
COMMENTARY

Who Wants an EAE NCD Epidemiology Training Course?

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Abstract

Cancer control programs depend on dedicated well-trained personnel for their success. All of the aspects, from promotion of general awareness, surveillance for descriptive statistics, analytical studies of risk factors, screening and lifestyle improvement interventions through to clinical treatment and outcome measures, require expertise for effective performance. The International Agency for Cancer Research (IARC) well recognizes this fact and therefore organizes a yearly ‘summer school’ focusing on cancer epidemiology. It also has organized a number of on site courses for aspects of cancer registration, for example with the National Cancer Institute of Thailand. It is hoped that EurAsian Education can offer research training as part of its program to contribute to cancer and other non-communicable disease control across EurAsia. Envisaged is a 7-day hands-on training course in all aspects of NCD epidemiology to students and staff of Universities and Research Institutes. Included will be a commitment to network assistance in bringing research proposals to successful conclusion and publication in the international literature.

Key Words: ASEAN - cancer epidemiology - research training - publication - networking

Introduction

Cancer control professionals, involved in education and promotion of awareness, surveillance and monitoring for cancer statistics, early detection and screening, and clinical oversight, are essential for effective generation and use of the evidence base for reduction of disease burden. The question is where the appropriate training should take place. In a perfect world the medical curriculum of universities across ASEAN would be able to include a comprehensive coverage of the necessary aspects of cancer epidemiology but in reality this is unattainable. The focus must primarily be on post-graduate and post-doctoral opportunities for those actively participating in research to assist in policy-making and implementation of cancer control programs.

The International Agency for Research on Cancer (IARC) well recognizes this fact and organizes a yearly ‘summer school’ in cancer epidemiology, with three modules “Introduction to Cancer Epidemiology”, “GICRNet Master Class: Analysis of Population-based Cancer Registry data” and “Implementing Cancer Prevention and Early Detection” over a three week period.

Very many scientists across Asia have benefited from attendance in this or other courses run by IARC across the world. However, the magnitude of the problem and the number of individuals requiring specific research training means that other stakeholders have become involved. The National Cancer Centers of Japan and Korea and the National Cancer Institute (NCI) of Thailand have all

worked together with IARC to assist in capacity-building. Focusing on the need for appropriate policy-making by health administrators and translation of policies into practice by program managers across the China-ASEAN region, the Chinese National Cancer Center/Cancer Academy of Medical Sciences (CICAMS) and IARC also established a Joint Cancer Prevention and Control Training Program (Rezhake et al., 2018).

At the end of 2018 a new project was initiated at Khon Kaen University, housed in the Faculty of Public Health but also with key members from the Faculty of Medicine. The aim of this ASEAN Cancer Epidemiology and Prevention research group (ACEP) is to assist in development of research capacity in the countries of South-East Asia in particular, by establishment of networks of active scientists and a new journal. For both of these, appropriate training of scientists who aim to be active in cancer control research in the future is a high priority. It is therefore planned to launch an ACEP ‘winter school’ taking advantage of the mild climatic conditions of the Thai so-called ‘cool’ season and the cancer epidemiology expertise which exists in Khon Kaen University and colleagues across Thailand (Wiangnon et al., 2019).

Two of the authors of this Commentary have direct experience of the Japan International Cooperation Agency funded course on ‘Community-based Cancer Prevention for the Asian and Pan-Pacific Countries’ (Takezaki, 2001; Wakai and Matsuo, 2007), organized by Dr Kazuo Tajima of Aichi Cancer Center (one as faculty, MAM, and the

Table 1. Contents of the JICA Course Program

	Sessions		Contents of Practice
	Lecture	Practice	
Outline of Epidemiology			
Concepts and overview of cancer epidemiology	1*		
Cancer control in Japan	1		
Global health policies/trends	1		
Cause and risk	1*	1	Calculation
Details of Epidemiology			
Demographic studies	1	1	
Human ecology	1		
Case-control studies	2	2	Calculation
Cohort study	1*		
HERPACC#	1	1	Observation
Cancer pathophysiology	1		
Diet, nutrition and cancer	2		
Molecular epidemiology	1		
Instruction of reporting skills	2		
Design of intervention trials	1		
Ethical issues	1		
Biostatistics		2	Computer
Aichi cancer registry	1	2	Computer
Osaka registry (Osaka)	1	1	Observation
Cancer Prevention			
Aichi Cancer Center Research Institute and Hospital	1		Observation
Smoking control (Osaka)	1		Group discuss
Radiation cancer (Hiroshima)	1		Observation
Infection and cancer	1		
H pylori and gastric cancer	1		
Cancer screening	1	4	Observation
Evaluation of screening	1	1	Computer
Occupational health in Japan	2		
Occupational cancer	2		
Primary cancer prevention	1	3	Group discuss
Carotenoids as biomarkers	1		
Local public health activity	1		Observation
Main risk factors by site	1		
Health promotion and prevention of lifestyle-related diseases in Japan	1		Observation
Country report	1		Presentation
Cancer prevention and its strategy (Action planning)	1	3	Personal discuss
Course Evaluation			
Weekly		(4)	Report
Mid-term & final		(2)	Discussion
Japanese language lesson			

* One lecture 1.5 hours and practice 2.5 hours # Hospital-based Epidemiology Research Program at Aichi Cancer Center

other as a student, PV). Unfortunately this is no longer available but its contents are clearly of interest to planning of a practical course (see Table 1).

While the JICA course required attendance for one month, this was only possible because most of the participants were from Ministries of Health and had been given leave of absence. The problem experienced was that on return to their offices almost all were lost to the field of cancer epidemiology because of the general tendency for revolving from Department to Department in Government. Those from academia, on the other hand, generally continue to be active and indeed publish. To

facilitate attendance, the proposed course is planned to be 7 days in duration. Saturday arrival, evening introductions, Sunday to Saturday inclusive devoted to lectures and practical sessions, with an opportunity to take part in group Powerpoint presentations on the final day, and return home on the Sunday, ready to restart work the next day. The basic "Introduction to Cancer Epidemiology" module of the IARC summer school is two weeks. It is hoped that advantages of geographical location and associated relatively inexpensive ease of access, with abundant budget accommodation, will allow the ACEP winter school to offer a meaningful experience within the financial capabilities of prospective participants.

It is envisaged that the course would include three 1.5 hour lectures a day for the first six days, two in the morning and one in the afternoon, followed by a practical session for 2 hours. Creation of groups concentrating on one particular field or cancer type (for example cancer registration, screening, lung cancer or colorectal cancer) would facilitate comprehensive presentations and critical discussion on the final day.

A provisional list of course contents is given in Table 2. Prior to the course, a text book covering all of the included areas, as well as use of scientific English for research purposes, will be provided as pdf and Powerpoint files in English as well as participant languages where feasible (it is intended that Google translate-assisted versions of the English originals will be created in the first instance for Burmese, Indonesian/Malaysian, Thai and Vietnamese - students will then be encouraged to assist in ensuring that accuracy in translation is maintained). The overview of cancer epidemiology, with due attention to the historical context, would also focus on the cancer control situation in individual countries, with input from the participants. Since one of the major aims of the course is to have all those taking part to gain experience in preparing manuscripts for publication, this would be an early focus. In addition to the group practice sessions, one-to-one advice for writing specific papers will be provided, staggered throughout the course, to each individual taking part, focusing on their own research questions.

Interested individuals can approach any of the authors by email for more details about particular lectures and practical sessions. Using experience gained in Japan, particular attention will be given to development of hospital-based cohorts (Tajima et al., 2000; Hamajima et al., 2001), and multi-institutional cooperation as in the Japan Collaborative Cohort study (Tamakoshi et al., 2013), and the Japan Public Health Center cohort (Tsugane et al., 2001). Another focus might be on nurse educators (Ash et al., 1999), as well as the experience of community-based intervention of the present authors (Promthet et al., 2012; Saranrittichai et al., 2012).

Candidates would be epidemiologists, statisticians, physicians and oncologists, public health specialists and others with a direct interest in working in cancer epidemiology, registration and activities related to cancer control. The programme aim is to provide training for personnel at all levels of experience, possibly with an especial focus on those who have an M.Sc and who might subsequently wish to pursue a Ph.D under the auspices of

Table 2. Contents of the EAE Internal Course

	Sessions	
	Lecture	Practice
Overview of cancer epidemiology	1	
Country reports, networking, costs	1	
Presentation of research findings		
Background philosophy/publication types	1	
Scientific English and oral presentations	1	1
Pathophysiology	1	
Biostatistics	1	
Assessment of diet and risk factors	1	
Reviews and meta-analyses		
Design and implementation	1	1
Descriptive studies		
Cancer registration	1	
Evaluation	1	1
Cross-sectional studies		
Design and implementation	1	
Molecular studies - Polymorphisms	1	
Molecular profiling	1	
Critical appraisal	1	1
Cohort studies		
Design and implementation	1	
Critical appraisal		1
Case-control studies		
Design and implementation	1	
Interventions		
Awareness programs	1	
Cancer screening	1	1
Final Day Action Session		

One lecture 1.5 hours and practical session 2.0 hours

universities cooperating with EAE Internal. Discussions are underway in the hope of developing a new program allowing initial tuition but actual active research work in home countries, in line with the International Doctoral Programme in Epidemiology and Public Health of Tampere University in Finland (<https://www.tuni.fi/en.study-with-us/international-doctoral-programme-epidemiology-public-health-ippe>, accessed 9.2.2019).

Participants based in the low and lower-middle income countries as listed in the World Bank current classification by income would be exempt from a course fee, and depending on grant support, this might also be extended to travel and living expenses. Where possible the upper-middle range would also be exempt, whereas participants from high-income countries might be welcomed but charged a reasonable fee.

The training course is only one prong of the envisaged ongoing cooperation with active scientists in the area. Contact will be maintained with 'students' who join one or other of networks for cancer control and multi-site journal clubs will be encouraged for ongoing opportunities to gain experience, with a trainee-focused approach and critical appraisal of scientific literature across disciplines (James et al., 2015). Responsibility will not end with the final action plans but should continue into the future, with assistance in publishing in peer-reviewed journals where feasible.

Scholars need to learn how to navigate the international research culture to succeed and emphasis will be given to presentation skills, curriculum vitae preparation, and preparation of grant applications. We naturally share the

conclusion of NCI's Center for Global Health (CGH) that development of competence and skills in one or more of these areas across the cancer control continuum are of particular interest:

study design
protocol development
patient-oriented research
clinical trials design and execution
ethical and regulatory aspects of clinical research
collection and management of research data
population-based research
dissemination and implementation research

All of these are incorporated in our planned ACEP Cancer Epidemiology Winter School. Please contact us if you are interested in taking part in this new program either as a student or as volunteer faculty.

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