TRAINING REPORT

The 5th JICA Training Course, Community-based Cancer Prevention (Epidemiological Approach)

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Introduction

Cancer is the leading cause of deaths in developed countries, while communicable diseases are still more important in in developing countries (WHO 2000). Boffetta and Parkin have estimated cancer to account for 13 percent of the annual deaths in adults of developing countries (Boffetta and Parkin 1994). However, relative distribution of cancer deaths increases in developing countries, with economic development and longer life span (Walgate 1984; Chackiel 1999). Actually, the magnitude of the differences in age-adjusted mortality rates of all sites but skin cancers between the more and less developed countries (173.9 vs. 112.9 in males and 103.1 vs. 77.5 in females) is not so large, compared with the crude rates (257.6 vs. 82.3 in males and 189.7 vs. 63.8 in females) (Ferlay, 2001). Limitations of medical facilities and equipment in developing countries lead means that prevention as an indispensable measure for cancer control (Mikheev et al. 1994). However, human resources concerning cancer prevention are limited, and encouragement of their development should be taken as a first priority .

To assist in development of human resources concerning cancer prevention, 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). This 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 secondary prevention of cancer.

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 programme. 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 programs 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 concerns revision of contents in this 5th course, with a commentary regarding improvements for the next, second-phase course.

Asian Pacific J Cancer Prev, **4**, 169-174

Requirement for Application

Course participants were nominated by their government 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 is responsible for the community-based cancer prevention activities; 2) never have participated in a public health related training course in developed countries such as Great Britain, United States or Australia; 3) be under forty years of age; 4) have basic skills for using a computer; and 5) have a sufficient command of spoken and written English. A minimum TOEFL score has been required since 2001. Persons serving in the military are excluded. Applicants were also requested to submit questionnaires and a country report with their application documents.

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Time Schedule

The first brief announcement of the present course is made through the list of all training courses of JICA that are delivers to the countries on Japan's technical cooperation by JICA office or Japanese embassy in July two years before the course. The government of each country makes the priorities to these courses and submits the list to JICA office or Japanese embassy. All lists are sent to the headquarter of JICA, and first candidate countries are decided according to their priorities and fixed number of each course. Then, the JICA training center, Chubu International Centre (CIBI), selected final candidate countries from the listed first candidates with suggestions of program members of the counterpart institute, Aichi Cancer Center Research Institute, around one year before the course.

General information (GI) for application was sent to the government of selected countries by JICA in July-August before 7 months of the course. The deadline of application for acceptance in the JICA office or the Embassy of Japan was December-January. The eight-week training course was preformed from February to April, after one week of Japanese guidance.

Participants

The number of participants was seven in 1999, eight in 2000, nine in 2001, eight in 2002 and nine in 2003 (Table

Table 1. Distribution of Participants for "Community-based Cancer Prevention," by Countries and Year

	Years					
	1999	2000	2001	2002	2003	Total
Asia						
Cambodia		1				1
Laos		1				1
Mongolia		1			2	3
Malaysia				2		2
Thailand				1		1
Sri Lanka				2		2
Oceania						
Papua New Guinea		1				1
Vanuatu		1				1
Fiji					1	1
Middle and South America						
Costa Rica	1			1		2
Dominican Republic	1					1
Honduras		1				1
Brazil	2		1[a]			3
Ecuador	1					1
Paraguay		2			1	3
Uruguay	2					2
Middle East						
Iran			1			1
Palestine Authority				1	1	2
Turkey					1	1
Jordan					1	1
Africa						
Ethiopia			1			1
Zambia			2			2
Zimbabwe			1			1
Tanzania				1		1
Kenya					1	1
Seycelles					1	1
East Europe						
Bosnia-Herzegovina			2			2
Lithuania			1			1
Romania			1			1
Total (countries)	7 (5)	8 (7)	10 (8)	8 (6)	9 (8)	42 (29)

[a]JICA trainee.

1). A Brazilian observer who was a long-term trainee of JICA also attended the course of 2001. The participants in 2003 were from the Middle and South American countries, Paraguay; the East and South-East Asian, Mongolia; Oceania, Fuji; the Middle-Eastern, Palestine Authority, Jordan and Turkey; and the African, Kenya and Seychelles.

Table 2. Contents of Course Program in 2003

	Number of sections[a]		Contents of practice
	Lecture	Practice[b]	
Outline of epidemiology			
Cancer control in Japan	1	1	Observation
Historical episodes of epidemiology	1		
Global health policies	1		
An overview of epidemiological studies	1	1	Group discussion
Cause and risk	1	1	Group discussion
Details of epidemiology			
Demographic studies	1	1	Calculation
Human ecology and cancer variation	1		
Case-control studies	1	1	Group discussion
Cohort study	1		
HERPACCb	1	1	Observation
Cancer pathophysiology	1		
Diet, nutrition and cancer	1	1	Observation
Molecular epidemiology	2	1	Observation
Instruction of reporting skills	1		
Study design of intervention trials	1	1	Group discussion
Biostatistics	1	1	Calculation
Statistical practice with package		8	Computer
Cancer prevention			
Smoking control (Osaka)	1	1	Observation
Aichi cancer registry	1	1	Computer
Osaka cancer registry (Osaka)	1	1	Observation
Radiation and cancer (Hiroshima)	1	1	Observation
Infection and cancer	1	1	Observation
Helicobacter pylori and gastric cancer	1		
Secondary prevention of cancer	1	1	Observation
Evaluation of cancer screening	1	1	Computer
Occupational health in Japan	1	1	Observation
Epidemiology of occupational cancer	1	1	Observation
Cancer prevention in the era of health care	1	2	Discussion
Experience of Japanese diet with cooking	1	1	Observation
Medical costs for cancer treatment	1	1	Exercise
Carotenoids as biomarker	1	1	Observation
Local public health activity		1	Observation
Main risk factors for cancer by site	1		
Country report		1	Presentation
Cancer prevention and its strategy	1	2	Personal discussion
		2	Group discussion
		2	Report
		1	Presentation
Course evaluation			
Weekly		(8)	Report
Mid-term & final		(2)	Discussion
Japanese language lesson	2		
Total	35	41	

[a]One session comprises three hours.
[b]Hospital-based Epidemiologic Research Program at Aichi Cancer Center.

Figure 1. Presentation at Action Plan Meeting

A total number of participants and countries in five years were 42 and 29, respectively. Participants comprised 24 males and 18 females. Age distribution ranged from 27 to 48 years, and mean age was 36.7 years. Backgrounds of participants were 39 doctors, two nurses and one health extension officer. Present employers were hospitals in fourteen, research institutes in ten, governmental organizations in eleven, non-governmental organizations in two, and university in five.

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 to 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 was annually revised with the suggestions from lectures and participants.

The training course was mainly conducted at the Chubu International Centre of JICA, Nagoya, Japan, and 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 the practical cancer prevention activities were taken place, as well as understanding Japanese culture and history.

After completing the technical training, participants were required to prepare the action plan report and present it 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 be possibly be applied in participants' 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.

Number of lectures and practices was similarly distributed in 2003 (Table 2). Computer practices were performed using statistical package, STATA (Stata Corporation, College Station, TX). Planning of perspective of cancer prevention and its strategy in each country was concentrated in the last week. The most common theme at the Action Plan Meeting was cancer prevention, including risk factor control and cancer research.

Lecturers

Excellent 28 lectures of specialist on cancer epidemiology and prevention were recruited from 10 universities and 9 facilities. Among them, three staffs of Aichi Cancer Center were involved in 6 sessions of total 35 (17.1%). Number of persons in charge of practices and observations was 25 in 3 universities, one hospital and 10 facilities, and 9 staffs of Aichi Cancer Center were involved in 23 sessions of the total 41 (56.1%).

Course evaluation

All participants responded 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 / study program, and balance of time allocation, and each item was evaluated to be about right or fair in 90% or over participants. The expected topics to be added to further program were epidemiological methods, statistical practice using computer, effective methods and ways of propaganda, more information of primary and

secondary prevention. As regards to time allocation, more discussion and practices were expected. More detailed information was obtained by weekly questionnaires.

As the duration of the second-phage course from 2004 is planned to be shorten to five weeks, the contents of the present course is required to be more concentrated. To collect information from participants how each session is necessary on the point of view of community-based cancer prevention, we preformed another questionnaire to make scores on priority of each session. More practical and basic contents, such as smoking control, infection, diet, cancer screening, cause and risk, case-control study, action planning, hospital-based epidemiologic research program and computer practice on statistics, were listed at higher scores.

Commentary

Cancer is the leading causes of death in developed countries, and is also increasing in developing countries with economic development, which is accompanied with improvement of hygiene conditions and life span (Walgate 1984; Chackiel 1999; Ferlay, 2001). Prevention is a dispensable measure to control cancer not only in developed countries, but also in developing countries. Establishment of cancer prevention system leads not only to provide effective cancer control, but also to apply it for prevention against other non-communicable diseases that have common risk factors with cancer. Population-based strategy, such as community-based cancer prevention may be more suitable strategy than high-risk strategy in developing countries, because education and promotion activity produce a great impact for cancer prevention in developing countries, where many people have less information how to prevent cancer (Rose 1992). Development of human resources is an essential and effective measure to perform it. The training course on cancer prevention education toward a model for nurse educators in developing countries have been conducted in the US between 1986 and 1994 (Ash et al 1999), and the present course is a first trial in the Asian Pacific region as far as we know.

The advantage of the present course is due to a small group-training style (Takezaki 2001). The participants can easily communicate each other and with lecturers. They have a chance to be exposed to a variety of the ethnic background of lifestyles and cancer statistics through the course, and objectively observe their own background. Furthermore, these differences are encouraged more in the situation staying in Japan. Such a comparison is helpful to establish their unique and suitable methods for cancer prevention, this being one of ethnoepidemiological point of view (Tajima and Sonoda 1996; Last 2001). Another advantage comprises many practices, being more helpful for well-understanding contents of lectures. A small group-training style allows the practices to be more effective.

On the contrary, the present training style requires standardization of training contents, while background of knowledge and experiences on cancer prevention, lifestyles, and the priority of cancer prevention differ between participants and countries. There is a limitation to standardize the latter problems between countries, although extra lectures and practices can partially reduce the gap in participants. The selection system of JICA with making priority of the course by the government of each country make the standardization of participants difficult (Takezaki 2002). To minimize this disadvantage, the next course is planned to be focused on Asian Pacific countries, and the time schedule for application and selection will be also brought more forward for participants to prepare background knowledge

Figure 2. Participants, Lectures and JICA Staffs at Closing Ceremony

of cancer epidemiology and prevention.

In summary, the present course provides one step for cancer prevention in developing countries. This step is expected to spread further development of human resources in each country. The next second-phase course will be carried out from February to March of 2004, and the JICA begins to deliver the GI to candidate countries in June, 2003. The author welcomes participants to share the opportunities to plan how to prevent cancer in developing countries.

Acknowledgements

This training course was supported by JICA, Ministry of Forging Affair, Japan. The author is grateful to Prof. Minoru Tanabe at the Kinzyo Gakuin University, Dr. Masanobu Fujioka at the Aichi Prefectural Government, Drs. Kunio Aoki and Tetsuo Kuroishi at the Nagoya Public Health Institute, Drs. Yoshiyuki Ohno and Masahiro Goto at the Asahi Labor Accident Hospital, Prof. Shinkan Tokudome and Dr. Sadao Suzuki at the Nagoya City University Medical School, Profs. Atsuko Aoyama and Nobuyuki Hamajima at the Nagoya University School of Medicine, Profs. Yoshinori Ito and Yuichiro Ono, and Dr. Toshihiko Imaeda at the Fujita Health University School of Health Science, Prof. Shogo Kikuchi at the Aichi Medical University School of Medicine, Prof. Hiroshi Ogawa at the Aichi Mizuho College, Prof. Masato Miura at the Nagoya University of Arts and Sciences, Dr. Chisato Nagata at the Gifu University School of Medicine, Prof. Haruhiko Sugimura at the Hamamatsu University School of Medicine, Ex-Prof. Nobuhiro Maruchi at the Shinshu University School of Medicine, Drs. Akira Oshima, Hideaki Tsukuma, and Wakiko Ajiki at the Osaka Medical Center for Cancer and Cardiovascular Diseases, Dr. Masakazu Nakamura at the Osaka Medical Center for Health Science and Promotion, Drs. Kazunori Kodama, Saeko Fujiwara and Eric J Grant at the Radiation Effects Research Foundation, Prof. Takesumi Yoshimura at the University of Occupational and Environmental Health, Dr. Malcolm A Moore at the Asian Pacific Organization for Cancer Prevention Training Center, Dr. Manami Inoue at the National Cancer Center, Research Institute, East, Dr. Hiroki Kataoka at the Aichi Prefectural Kamo Public Health Center, Dr. Kazuo Ozawa and Ms. Yoko Sato at the Aichi Red Cross Blood Center, Mss. Nahomi Imaeda and Chika Toyohuku at the Nagoya City School of Nutrition, Mr. Tomoyuki Kato at the Shinmeikosan Co., LTD, Drs. Kenji Yamao, Yasuaki Arai, Nobukazu Fuwa and Yukio Uchiyama at the Aichi Cancer Center Hospital, Drs. Kazuo Tajima, Kaoru Hirose, Kenji Wakai, XinEn Huang and Hidemi Ito, and Ms. Toshiko Saito at the Division of Epidemiology and Prevention, Aichi Cancer Center Research Institute, and Dr. Suketami Tominaga, the president at the Aichi Cancer Center for providing excellent lectures, practices and observations to participants in 2003. The author would like to acknowledge Mr. Tatsuhiko Kan, the president, at the Chubu International Centre, JICA, Mr. Syunsuke Takatoi at the Programme Division, Chubu International Centre, JICA, Ms. Hisako Yamamoto and Mr. Kiyohiko Ogino at the Japan International Cooperation Center for their well-organized course coordination in 2003.

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