medicine in this region. The abstracts of the Symposium are available from the JARM (see correspondence address). This paper describes the demographic data related to rehabilitation medicine presented at the conference.

### METHOD

To delineate the current status of rehabilitation medicine in Asia, a questionnaire survey was performed. A structured questionnaire was formulated consisting of a face sheet of the respondents, national demographics and medical care systems, education for physical medicine and rehabilitation (PM&R), postgraduate training in PM&R, board certification, practice in the field of PM&R, and free comments. The questionnaire was sent to the 25 possible participants from 15 Asian countries well in advance (about 2 months before the symposium), so that the respondents could refer to available national statistics in individual countries. The possible participants were selected on the basis of the following criteria. (1) President/chairperson of a national association related to PM&R in each country, (2) chairperson of a university department related to PM&R, (3) director or equivalent of a rehabilitation hospital or center, or (4) internationally active members as judged from papers presented to rehabilitation journals and/or international congress meetings, or by involvement in international programs related to PM&R. When more than one person fulfilled the criteria in the same country, the questionnaire form was sent to all of them.

### RESULTS

Twenty-one replies were received, with a response rate of 84%. The names of the contributors are available from the authors. When there were uncertainties or inconsistencies regarding the information given on the questionnaire form, the respondents were asked to clarify it during the conference. When demographic data from multiple respondents from the same country

Table I. Health statistics, PM&R training, certification and practice in Asian countries

Country	Population in million (≥65 years)	Life expectancy	No. of medical doctors	No. of medical schools	Undergraduate training in PM&R (hours)	Postgraduate training in PM&R (years)	PM&R Certification				Main fields of practice	
							Board exam	Requirements	Type of exam	Examinees per year		Pass rate (%)
Indonesia	200 (4%)	F 65, M 63	14000	35	10	4	Yes	publ pres	Written + oral	20	80	1. Stroke 2. Rheumatism 3. Orthopedic
Japan	126 (17%)	F 84, M 77	240000	80	20	5	Yes	3-year training publ pres	Written + oral	40-80	70-80	1. Stroke 2. Musculoskeletal, SCI
Jordan	4.6 (5%)	F 71, M 69	8000	3	2	4	Yes	4-year training pres	Written + oral	2	50	1. Musculoskeletal 2. Stroke, CP 3. Orthopedic
Kingdom of Saudi Arabia	16 (3%)	F 73, M 71	23000	5	None	None	No					1. SCI, TBI 2. Stroke 3. CP
Korea	47 (7%)	F 78, M 71	70000	41	18.8	4	Yes	4-year training publ pres	Written + oral	56	95	1. Pain management 2. Stroke 3. SCI, CP
Kuwait	2.25 (2%)	F 77, M 73	3200	1	None	None	No					1. Musculoskeletal 2. Neurological 3. Pediatric
Malaysia	22 (6%)	F 74, M 71	NA	8	16	4	Yes	4-year training case list research	Written + oral	3	80	1. SCI 2. Stroke 3. CP
Pakistan	135 (3%)	F 65, M 63	80000	30	2	3	No					NA
People's Republic of China	1270 (7%)	F 71, M 68	2000000	140	3-40	3	Yes	5-year training ed course	Written + oral	NA	NA	1. Neurological 2. Orthopedic 3. Pain management
Hong Kong	6.8 (11%)	F 81, M 78	9000	2	5	6	Yes	3-year training case list	Thesis + oral	2	85	1. Stroke 2. Geriatric 3. Musculoskeletal
Macao	0.46 (8%)	F 80, M 75	488	0	None	5		3-year training ed course case list	CV + oral	1	80	1. Stroke 2. Orthopedic 3. Respiratory
The Philippines	76 (4%)	F 72, M 66	95000	28	3	3	Yes	3-year training publ pres	Written + oral	Written 30 Oral 5	23 90	1. Musculoskeletal 2. Neurological 3. Pediatric
Taiwan	23 (9%)	F 76, M 73	29000	11	60	4	Yes	3.5-year training publ pres	Written + oral	40	85	1. Stroke 2. TBI 3. CP
Thailand	62 (6%)	F 72, F 68	24000	11	10-20	3	Yes	3-year training publ pres	Written + oral	12-19	90	1. Musculoskeletal 2. Stroke, SCI, CP 3. Electrodiagnosis
Vietnam	76 (6%)	F 70, M 65	39000	9	20	2-4	Yes	2-3-year training publ pres	Written + oral	1	90	1. Stroke 2. CP 3. SCI

SCI: spinal cord injury; CP: cerebral paresis; TBI: traumatic brain injury; publ: publication in rehabilitation journals; pres: presentation at scientific meetings; ed course: educational course; CV: curriculum vitae.

Table II. Insurance coverage on medical care in Asian countries. The Table lists information as provided by each respondent.

<i>Indonesia</i>	Medical costs are paid by a system other than insurance or welfare policies.
<i>Japan</i>	National insurance policy including that aided by a company for which the patients work cover all medical costs. Welfare pays for the costs for the uninsured people. Welfare for the people with disability also pays a part of the costs for orthosis and prosthesis.
<i>Jordan</i>	National insurance policy and welfare mainly cover all medical costs.
<i>Kingdom of Saudi Arabia</i>	All medical costs are paid by the government (free of charge for the Saudi citizen).
<i>Korea</i>	National and companies' insurance policies cover all medical costs. Welfare also pays for the costs including physical and occupational therapy.
<i>Kuwait</i>	All medical care is covered by the national insurance policy.
<i>Malaysia</i>	All medical care is covered either by companies' insurance or welfare policies.
<i>Pakistan</i>	National insurance policy (Department of Health) mainly pays medical costs.
<i>People's Republic of China</i>	Hospitalization and medication are covered mainly by the national*; orthosis; and prosthesis by welfare, and physical and occupational therapy by other funds.
<i>Hong Kong</i>	All medical costs are provided by the welfare policy.
<i>Macao</i>	All medical costs are paid by the welfare or companies' insurance policies.
<i>The Philippines</i>	80% of people pay themselves. 15% by the welfare budget. 5% by the national or companies' insurance policies.
<i>Taiwan</i>	National insurance policy covers all types of medical costs except for wheelchair. Companies' insurance and welfare policies compensate for that. Costs for medication is covered only by the national insurance.
<i>Thailand</i>	National insurance policy covers all medical costs except for speech therapy.
<i>Vietnam</i>	National insurance and welfare policies mainly cover all types of medical costs.

\* "National" indicates either a nation or a region.

were inconsistent, corrections were made based on the World Health Organization data at the web site <http://www.who.int/>. Every effort was made to keep the information as accurate as possible, but because of the inherent lack of reliable demographic data in some Asian countries, future modifications or corrections may be needed when more accurate data become available. The findings are summarized in Tables I and II.

#### Demographics

The degree of aging of the society differed markedly among the participating countries. The percentage of persons aged 65 years and older ranged from the lowest 2% in Kuwait to the highest 17% in Japan, with a mean of 6.6% (Table I). The life expectancy was the lowest in Pakistan (65 years for females and 63 years for males) and the highest in Japan (84 years for females and 77 years for males). The top three pathologies treated in PM&R practice differed from country to country, although stroke and cerebral palsy were listed as important disease categories in most countries. The insurance coverage on medical care in each country is listed in Table II. In most countries, medical care is covered by national insurance policies.

#### PM&R training

Undergraduate and postgraduate training in PM&R was available in most Asian countries except for Kuwait and Saudi Arabia (Table I). At the undergraduate level, stroke, traumatic brain injury, cerebral palsy and musculoskeletal disorders were covered in most countries, but the hours dedicated to undergraduate education varied markedly from the lowest 2 hours in Pakistan and Jordan to the highest 60 hours in Taiwan. At the postgraduate level, the duration of training ranged from 2 to 6

years, including rotations in orthopedics, neurology, internal medicine, emergency medicine and so on.

#### PM&R certification

Twelve out of the 14 countries (85.7%) had a PM&R specialty board examination. In most countries, examinees were required to pass both written and oral examinations after finishing several years of postgraduate PM&R training (Table I). The number of physiatrists ranged from 4 in Malaysia to 748 in Japan.

## DISCUSSION

In recent years, there has been an increasing recognition of the needs for globalization in PM&R (11). This is evidenced by an international meeting convened by the American Board of Physical Medicine and Rehabilitation in 1999 in Washington, DC. The meeting focused on PM&R training and certification in various countries in the world, and information on the numbers of PM&R specialists in various regions and the training and certification procedures were presented (12). Regarding the Asian/Pacific region, it was noted that there were 5084 physiatrists in 11 countries (12), and the details of certification and measuring competency were reported for Japan, South Korea, and the Philippines (13). However, information in other Asian countries was not available.

Because Asia occupies a significant proportion of the world's population, and accordingly of the world's population with disability, PM&R should play more active roles in the enhancement of functioning and quality of life of persons with disability in this region. At the New Millennium Symposium, experts from 14 Asian countries gathered and exchanged views on various aspects of PM&R from basic research to education.

The data presented in this paper is one of the accomplishments of the Symposium, and it is the first to give a general picture of the current status of PM&R training and practice in Asia. Although each country has its own unique culture, most Asian countries share common sociocultural backgrounds, and we need to cooperate with one another for the improvement of the training system for rehabilitation personnel, especially of physiatrists, for collaborative international research, and for advocacy of PM&R to the government and general public in each country. At the turn of the century, the New Millennium Asian Symposium marked an important step forward for the promotion of rehabilitation medicine not only in Asia but in other regions throughout the world.

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