

## COURSE REPORT

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# The JICA Training Course, Community-based Cancer Prevention for the Asian and Pan-pacific Countries, Fiscal Year 2006 (Epidemiological Approach)

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### Abstract

Communicable diseases are still major causes of deaths in developing countries. Cancer incidence, however, increased 19% between 1990 and 2000, mainly in this same developing world (Stewart and Kleihaus, 2003), and malignant neoplasms are now the second leading cause of mortality in these countries (WHO, 2003). Limitations of medical facilities and equipment mean that prevention is indispensable for cancer control (Mikheev et al., 1994). However, human resources concerning cancer prevention are also limited, and encouragement of their development should be taken as a first priority. To assist in this aim, the present training course was designed by the Division of Epidemiology and Prevention, Aichi Cancer Center Research Institute, Japan, and has been annually conducted since 1999, supported by the Japan International Cooperation Agency (JICA) (Takezaki, 2001; 2002; 2003; Wakai, 2004; 2006). The course targets doctors and public health workers who are responsible for community-based cancer prevention in developing countries to promote the introduction of comprehensive procedures, focusing mainly on primary prevention but also including screening for secondary prevention of cancer.

**Key Words:** Training course - cancer epidemiology - community-based - JICA

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### Introduction

The Japanese Government extends official development assistance (ODA) to developing countries to support self-help efforts that will lead to economic progress and a better life for their citizens. Since its foundation in 1974, JICA has implemented Japan's technical cooperation under the ODA program. Currently, JICA conducts such activities as training, dispatch of experts, provision of equipment, project-type technical cooperation, development studies, dispatch of cooperation volunteers (JOCV), and surveys and administration of capital grant aid programs. Hosting training program for overseas participants is one of JICA's fundamental technical cooperation activities for developing countries. Participants come from target countries to obtain knowledge and technology training in a wide variety of fields. The objectives of the JICA training program are: 1) to contribute to the development of the human resources necessary to promote progress in developing countries, and 2) to contribute to the promotion of mutual understanding and friendship.

The present report describes the contents of the 9th course, the fourth course in the second-phase, five-year program.

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### Requirements for Applicants

Course participants are nominated by their governments in accordance with the given criteria and selected by JICA. Inclusion criteria for application are: 1) be a doctor or other person who is currently engaged in public health service, and also responsible for community-based cancer prevention activities; 2) never have previously participated in a public health related training course in developed countries such as Great Britain, the United States, and Australia; 3) be under forty years of age; 4) have basic skills in computer usage; and 5) have a sufficient command of spoken and written English. A minimum TOEFL score has been required since FY 2000. Persons serving in the military are excluded. Applicants were also requested to submit questionnaires and a country report with their application documents.

### Time Schedule

The first brief announcement of the present course was made through the list of all training courses of JICA that are delivered to the countries on Japan's technical cooperation by JICA offices or Japanese embassies two years before the course. The government of each country

makes the priorities and submits lists of candidate courses. All lists are sent to the headquarter of JICA, and first candidate countries are decided according to priorities and fixed numbers for each course. Then, the JICA training center, Chubu International Centre (CBIC), selected final candidate countries from the listed first candidates with suggestions from the program members of the counterpart institute, Aichi Cancer Center Research Institute, around six months before the course.

General information (GI) for application was sent to the governments of selected countries by JICA six months before the course. The five-week training course, after one week of guidance, was performed from July to September 2006 for the fiscal year (FY) 2006.

## Participants

The annual number of participants ranged from seven to ten between FYs 1998 and 2006 (Table 1). A Brazilian observer who was a long-term trainee of JICA also attended the course in FY 2000. From the FY 2003 course, the candidate countries were limited to the Asian and Pan-pacific. The participants FY 2006 came from Colombia, India, Papua New Guinea, Solomon Islands, and Vietnam. Of these countries, Vietnam dispatched a trainee to this course for the first time. During the nine fiscal years, 76 trainees from 40 countries completed the course.

The participants comprised 46 men and 30 women, aged 23 to 48 years (mean, 36.3 years). The backgrounds

**Table 1. Distribution of Participants for 'Community-based Cancer Prevention' by Country and Fiscal Year**

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Asia										
Bangladesh						1	1			2
Cambodia		1								1
China							1			1
India							1	1	1	3
Indonesia						1				1
Iran			1							1
Jordan					1					1
Laos		1								1
Malaysia				2		2	1			5
Mongolia		1			2			3		6
Nepal								1		1
Palestine Authority				1	1					2
Philippines							1	2		3
Sri Lanka				2		1	1			4
Thailand				1		1	1			3
Turkey					1					1
Vietnam									1	1
Oceania										
Fiji					1	1	1			3
Micronesia							1			1
Papua New Guinea		1							2	3
Solomon Islands							1		2	3
Vanuatu		1								1
Middle and South America										
Colombia						1			1	2
Costa Rica	1			1						2
Dominica						1				1
Dominican Republic	1									1
Honduras		1								1
Brazil	2		1 <sup>a</sup>							3
Ecuador	1									1
Paraguay		2			1	1				4
Uruguay	2									2
Africa										
Ethiopia			1							1
Kenya					1					1
Seychelles					1					1
Tanzania				1						1
Zambia			2							2
Zimbabwe			1							1
Eastern Europe										
Bosnia-Herzegovina			2							2
Lithuania			1							1
Romania			1							1
Total (No. of countries)	7 (5)	8 (7)	10 (8)	8 (6)	9 (8)	10 (9)	10 (10)	7 (4)	7 (5)	76 (40)

<sup>a</sup>JICA trainee.

of participants were doctors in 62, health extension officers in 8, nurses in 5, and others in 1. Present employers were governmental organizations in 30, hospitals in 25, research institutes in 11, universities in 8, and non-governmental organizations in 2.

## Course Subjects

Lectures, practices and observations were programmed according to training subjects by the program members of the Division of Epidemiology and Prevention, Aichi Cancer Center Research Institute. Following the Japanese guidance, course orientation and country report presentation, training subjects comprised: 1) outline of epidemiology; 2) details of epidemiology; 3) cancer prevention; and 4) action planning for cancer prevention. The course curriculum has annually been revised with suggestions from the participants and lecturers.

The training course was mainly conducted at the Chubu International Centre of JICA, Nagoya, Japan, and the Aichi Cancer Center and other facilities were used according to the course programs. A field trip was scheduled to Hiroshima, Osaka, and Kyoto areas for visiting places where practical cancer prevention activities are taking place, as well as to provide an understanding of Japanese culture and history.

After completing the technical training, participants were required to prepare action plan reports for presentation at the Action Plan Meeting scheduled at the end of the training course. The purpose of this meeting was to present what participants found the most interesting concerning the cancer prevention in the present course, and what could possibly be applied in their own countries. At the middle and end of the training, evaluation meetings were to be held for further improvement of the present training course. Participants were also asked to submit weekly questionnaires for course evaluation.

Contents of the course program in FY 2006 are summarized in Table 2. Computer practices were performed using a statistical package, STATA (Stata Corporation, College Station, TX) and software for cancer statistics, GLOBOCAN 2000, which can be updated through the Internet (IARC Press, Lyon). The action planning for cancer prevention in each country was concentrated in the last week. The most common theme at the Action Plan Meeting was establishment or enhancement of cancer registration, followed by tobacco control and cancer screening.

## Lecturers

In the FY 2006 course, 32 experienced lecturers and/or persons in charge of practical programs, who are specialists in cancer epidemiology and prevention, were recruited from 11 universities, 2 hospitals, and 9 other facilities. Among them, four staff of Aichi Cancer Center were involved in 19 of total 69 sessions (27.5%).

## Course Evaluation

The participants filled in questionnaires for final course

evaluation at the end of the training course. The items of this questionnaire included coverage of subjects, depth, logical order of topics, relationship of each topic to the objectives of training or study program, and balance of time allocation, and each item was evaluated to be about right or fair in 90% or over participants except for duration

**Table 2. Course Program in Fiscal Year 2006**

	Number of sessions <sup>a</sup>		Contents of practice
	Lecture	Practice <sup>b</sup>	
Outline of epidemiology			
Concepts /overview	1		
Cancer control in Japan	1		
Global health policies	1		
Cause and risk	1	1	Calculation
Details of epidemiology			
Demographic studies	1	1	Calculation
Human ecology	1		
Case-control studies	2	2	Discussion and calculation
Cohort studies	1		
HERPACC <sup>c</sup>	1	1	Observation
Cancer pathophysiology	1		
Diet, nutrition and cancer	1		
Molecular epidemiology	1		
Reporting skills	1		
Intervention study design	1		
Ethical issues	1		
Biostatistics		2	Computer
Aichi cancer registry	1	2	Computer
Osaka cancer registry	1	1	Observation
Hamamatsu University		1	Observation
Cancer prevention			
Country report	1	1	Presentation
ACCRH*		1	Observation
Smoking control (Osaka)		1	Group discuss
Radiation (Hiroshima)		1	Observation
Infection and cancer	1		
Helicobacter Pylori and gastric cancer	1		
Epidemiology oral cancer	1		
Asbestos and lung cancer	1		
Cancer screening	1	3	Observation
Evaluation of screening	1	1	Computer
Occupational health - Japan	1		
Epidemiology of occupational cancer	2		
Primary cancer prevention	1	4	Discussion
Carotenoids as biomarker	1		
Local public health activity		1	Observation
Health promotion and prevention of lifestyle-related diseases in Japan		3	Observation
Cancer prevention and its strategy			
Action planning	1	3	Personal tuition
		1	Group discuss
		6	Report making
		1	Presentation
Course evaluation			
Weekly		(4)	Report
Mid-term & final		(2)	Discussion
<b>Total</b>	<b>31</b>	<b>38</b>	

<sup>a</sup>One session comprises 1.5 (Morning A and B) and 2.5 (Afternoon) hours. <sup>b</sup>Including observations. <sup>c</sup>Hospital-based Epidemiologic Research Program at Aichi Cancer Center. \*Aichi Cancer Center Research Institute and Hospital

of the program. The expected topics to be added to further program were practical biostatistics including meta-analysis. Several lectures and practices seemed to be irrelevant to cancer epidemiology or prevention, or too specific for some trainees and, therefore, should be revised. More detailed information was obtained from weekly questionnaires and will be used for the improvement of each lecture, practice, or observation.

## **Commentary**

Cancer incidence has been increasing in developing countries (Stewart and Kleihaus, 2003). Chronic diseases including cancer have not simply replaced infectious ones in developing countries. Rather, such countries now suffer from a double burden of disease (Yach, 2004). In the absence of policy actions, risky behavior including consumption of tobacco, alcohol, and foods high in fat increases along with gross national product, followed by related increases in cancer and other chronic diseases decades later (Yach, 2004). Establishment of cancer prevention programs should lead not only to effective cancer control, but also reduction of other non-communicable diseases that have common risk factors with cancer.

Population-based strategies, such as community-based cancer prevention may be more suitable than focusing on high-risk groups in developing countries because education and promotion produce a great impact for cancer prevention in these countries, where many people at the present have limited information on how to prevent cancer (Rose, 1992). Development of human resources is an essential measure and training courses on cancer prevention toward a model for nurse educators in developing countries were conducted in the US between 1986 and 1994 (Ash et al., 1999). Some courses for cancer prevention, such as that by the US National Cancer Institute, are open to international participants. To our knowledge, the present course is a first trial in the Asian Pacific region.

The advantage of the present course is its small group-training style (Takezaki, 2001). The style allows more intensive teaching especially in practices. The participants can easily communicate with each other and with the lecturers and exchange information. Through the course, they have a chance to be exposed to a variety of ethnic backgrounds and lifestyles, reflected in different cancer statistics, and objectively consider the situation in their own countries. Furthermore, the awareness of differences is encouraged by the stay in Japan. Such a comparison is helpful to establish unique and suitable methods for cancer prevention, based on ethnoepidemiological considerations (Tajima and Sonoda, 1996; Last, 2001). Training courses in the countries of trainees may be more effective to facilitate activities for cancer prevention in the country than courses in Japan. To program a course involving many Japanese specialists in cancer epidemiology and prevention, however, may be possible only in Japan. To follow-up whether action plans work and to provide required help timely will be the next step to enhance the significance of this course.

However, the present training style requires standardization of training contents, while background of knowledge and experiences on cancer prevention, and the priorities naturally differ between participants and countries. The selection system of JICA making priorities of the course on the basis of political considerations may make standardization of participants difficult (Takezaki, 2002). To minimize this disadvantage, the five-year program started in FY 2003 focuses on Asian and Pan-pacific countries. Because of practical reasons, we had to shorten the course from eight to five weeks in the second five-year program from FY 2003, but the logical integrity of the course appeared to be well preserved.

In summary, the present courses provide one step for cancer prevention in developing countries and hopefully will contribute to further development of human resources in each country. The course is to be held in this summer by JICA. The new counterpart institution will be Nagoya University Graduate School of Medicine. The author welcomes participants to share opportunities to plan how to prevent cancer in each country.

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