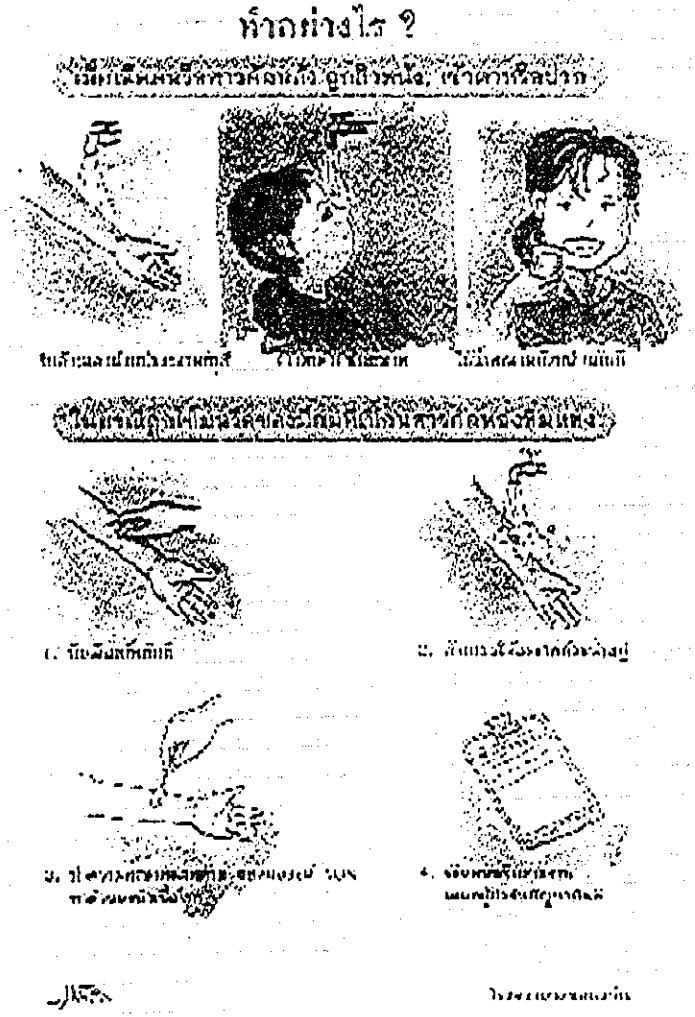


1) Explanation of first sid methods for occupation accidents.

2) Explanation how to disinfect contaminated materials with blood.

MOPH-JICA Joint Workshop on " IEC Development for Universal Precautions and AIDS Education"

Ms Yukari Fukuhara
JICA Expert on Health Education Media Development

Goals

- To identify the essential theme in the developing the teaching media conceming the practice of Universal Precautions.
- To identify the target group.
- To select the most desirable kind of media to be applied.

Organizers

- Khon Kaen Regional Hospital
- Provincial Hospital Division, Office of Permanent Secretary
- AIDS Division, Department of Communicable Diseases Control
- JICA Project for Prevention and Control of AIDS

Participants

- Health Education Unit, Khon Kaen Regional Hospital, Health personnel from the in-patient wards with AIDS cases.
- Health Education Units of all provincial hospitals in the 6th Medical Region.
- Health education unit of the Provincial Health Department.

The number of participants are given below:

The 1st day	61 persons
The 2nd day	47 persons
The 3rd day	37 persons

Venue

The Auditorium of the Khon Kaen Regional Hospital.

Duration

From 11 to 13 September 1995 from 8:30 am to 4:00 pm for three days.

Budget

An additional AIDS fund of Provincial Hospital Division to Khon Kaen

Regional Hospital	Baht 30,000
JICA supplementary provision	Baht 30,000
Total	Baht 60,000

Workshop Programme

11 September 1995	Opening ceremony
	The present situation of HIV/AIDS problem
	The present AIDS situation in Khon Kaen and significance of Universal Precauations
	Present situation of AIDS education materials
	Special lecture "Survey Design"
	Special lecture "Education level and the degree of Apprehend"
12 September 1995	Orientation
	Characteristics of different types of media for education purposes.
	Development of Educational Materials
	Production of a simple A-V teaching materials
	Practice "Production of a simple A-V teaching materials
13 September 1995	Practice "Production of a sampleA-V teaching materials
	Practice "Production of a simple A-V teaching materials
	Closing ceremony

Findings

1. Participants should identify the most suitable wording according to their different targets.

2. Participants should identify the most desirable educational materials.

3. Participants should relized that there are a number of different problems in the process of actual material development.

Report of JICA Project for prevention and control of AIDS

National Institute of Health,
Division of Health Laboratory Quality Control,
Department of Medical Sciences
and

Children's Hospital,
Department of Medical Services

Annual Schedule in NII I, DMSc and Children's Hospital, DMSc. Project for Prevention and Control of AIDS

	FY 93												FY 94												FY 95												FY 96			Expert	Counter-part
	7	8	9	10	11	12	1	2	3				4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6		
Virology, Coordination													Miyamura																											1	1
Characterization of HIV infection																																									
Quantitative analysis of HIV infection	Honda 5d												Honda 12d								19d				Honda 19d															4	12
Nucleotide sequencing																									Nagahawa 5.5m															1	5
Isolation of HIV																									Tsuchie 21d															1	1
HIV RNA quantitative analysis																									Tsukada 51d															1	1
Molecular epidemiology																									Saloh 12d															1	1
Development of diagnostic reagent																									Takebe 15d															1	1
Immunopathology by EM																									Kurinura 7d															1	1
																									Kalumoto 14d															1	1
Study on urine EIA																					Yoshihara 21d																			1	1
Strengthening laboratory diagnosis of opportunistic infections																																									
Study on Nocardiosis and opportunistic fungal diseases										Mikami			27d								Mikami 19d																Mikami			3	2
PCR of Pneumocystis carinii																																								1	4
TB & other bacterial infections										Tachikawa 27d																											Abe 21d					
																																					Higashitotumi 3m			2	2
Clostridium difficile																																								1	1
Laboratory diagnosis of CMV																					Takeda 3m																			1	1
Establishing Quality Control System for diagnostic kits																									Yoshihara 24d															1	2
Establishing specimen storage system																																			Miyamura						1	2
Establishing laboratory diagnosis in Children's Hospital																																			Yoshihara						3	3
Collaboration to establish diagnostic lab. in Phayao Hospital																																									
Seminar/ Training course																																									
Revision of National guideline of the HIV testing																									(organized by Dr.Paijit)																
National group training course on laboratory diagnosis of opportunistic infections										(Organized by Dr.Mayura)			5d (17 attendants)												5d(22 attendants)																
Fellowship	Ms. Amornlip (NII I) 1Y																							Ms	Nantiawn(NII I)																8
	Mr.Viroj (OC) 1Y																																		Ms.Wilai (OC)			3m				
																									Ms.Rajada (Child Hosp.)													3m			
																					Ms.Nonglak (NII I) 6m																				
																									Ms Lamduan (Phayo Hosp.)													3m			
																					Ms.Salinee (Child. Hosp.) 4m																				
Survey team													Planning and consultation team												Evaluation team																
																					Feb. 15-20,1995												Jan.3-11,1996							

Publications

Original papers and books

1. Saguanwongse U., Muangprom A., Ruachusatsawat N., Wongcheree S., Warachi W.,Miyamura K.,Yamazaki S. and Honda M. : No HTLV-I / II in intravenous drug abusers with high rate of HIV-1 infection that decreases gradually in Central Thailand. Microbiol. Immunol. (presented)

2. Poonwan N. et al. : Pathogenic *Nocardia* isolated from clinical specimens including those of AIDS patients in Thailand. European J. Epidemiol. (in press)

3. Mikami Y. and Poonwan N: Manual book of identification guideline of pathogenic *Nocardia*.

4. Wongwanich S.: Laboratory manual on diagnosis of anaerobic bacterial infections.

Videos

1. Mikami Y. and Poonwan N. : Identification guideline of pathogenic *Nocardia*.

2. Tachikawa N. and Wongwanich S.: PCR technique.

(Some books and video tapes were compiled by Mr.Hirai, Mr.Sumida and Ms.Fukuhara, IEC experts of the project.)

Presentations

At Third International Conference on AIDS in Asian and the Pacific

1. Bhumisawadi B., Auwanit W., Isarangkura Na A., Duangchandra S., Saipradit N.,Sriwanthana B., Chompuk L., Naganawa S., Muangprom A., Jayavasu C., Miyamura K., Honda M., and Yamazaki S.:
Genotypic and serotypic analysis of HIV-1 in Thailand.

2. Isaragkura Na A.P., Duangchandra S., Saipradit N., Sriwanthana B.,Champuk L., Naganawa S., Muangprom A., Auwanit W., J. Bhumisawadi J, Jayavasu C., Miyamura K., Honda M. and Yamazaki S.
Appropriate method for genetic analysis of HIV-1 in Thailand.

3. Poonwan N., Kusum M., Mikami Y., Yazawa K. and Konyama K.: Pathogenic *Nocardia* isolated from AIDS patient in Thailand.

4. Saguanwongse S., Yoshihara N., Ruchusatsawat N. and Vongsheree S.: Evaluation of urine-ELA for the detection of HIV-1 antibody .

Project for prevention and control of AIDS

Research proposal for the following years (NIH,DMSc)

1. Immunological techniques for monitoring cellular immune response in HIV infected individuals.
   - CTL assay for monitoring CMRI in AIDS and AC during drug treatment.

2. Nucleotide sequencing of envelope region of proviral HIV DNA extracted from PMBC by automated
   DNA sequencer.
   - Analysis of the data for publishing .
   - Screening of HIV-1 serotype by peptide based ELISA in the sera from sentinel serosurvey study.
   - Computerized analysis of HIV DNA sequence.

3. Immunopathology by electron microscopy.
   -Immunopathological study on HIV isolates in Thailand.

4. Screening of antiviral and immunomodulating activity in Thai harb.
   - In vitro antiviral screening in Thai medical plants.
   -Laboratory assay for detection of immunomodulating activity of Thai medicinal plants.

5. Molecular cloning of Thai HIV-1.
   - Construction of a complete genomic library of Thai HIV-1 subtype B and E.
   - Expression clones for characterization of gp120/gp160.

6. Strengthening laboratory diagnosis of opportunistic infections in AIDS patients.
   - Diagnosis of toxoplasmosis in AIDS patients. Identification and detection by immunological method and PCR technique. Culture and Purification of Toxoplasma gondii antigen.
   - Extraction and purification of cryptococcosis by immunological method. Extraction and purificatiion of cryptococcal antigen. Development of Latex agglutination testing reagent for diagnosing Cryptococcosis from patient's sera.
   - Early diagnosis and epidemiological study of Cryptococcosis in AIDS patients based on molecular biology.

7. Study on antiviral activities against herpesvirus group (HSV, EBV, CMV) of drugs in AIDS patients.
   - Screening methods (Ex. enzyme inhibitory assay).
   - Virological methods (Ex. plaque reduction assay, dot hybridization or PCR).

8. The management of QA system in the laboratory diagnosis of HIV infections.

9. Establishment of external Quality Assessment on the laboratory diagnosis of HIV infection.
   -Technical consultation on the National check sample in laboratory diagnosis of HIV infection.
   -Advise on the preparation and standardization of quality control sera.

10. Study on opportunistic infections of pediatric AIDS patients.

Report of JICA Project for prevention and control of AIDS

Abstract

Presented to Third International Conference on AIDS in Asia and the Pacific

APPOPRIATE METHOD FOR GENETIC ANALYSIS OF HIV-1 IN THAILAND

Panasda Isarangkura Na Ayuthaya* ; Duangchandra,S.* ; Saipradit,N.* ; Sriwanthana, B.* ; Chompuk, L.* ; Naganawa, S.** ; Muangprom, A.* ; Auwanit, W.*; Bhumisawasdi, J.* ; Jayavasu, C.* ; Miyamura, K.** ; Honda, M.** ; Yamazaki, M.**

* National Institute of Health, Department of Medical Sciences, Thailand
** National Institute of Health, Japan

Background :

HIV-1 in Thailand is largely due to two divergent clades of viruses, E and B. Since AIDS pandemic has started in this country, the virological, immunological, and clinical monitoring is one of the urgent problem to control both the symptomatic and disease progressed individuals and to devlop anti-HIV candidate agents that are effective for field viruses endemic in Thailand.

Objectives :

Our studies were designed to establish appropriate method of genetic analysis for characterization of HIV-1 prevalent in Thailand using autosequencer to elucidate viral subtypes and its mutation with relation to clinical and laboratory data of the individuals.

Materials and Methods :

Samples

A total of 14 blood samples were taken from HIV-1 asymptomatic carriers, 8 from heterosexual and 6 from intravenous drug users (IVDU). A detailed description of the samples are presented in table 1.

Preparation of DNA

Peripheral blood mononuclear cells (PBMCs) were separated from blood samples using Ficoll-plaque centrifugation and DNA were extracted by Instagene Purification Matrix (BIO-RAD, USA) for DNA analysis.

DNA amplification of V3 genome of HIV-1 :

One of two primer pairs, OA3/OD3 or MK603/CO602 (Table2), was used to amplify the env genome using 1 ug of DNA template. The thermocycling condition were 94°c for 1 min, 55°c for 2 min, 72° c for 1 min, 35 cycles and heating to 72°c for 7 min. Five microlitre of the amplified product was used as the template for the second amplification with primer EB2/EC2 (Table 2) for about 300 bp DNA fragment of the C2-V3 region of the HIV-1 env gene, using the same condition as the first amplification.

Discussion and Conclusion :

1. Two primer sets of nested PCR for sequencing thier C2-V3 region of HIV env were initially studied.

1.1 MK603/C0602 outer primer set was suitable for amplifying env gene of both clade E and clade B viruses while OA3/OD3 primer set did amplify only some of clade E viruses

1.2 The combination of the PCR methods using the two primer pairs could give us more informations on infected viruses.

2. By using two sequencing methods; dye-terminator and dye-primer methods of cloned viral sequences, genotypic analysis was studied in field viruses in Thailand.

2.1 Comparing genotypic analysis and serotypic analysis by peptide-based ELISA, clade of the virus is basically similar.

2.2 However, there is a discrepant case between the sequence results of dye-terminator and dye-primer methods, suggesting the influence of cloning procedure of dye-primer method, implying the possibility of co-infection of HIV in an individual.

2.3 direct dye-terminator method in this study is simple and accurate to determine the genotype of HIV, suggesting that it is an alternative method for molecular-epidemiological study.

Presented to Third International Conference on AIDS in Asia and the Pacific

GENOTYPIC AND SEROTYPIC ANALYSIS OF HIV-1 IN THAILAND

Jakkris Bhumisawasdi* ; Auwanit, W.* ; Isarangkura Na Ayuthaya, P.* ; Duangchandra, S.* ; Saipradit, N.* ; Sriwanthana., B.* ; Chompuk, L.* ; Naganawa, S.** ; Muangprom, A.* ; Jayavasa, C.* ;Miyamura, K.** ; Honda, M.** ; Yamazaki, M.**

* National Institute of Health, Department of Medical Sciences, Thailand
** National Institute of Health, Japan

Introduction :

The genetic study of HIV become critical to our understanding the dynamics of HIV-1 spread in populations at various risks in Thailand for control HIV infection and preparation for efficacy trials of anti-HIV candidate agents in the near future. From 1995, we have prospectively started studies of the HIV field isolates in populations in Thailand.

Objectives :

To characterize field HIV-1 in Thailand genetically and discuss the various factors involeved in better understanding the character of HIV to plan and initiate such trials.

Materials and Methods :

Blood samples from 94 individuals seropositive for HIV-1 up to February 1995 were collected from intravenous durg addict (IVDU), sexually transmitted disease patients and sex workres in different geographic areas of Thailand.

All sample were screened for HIV-1 seretype by V3 domain peptide-base ELISA system (Chou-Pong Pau et al, AIDS, 1993,7(3) : 337-340). Four peptides represented the principal neutralizing domain (PND) of HIV-1 gp120 (V3-domain) are PND-E (DTSITIGPGQVFYRT), PND-B (DKSIHLGPGQAWYTT), PND-BR (DKSIHLGPGRAWYTT) and PND-MN (DKRIHIGPGRAFYTT) purchased from Biopharma Inc. London, UK.

Genomic DNA extracted from PBMCs of 27 blood samples were amplified by polymerase chain reaction (PCR) using nested primers that flank the sequences of between C2 to V3 loop of HIV-1 env region.

One of two primer pairs, OA3/OD3 (Honda M. et. al. 1995 in press) or MK603/CO602 (Chin Yhi Ou, Lancet 1993, 341 1171-1174), was used to amplify the env genome. The thermocycling condition were 94°c for 1 min, 55°c for 2 min, 72°c for 1 min, 35° cycles and heating to 72°c for 7min. The amplified product was used as the template for the second amplification with primer EB2/EC2 (Honda M. et.al. 1995 in press) for about 300bp DNA fragment of the C2-V3 region of the HIV-1 env gene, using the same condition as the first amplification.

DNA products were purified and were direct sequenced by dye terminator method or were cloned polyclonally and sequenced by dye primer method using automate sequencing system (Applied Biosystms Inc., USA). DNA sequences were edited by using Sequence Navigator soft ware(ABI. Inc., USA) and the Genetyx (Software Dev.Corp., Japan) was used for the multiple alignment of amino acid.

Discussion and Conclusion :

For this study, 94 HIV-1 seropositive individuals were enrolled : 45 from intravenous durg user(IVDU) and 44 from heterosexual individuals.

1. Two outer primer sets for nested PCR to sequence the C2-V3 region of HIV env, OA/OD for dye terminator sequencing or MK/CO for dye primer sequencing, were further compared.

- By comparing the two outer primer sets, there were 3 cases of sample that showed different subtypes of HIV-1 (Table 1) in the same individual, suggestion the primer dependent-tendency of priming the PCR reactions. Serotyping by peptide-based ELISA resulted the same HIV-1 subtype identified by a dye terminator nucleotide sequencing method.
- The combination of the PCR methods using the two primer pair could give us more informations on infected viruses (Figure 1)
- Two subtypes of HIV-1 were presented in Thailand demonstrated by phylogenetic analysis(Figure 2)

2. Interestingly, 4 out of 9 sera form clade B infected IVDU were negative for binding to PND-pepide B as well as MN, BR and E by subtype-specific pepide-based ELISA (Figure3, Table 2). However, the four sera showed typically seropositive for HIV by western blot analysis (Figure 4). Low level of antibody to aHIV V3-PND may occur during neutrlizing viral antigen. Further, there was no difference in HIV sequences between populations of ELISA-reactives and nonreactives (Figure 3). All 27 sera tested from individuals infected with clade E virus were reactive to respective pepied-E by the ELISA. (Figure 5).

3. By combination of serological and genetic analysis, HIV subtypes spread in Thailand were analyzed (Table 3, 4). HIV spread in IVDU are detected to be mixed populations of clade B virus (44%), clade E virus (53%) and B/E virus (2%). Further, most of the spreading viruses in IVDU of the northern Thailand was confirmed to be clade E virus, in contrast to that of central Thailand still clade B virus. Sexually transmitted individuals were infected with clade E virus in Thailand.

Presented to Third International Conference on AIDS in Asia and the Pacific

PATHOGENIC *NOCARDIA* ISOLATED FORM AIDS IN THAILAND

Poonwan, N.*, Kusum M.*, Mikami, Y.**, Yazawa, K.**, and Konyama, K ***

* Mycology section, Division of Clinical Pathology, Department of Medical Sciences, National Institute of Health, Nonthaburi, Thailand,

** Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University, Chiba (260), Japan

***JICA (AIDS Project), Department of Communicable Disease Control, Nonthaburi, Thailand

ABSTRACT

Forty strains of nocardioform microorganisms were isolated as clinical specimens including ones from AIDS patients in Thailand. Among them, 37 strains were found to belong to the genus *Nocardia*. Our identification studies revealed that most of the strains (25 strains) belong to the *N.asteroides* group, i.e., *N.asteroides* sensu stricto and *N. farcinica*. Three strains were identified as *N.otitidiscaviarum* and two strains *N.brasiliensis*.

In addition, 7 strains of rare pathogenic *N.transvalensis* were also isolated. This is the first reported case of nocardiosis due to *N.transvalensis* in Asia. Although the relationships between noacardiosis and HIV infection has not been fully elucidated, in the present studies, sero-positive patients for HIV were more than 25%. Therefore, further detail epidemiological studies may be necessary to determine a possible association between AIDS and nocardiosis.

INTRODUCTION

Nocardia is an aerobic gram-positive filamentous and partly acid-fast bacterium which belong to the pathogenic actinomycetes. Human infection by several *Nocardia* species is uncommon but potentially life threatening. Nocardia can cause both systemic and cutaneous disease. Systemic disease is usually caused by the N.asteroides group (*N.asteroides* sensu stricto, *N.farcinica* and *N.nova*). On the other hand, cutaneous nocardiosis, is usually caused by *N.brasiliensis* and *N.otitidiscaviarum*. Nocardiosis has been considered to be induced by various predisposing factors. The factors which are most commonly associated with nocardiosis include corticosteroid therapy, immunosuppressive therapy and hematological malignancy. Reported cases of infection are increasing in number in recent years, coupled with the incerased number of AIDS patients and with the usage of immunousuppressive agents. Here we report the characterization studies on pathogenic *Nocardia* isolated clinically in Thailand from 1990 to 1994.

DISSCUSSION

Systemic nocardiosis is manily caused by *N.asteroides* group. In the present study, about 68% of the isolates in the hospital in Thailand were N.asteroides group (12 strains of *N.asteroides* and 13 strains of N.farcinica). However, we could not find *N.nova* strain.

Clinical cases due to N.transvalensis were very rare and no cases have been reported in Asia. *N.transvalensis*, 7 strains were identified. It is also interesting to know why so many N.transvalensis strains can be isolated from clinical specimens in Thailand.

We could confirm three cases of *N.otitidiscaviarum*.. Therefore, further surveillance on the infections due to N.otitidiscaviarum in Thailand is of interest.

However, interestingly, among the 37 cases in the present studies, sero-positive and -negative patients for HIV were 10 and 2, respectively, and the remaining cases were unknown. The supposed % of the numbers in sero-positive patients for AIDS of the remaining cases seems to be high, therefore, further detail epidemiological studies may be necessary to determine a possible association between AIDS and nocardiosis.

Presented to Third International Conference on AIDS in Asia and the Pacific

EVALUATION OF URINE-EIA FOR THE DETECTION OF HIV-1 ANTIBODY

Saguanwongse, S.* Yoshihara, N. ** Ruchusatsawat, N.* and Vongsheree, S.*

* Virus Research Institure, Dept. of Medical Sciences, MOPH Thailand
** National Institute of Health, Tokyo-Japan

Abstract

A field evaluation of *Urine-EIA* for the detection of HIV-1 antibody was performed using 1198 IDU specimens from Thanyarak Narcotics Hospital during Oct - Dec 1994. The test performance was compared with serum test ; EIA(Abbott 3rd Generation), Particle agglutination (Serodia - fujirebio Inc.) and Western blot (Pasteur). The *Urine EIA* gave 95.96% sensitivity and 92.27% specificity which were satisfactory for surveillance purpose. The test might be beneficial for epidemiologists since it was simple and required non-invasive method of sampling.

Objective

To access the performance of a *Urine - EIA* in a field evaluation, using IDU samples.

Method

Samples : 1198 sera and corresponding urine were samplinged from IDUs who attended Thanyarak Narotics Hospital during Oct - Dec, 1994.

Urine - EIA : Indirect EIA, Stripped nicrotiter plate flat-bottom, from Calypte Biomedical Incorporation - Japan. The test utilized recombinant envelope protein of HIV - 1 and recommended urine as clinical specimens.

Conclusion

1. This Urine - EIA showed satisfactory performance for HIV-1 surveillance purpose. The prevalence of HIV infected in IDU, by serum tests, was 35.06% while this Urine-EIA occupied 37.73%.

2. This Urine-EIA may be applicable for certain high risk population who have high prevalence of HIV-1 infection.

3. The test is simple and requires a non-invasive method of sampling.

Absence of HTLV-I/II in Intravenous Drug Abusers with a Gradually Decreasing High Rate of HIV-1 Infection in Central Thailand

Suranga Saguanwongse[1], Amorntip Muangpom[1], Nuangjun Ruchusatsawat[1], Suthon Wongcheree[1], Paijit Warachit[1], Kikuko Miyamura[1,2], Shudo Yamazaki[2] and Mitsuo Honda[2]

1.Virus Research Institute, Departtment of Medical Sciences, Nonthabuli 11000, Thailand
2.AIDS Research Center, National Institute of Health, Tokyo162, Japan

Materials and Methods

Study subjects:The Thailand-Japan Collaborative Study of Human Infectious Diseases obtained 1,074 serum specimens from IVDAs (males, 1036; females, 38) from Thanyarak Narcotics Hospital in Pathurmthani, Bangkok, Thailand, in January 1995. Eight serum specimens from HTLV-II -infected individuals in the South Vietnam and 10 sera positive for HTLV-I infection were used as reference sera. Control (n=10) were specimens from seronegative blood donors supplied by the Japanese Red Cross Central Blood Center, Hiroo, Tokyo.
Assay for HIV-1: The gelatin particle-agglutination (PA) screening test for HIV (Serodia-HIV, Fujirebio Inc). Those positive in the screening PA test were confirmed by Western blot analysis (Bio-Bad Laboratories, Richmond, Calif.,USA)
Assay for HTLV-I / II: seropositive donors were screened by using routine PA tests for antibodies to HTLV- I / II (Serodia-HTLV-I Fujirebio Inc.) Confirmatory serologic analyses were carried out by HTLV-I/II type-specific Western immunoblotting (HTLV BLOT 2.3; Diagnostic Biotechnology, Singapore). HTLV-I seropositivity was confirmed by the detection of recombinant glycoprotein 46, more than one of gag proteins of HTLV, and more than one of env proteins of HTLV in the blotting.
Statistical analysis. Calculation of the geometric mean + the standard deviation and X^2 tests were carried out for 2x2 tables with a microcomputer. Significance was defined as $p<0.05$.

Abstract

Serum specimens of 1,074 intravenous drug abusers (IVDA) were examined for infection with HIV-1, HTLV-I and HTLV-II in central Thailand. Three hundred and sixty two of the specimens were seropositive for HIV-1 (33.7%). The HIV-1 seropositive IVDAs exhibited increased seropositivity with age through group 40-44 and significantly decreased seropositivity over age 45, showing that the virus has recently been introduced and become endemic among the population. In contrast, no seropositivity to either HTLV-I or II was detected in the samples tested by a particle-agglutination assay for HTLV followed by type-specific Western blotting for HTLV. Recently, we revealed that HTLV-II is extraordinarily high in IVDAs in South Vietnam, but not in North Vietnam. Further, we suggested that the virus may have been introduced into the IVDA population from IVDAs from the United States during the Vietnam conflict. Reference to previous reports revealed that the rate of HIV infection in IVDAs has decreased gradually with no HTLV-I or HTLV-II in central Thailand.

Title : Comparison of cell surface antigens of peripheral mononuclear cells on HIV non-infected and HIV infected (mainly mother-to infant transmission) individuals

Expert: Dr. Mitsuo Honda (NIH, Japan)

Duration: Sept.10 ~ Sept. 22, 1995

We will analyze the cell surface antigens of peripheral mononuclear cells (PBMC) by using flow cytometer. The analyzing items were described as follows:

1. CD3, CD4, CD8
Analysis of CD4 / CD8 cell ratio and CD4 / CD8 on $CD3^+$ cells i.e. T cells ratio
(CD4 expresses not only cytotoxic/ suppressor T cells but also monocytes, and CD8 expresses not only cytotoxic / suppressor T cells but also NKcells)

2. CD3, CD16, CD56
Analysis of NK cells

3. CD4, CD38, HLA-DR
Analysis of activated and resting $CD4^+$ cells
(Activated $CD4^+$ cells express CD38, HLA-DR, and resting $CD4^+$ cells do not express CD38, HLA-DR)

4. CD8, CD38, HLA-DR
Analysis of activated and resting $CD8^+$ cells

5. CD4, CD38, CD95 (Fas)
Analysis of expression of Fas antigen which related to apoptosis on activated and resting $CD4^+$ cells

Title : Quantitative analysis of HIV-RNA in plasma from HIV-infected mothers and their children

Expert: Keiji Tsukada (BML)

Duration: Sept.11 ~ Oct.31, 1995

Objective:

DNA detection from PBMC represents the presence of proviral DNA in infected individual, while HIV RNA detectable in blood considered to indicate the presence of free HIV. Therefore, quantitative analysis of HIV-RNA in blood may provide useful information on the progress of the illness.

Method:

1. Extraction and purification of HIV RNA by AGPC (Acid guanidinium thiocianate phenol chloroform) method
2. Reverse transcription and PCR amplification
3. Detection and quantitative analysis by hybridization with ^{32}P labeled probe.

Results:

1. A total of 34 plasma specimens (18 from children and 16 from mothers, 1 from a farther) were analyzed.
2. Eleven of 18 children were HIV-RNA positive and 7 (all were asymptomatic) were negative. One asymptomatic child was HIV-RNA positive.
3. No difference in concentration of HIV-RNA was shown between children diagnosed as AIDS and at early stage of symptomatic HIV infection.
4. Fifteen of 16 mothers were HIV-RNA positive.

Comments :

1. Seven children of HIV RNA negative are considered to have the virus at a very low concentration, or not to be infected. However, the negative result of one mother whose child was HIV-RNA positive may indicate the possibility that the primer could not amplify the genomes of some Thai virus strain.

2. The procedure will be applied further development of a non-radioactive method, e.g. ECL 3'-oligolabelling assay. Such method may be more useful for routine use in the area like Thai where a lot of testing has to be done daily. Also, simplification of the procedure is more beneficial from the view point of cost and timesaving.

Project Title: Assay of anti-HIV activity of $CD8^+$ T cells and neutralizing antibodies against HIV

Expert: Dr. Hideki Tsuchie, Osaka University

Background:
Most HIV-infected individuals produce anti-HIV neutralizing antibodies, antibodies capable of mediating ADCC, and complement-dependent lysis of viral particles and infected cells. NK activity and HIV-specific $CD8^+$ CTL have also been demonstrated in HIV-infected individuals. The average time from HIV infection to AIDS progression is 10 years, but clinical and immunologic decline is generally evident much earlier. A small percentage of HIV-infected people are characterized as having nonprogressive infection because they remain healthy and do not have the declining $CD4^+$ cell counts which is evident in people with progressive disease. It has been recently reported that the long-term nonprogressors have a vigorous, anti-HIV activity of $CD8^+$ cells and a strong neutralizing activity.

Objective:
To analyze anti-HIV activity of $CD8^+$ T cells and level of neutralizing antibodies against HIV in HIV-infected individuals in Thailand.

I. Assay of anti-HIV activity of $CD8^+$ T cells

Materials
Cells:Peripheral blood mononuclear cells (PBMC) from HIV-infected individuals in Thailand.

Procedures:
1. Preparation of PBMC from HIV-infected individuals
2. Positive selection of $CD4^+$ and $CD8^+$ cells from the PBMC by using Dynabeads M-450 CD4 and CD8.
3. Culture of $CD4^+$ T cells in the presence or absence of autologous $CD8^+$ T cells.
4. Measure HIV p24 antigen in the culture supernatants every 2-3 days after initiation of the culture and analyze the anti-HIV activity of $CD8^+$ T cells.

II Assay of neutralizing antibodies against HIV

Materials
Cells: positively selected $CD4^+$ T cells from PBMC of HIV-seronegative individuals in Thailand by using Dynabeads M450 CD4
Viruses: HIV-1 isolates from HIV-seropositive individuals in Thailand
Plasma: Plasma samples from HIV-seropositive individuals in Thailand

Procedure:

A. Titration of virus-containing culture supernatant fluids to determine the 50%- tissue culture infective dose($TCID_{50}$) of HIV per ml of original fluid
1. Serial four-fold dilution of HIV isolates in 96-well microplates
2. Addition of the $CD4^+$ T cell suspension
3. Incubation at 37C in a CO_2 incubator

4. Inspection of the plate for the evidence of virus-induced cytopathic effect (CPE) and assay of HIV- antigen expression by immunofluorescence
5. Determination of the $TCID_{50}$

B. Assay of neutralizing antibodies
1. Serial dilution of plasma samples
2. Addition of diluted virus
3. Incubation for 60 min at 4C.
4. Addition of CD4 T cell suspension
5. Incubation of the virus-cell-serum mixtures at 37C in a CO2 incubator for 1 hr.
6. Addition of fresh medium and culture in a CO_2 incubator at 37C
7. HIV p24 antigen assay and immunofluorescent assay

Expected outcome:
1. Successful isolation of HIV from blood samples of HIV-infected individuals by depletion of $CD8^+$ T cells
2. Analysis of immunological status of HIV-infected individuals
3. Characterization of anti-HIV activity of $CD8^+$ T cells.

Title: Immunopathology of Thai HIV isolates by electron microscopy.

Expert: Tetsuo Katsumoto, Tottori University

Duration: July 7 ~ July 22, 1995

Objective: To analyze the morphogenesis of Thai HIV isolates and to compare with that of other HIV isolates already reported by immune-electron microscopy

Materials: Cells : Peripheral blood mononuclear cells (PBMC) or CD4+ lymphocytes

Virus : Thai HIV isolates and reference HIV-1 strain

Summary:

1. Lecture of theory and technology on general cell biology.
2. Inoculation of Thai HIV (HOT17 strain) to Human PBMC.
3. Budding of the virion from the surface of persistently infected MT-4/HIV-1 HIB cells was observed by scanning electron microscope.
4. Training on negative staining technique and the method was used for observation of inactivated bacteria in typhoid vaccine stored in NIH, Thai.

Comments

The counterpart has enough technique for operation of the electron microscopy. Further knowledge and technology on cell biology will help her to be more active in electronmicroscopical investigations in future.

Report on JICA project for prevention and control of AIDS

Aug.14.1995 Hironori Sato

Duty:	Establishment of cooperation base on the field of molecular epidemiology of HIV in Thailand.
Date:	Jul.31-Aug.11, 1995
Name of expert:	Hironori Sato Dr.Sci.
Profession:	Staff Scientist, AIDS Research Center, National Institute of Health, Japan.
Specialty:	Molecular biology, Virology
Present address:	
Mailing address:	1-23-1 Toyama, Shinjuku-ku, Tokyo 162 Japan
Tel:	(81-3)-5285-1111
Fax:	(81-3)-5285-1177
E-mail:	hirosato@nih.go.jp
Counterpart in Thailand:	Ms. Amomtip, Ms. Nuanijan, Mr. Suthon, Dr. Busarawan
Cooperating place:	Virus Research Institute, Department of Medical Sciences, 88/7 Soi Bamrasparadura, Nonthaburi 11000, Thailand

Summary of results:

1. Nested PCR

We tested fitness of PCR primers those were designed based on nucleotide sequences of 1) gag p24, 2) pol and 3) env gp120 V3 regions of HIV-1 subtype B cultured isolates. Fifteen blood specimens were previously collected by Ms. Amomtip and Mr. Suthon from mother-to-infant transmission cases in Thailand. Amplification of HIV-1 proviral DNA was done by nested PCR with peripheral blood mononuclear cell (PBMC) lysates. Frequency of the positive amplification was different in primer sets; 100% (4 out of 4) with the pol primes whereas 0% (0 out of 4) with gag primers and 20% (3 out of 15) with env gp120 V3 primers. The low frequency of PCR amplification with gag and env primers is not explained simply by the loss of Taq polymerase activity during transport or the potential low quality of the distilled water used for preparation of chemical reagents in the institute since pol and HLA products were successfully amplified (100%) with the same reagents. Although the number of the specimens tested was limited, the present result may imply the low fitness of HIV-1 subtype B gag and env PCR primers to the HIV-1 in Thailand and suggest the requirement of either improvement of PCR condition with the primers or redesigning PCR primers based on HIV-1 predominated in Thailand. Since HIV-1 prevailed in Thailand through sexual contact are suggested to be HIV-1 subtype E, accumulation of nucleotide sequence information of the particular subtype would be critical for the nested PCR with Thailand specimens. Using the qualified distilled water as well as the optimum condition for the specimen storage also can be critical although it may not be the primary reason for the present result. We suggest that improvement of these three points will give a better result of nested PCR with Thailand specimen or HIV-1 diagnosis by PCR in Thailand.

2. DNA nucleotide sequencing.

We did the DNA sequencing of the HIV-1 envelope V3 region from two infected mothers and one infected infant in Thailand. PCR amplified DNAs were purified by Centricon 1000 and subjected to cycle sequencing by dye-terminator labeling method. The labeled DNAs were purified by phenol-chloroform and run on the polyacrylamide gel with 373S DNA sequencer (ABI). The work was done successfully due to the cooperation of Dr. Naganawa who is.a Japanese expert of JAICA project. Complete sequences (324 bp) was determined in one case, m3, while partial sequences were determined in other 2 cases (Figure 1). Amino acid sequences deduced from the nucleotide sequences showed the presence of the amino-acid-signature-pattern for HIV-1 subtype E (Figure 2). Phylogenetic tree analysis with m3 sequence confirmed that the patient was infected with HIV-1 subtype E (Figure 3). The results suggest that the subtype is not limited in sexual transmission cases but now prevailed in mother-to-infant transmission cases in Thailand.

Suggestion to Dr. Miyamura and related persons in Thai NIH:

1. About advertisement of JICA project.

The purpose, organization and strategy of the JICA project on AIDS in Thai NIH was not very clear to me until I visited the institute and still not completely understood. To clarify the points to each expert, especially to young generation, may result in attendance of the expert who has strong motivation that is, I believe, the best driving force for conducting any kind of project.

2. About cooperation among Japanese expert as well as Thailand counterparts.

This is related to the point descried above. Once you get experts, it is essential to cooperate well together. In other words, it is critical to know what each person is doing. I found that each expert gets along very well with one another in the institute (possibly due to the much effort of Dr. Miyamura) whereas they do not know what the other person is doing. To give and get advises each other, I suggest to have a constant meeting where experts and counterparts from different laboratory can join and exchange opinion. With such meeting, the project may become open for any critics of the related individuals, and the expert may get the positive suggestion to drive the project.

3. About support to Thailand NIH

For the best cooperation, it is essential that both side (Japan and Thailand) have been educated well; the qualified knowledge and way of thinking in addition to qualified techniques is required. I suggest to have a journal club where experts and counterparts from different laboratory can join and study papers related to the AIDS research.

Conclusion:

As a whole, I enjoyed very much about attending the JICA project. Having a chance to cooperate my counterparts as well as to visit Thailand was joyful and exciting experience for me. I hope my stay gave good influence on my counterparts either. Although I did my best within the limited period, there are a lot of points remained unsolved. I would like to attend the project again if I have a chance in the future. I have suggested a few points to Dr. Miyamura and related persons in Thai NIH in this report and I hope some of them can consider about them. Finally, I would like to thank Dr. Miyamura, Mr. Makino and Ms. Amorntip for helping my stay in Thailand.

Project PREVENTION AND CONTROL OF AIDS IN THAILAND
sub-Project Establishing and improving laboratory diagnosis of opportunistic infection of AIDS

Term 94/14/2-94/12/3
Counter-part National Institute of Health, Division of Clinical Pathology

Tachikawa Natsuo,M.D.
The Department of Infectious Disease and Applied Immunology,
The Institute of Medical Science,
The University of Tokyo.

1. About transfer of technology.
1-1 Detection of Pneumocystis Carinii on sputa using by PCR.
This is the most important object of this sub-project which I participated in this time. Percentage of accomplishment is over 80%, when I estimate it. Reasons of this high % are following.
1. Eagerness of the counterpart.
2. High technological level of NIH.
1-2 Detection of Cryprococcal antigen using by kit.
This kit is produced by a company. In clinical phase, this is very useful system to detect Cryptococcal infection. But in research phase, this is not beneficial. Counter-part will use this kit to clinical samples and estimate the efficacy of this kit while cooperating with doctor side.

2. Problems of transfer of technology in NIH.
I pointed out high technological level in NIH in 1-1. This time I went to NIH to transfer the technics about PCR. But there are many (5 or 6) laboratories which perform PCR already. One laboratory started PCR a few months ago, and when they started PCR, they also learned PCR from a Japanese researcher. In NIH there are already many sources of information. But lack of enough cooperation between laboratories may prevent the spread of new technology and information. I think there should be some system to share new technology and information in NIH. If so researchers can get them with low cost.

3. Problems of cooperation with clinical side.
From my point of view NIH does not have enough cooperation with clinical side compared with the potential ability of NIH. This situation means 2 problem.
3-1 Problem of design in research.
Because of the lack of cooperation with clinical side, researchers in NIH do not have enough chance to know what is happening in clinical side and what is the most urgent need in clinical side. So, they may design their research which has little relation with clinical need.
3-2 Problem of sample.
Researchers in NIH also must face the difficulties to get clinical samples. This is another phase of the same problem.

4.About NIH in Thailand.
I pointed lack of cooperation between laboratories in NIH in 2 and lack of cooperation with clinical side in 3, and there may be another lack of cooperation with other research laboratories in Thailand. Namely, every laboratory in NIH is independent and has scarce cooperation with others. This means if some technics are transferred to one laboratory from outside, such technics may not spread to other laboratories. PCR technic is one of such examples.
NIH already has high technology, I think they can manage by themselves.

5. About the project of my part.
My project is one part of PREVENTION AND CONTROL OF AIDS IN THAILAND.
One doctor taught me that 1.6% of pregnant women in Bangkok are HIV infection positive. And he also said that almost infected pregnant women know their infection when they check their blood for screening at pregnancy. Because such women are healthy and no symptomatic, they do not feel necessity to go to hospital.

Although AIDS education in Thailand has been accomplished eagerly, effect of AIDS education is not satisfactory.

Effect of research about AIDS which JICA supports now may be very small. Even though in advanced countries, effect of research is not so good. The purpose of my project is to develop the proper laboratory technics for opportunistic infections. But in clinical side, the useful technics are already established. Because most of such "proper laboratory technics" are traditional even in Thailand, it is important to spread such technics in Thailand especially in provincial area. But it is useless to "develop" .

Research which researchers in NIH are satisfied with would not be practical in clinical side. NIH do not need to manage "clinical useful" technics also.

I feel some discrepancy between purpose of NIH and purpose of this project.

6. About the project of JICA.

Because of high prevalence of HIV infection, this situation seems urgent. So JICA project should be concentrated on more effective field. Namely, I think it is better to shift energy from research side to education side.

But I think the situation in Thailand may be more serious. Because Thailand has history of education about AIDS, I think we can estimate this situation in 2 ways.

(1) Because education is not still enough, they can not control the prevalence of HIV infection.

(2) Although education is enough, they can not control the prevalence of HIV infection.

If (1) is true, we should add more education. But if (2) is true, it is useless to add more education. And I think (2) is more probable. And if so, we must think other factors which promote the spread of HIV infection. I think not only JICA but also Thai side should make up their mind to face with such factors if really Thai side want to control HIV infection.

So I think it is important to estimate the role and achievement of education in Thailand. And it may be also important to check up such "factors" and analyze them to make new plan to fight with HIV infection.

Proposed cooperative research no cytomegalovirus in Virus Research Institute, NIH, Thailand.

Project title : Cytomegalovirus infection in Thailand
Expert : Dr.Hisao TAKEDA (NIH, Japan)
Period : January 18, 1995 - April 15, 1995

1. Seroepidemiology of IgG and IgM antibodies to Cytomegalovirous (CMV) antigen in healthy Thai population.

Objective : 1. To determine the prevalence of CMA infection in healthy people.
2. To study the positive rates of IgG and IgM antibodies to CMV antigen in healthy population.

Materials and Methods :

A total of 390 serum samples will be collected from healthy people ranged from 15 to less than 80 years old in central parts of Thailand (Bangkok, Ratchaburi, Nakompathom, Pathumthani). Fifty sample will be used to detect anti-IgG and anti-IgM antibodies to CMV antigen by Indirect ELISA. The expected samples are shown in the following table.

Expected outcome :

Analysis of age- related prevalence of antibodies to cytomegalovirus in healthy population.

2. Detection of IgG and IgM antibodies to CMV antigen among Intravenous drug users (IVDU).

Objective : To study the positive rates of IgG & IgM antibodies to CMV antigen between HIV-infected and HIV-uninfected IVDU.

Specimen : Serum specimens collected from IVDU hospital under the cooperative study of NIH-JICA AIDS Project in Sept. - Dec., 1994
Sample size : 1,198 sera
Sample volume : 50 ul/specimen

Method : Indirect ELISA for detection of IgG and IgM antibodies to CMV.

Expected Outcome : To analyze prevalence of CMV antibodies, and association of HIV infection with CMV infection among IVDU.

3. Isolation and Detection of CMV from HIV patients.

Objective : To analyze the prevalence of CMV in HIV patients.
To select a simple and low cost method of specimen collection for detection of CMV in HIV patients.

Specimen : Saliva, urine, blood (plasma and buffycoat separately) from AIDS patients and vaginal swab of pregnant women with HIV infection.

Sample size : Symptomatic HIV carries	30 cases
Symptomatic AIDS	30
Pregnant women with HIV infection	30(20)
Infants born to HIV infected mother	30 (20)

Testing : 1) Isolation of CMV by Microtrack method, followed by detection by immunofluorescent antibody technique.
2) Detection of CMV specific DNA by PCR.
3) Detection of IgG and IgM antibodies to CMV by Indirect ELISA.

Expected Outcome :
1) Comparison of the frequency of CMV isolation/detcetion among the specimens and the methods.
2) Comparison of the sensitivity between CMV isolation and IgM detection for diagnostic purpose.
3) Comparison of the CMV isolation/detection between asymptomatic and symptomatic stages of HIV infection.
4) Analysis of IgG and IgM antibody titers to CMV antigen among HIV-infected mothers and their infants.

Title : Determination of Mycobacterium tuberculosis in clinical specimens and isolation of bacteria from HIV-infected patients

Expert: Minoru Higashitsutsumi

Duration: July 7 ~ Oct.6, 1995

Setting up a laboratory for Mycoplasma tuberculosis
1. Medical check of the counterpats 2. BCG administration

Training:
1. Isolation procedure
A. Digestion and decontamination methods
1) 4% Sodium Hydroxide 2) Cetypyridinium chloride (CPC) method 3)N-acetyl-L-cystein sodium hydroxide (NALC-NaOH) method and centrifugation method
B. Culture media, non selective
1) 1 % and 2 % Ogawa medium 2) Middlebrook 7H10 Agar medium
3) Middlebrook 7H9 Broth medium
C. Inhibitory agent
1) PANTA 2) Middlebrook selective 7H11 Agar medium

2. Identification
1) Colony morphology 2) Growth range temperature 3) Growth rate
4) Photo reactive 5) Niacin test 6) NAP test 7) DNA-DNA hybridization

3. Drug susceptibility test ; Indirect susceptibility test method
1) 1% Ogawa medium 2) Middlebrook 7H10 Agar medium 3) Middlebrook 7H9 Broth medium
Drugs; INH, SM, EB, RFP

4. Clinical specimen for Mycobacterium isolation
Sputum, Urine, CSF, Gastric aspirate, Blood

5. Polymerase Chain Reaction method

Research
1. Isolation of mycobacterium from tap water.
Nine Mycobacterium strains were isolated from 12 pools of tap water collected from the laboratory, animal center, laundry room (pipe water), toilet and water supply. Biological examination as well as DNA hybridization did not classified them into any known bacterial species, and DNA sequence analysis showed them to be a new species related to M.gordonae. Further characterization is needed before the registration of it to the species list.

2. Isolation of bacteria from HIV infected mothers and children
Various kinds of bacteria and fungi were detected from 13 of 66 blood specimens so far tested from HIV-infected mothers and their offspring in the Children's hospital. They include Salmonella typhimurium, colynebacterium, Yeast-like fungi, Staphylococcus, Achinetobacter etc.

Report of JICA Project for prevention and control of AIDS

Children's Hospital, Department of Medical Services

Children's Hospital, DMSc Project for Prevention and control of AIDS

The project activities

Collaboration of Children's Hospital with NIH and JICA experts on HIV infection in children and their mothers (1993-1996).

1. A total of 90 blood specimens were collected from HIV-1 infected children and mothers.
2. HIV-1 antibodies were assayed by WB and synthetic peptide-based ELISA.
3. HIV-1 genomes were detected by PCR using pol-region as primers.
4. Genotype was studied by peptide-based ELISA and V-3 region-based PCR followed by DNA sequencing.
5. Some specimens were used for detection of HIV-1 RNA by RT-PCR.
6. Some children were analyzed expression of cell surface antigens of PBMC. Fas antigen which related to apoptosis on activated CD4+ cells were detected.
7. Virus isolation and their biological characterization are in progress.
8. Bacterial isolation from blood specimen was carried out. Some bacteria and fungi were detected from more than 10 cases.

Setting up laboratory diagnosis in Children's Hospital (1996)

1. Setting up the clinical laboratory for serological and PCR diagnosis of HIV infection .
2. PCR diagnosis of the children born to HIV infected mothers.
3. Pediatric opportunistic pulmonary infections.

Research proposal for the following years (Children's Hospital)

1. Study on opportunistic infections of pediatric AIDS patients.

Review of JICA Project for Prevention and Control of AIDS in Thailand

AIDS Division
Department of Communicable Disease Control
Ministry of Public Health

December, 1995

Review of JICA Project for Prevention and Control of AIDS in Thailand

I. Background Information

The Japan International Cooperation Agency (hereinafter referred to as JICA) and the Ministry of Public Health (hereinafter referred to as MOPH) of Thailand have launched the 3 (three)-year project-type technical collaboration named the Project for Prevention and Control of AIDS (hereinafter referred to as the project) since 01 July, 1993.

General objectives of the project are as follows:

(1) To strengthen laboratory studies on HIV (Human Immunodeficiency Virus)/AIDS in order to improve medical services for the AIDS and symptomatic HIV patients, and HIV carriers.

(2) To strengthen mass education on HIV/AIDS aimed at high risk groups and general public.

and

(3) To develop on intersectoral comprehensive intervention programme which integrate technical know-how and experiences acquired through the collaborations into the operational levels. For this purpose,the Ministry has selected Phayao province as pilot project site in 1994.

The last objective be considered to be important of developing a country model for the control measures against the spreading of HIV/AIDS.

To fulfill above-mentioned objectives, the JICA has introduced 3 (three) main counter-measures,despatches of long and short-term experts, fellowship programmes and provisions of equipment towards the sub-projects undertaken by the MOPH, Department of Communicable Disease Control responsible for the project coordinations as the National AIDS Programme Co-ordinator, Department of Medical Sciences, Office of the Permanent Secretary, Department of Medical Service and Department of Health as advisor on MCH programme.

II. Current Situation

As mentioned earlier, several agencies in the MOPH involved the project are divided into a number of the sub-projects. The collaborative activities are administered as closely at central and provincial levels.

As of the end of December, 1995, achievement of each sub-project is shown in Annex II.

Although most of the outcomes of the project are satisfactory and could be accredited as part in the success of the National AIDS Programme. Evidences are seen in reducing the spread of HIV and improving quality of care for AIDS patients in general.

There are, however, some suggestions for the further need to achieve more fruitful results of the collaboration.

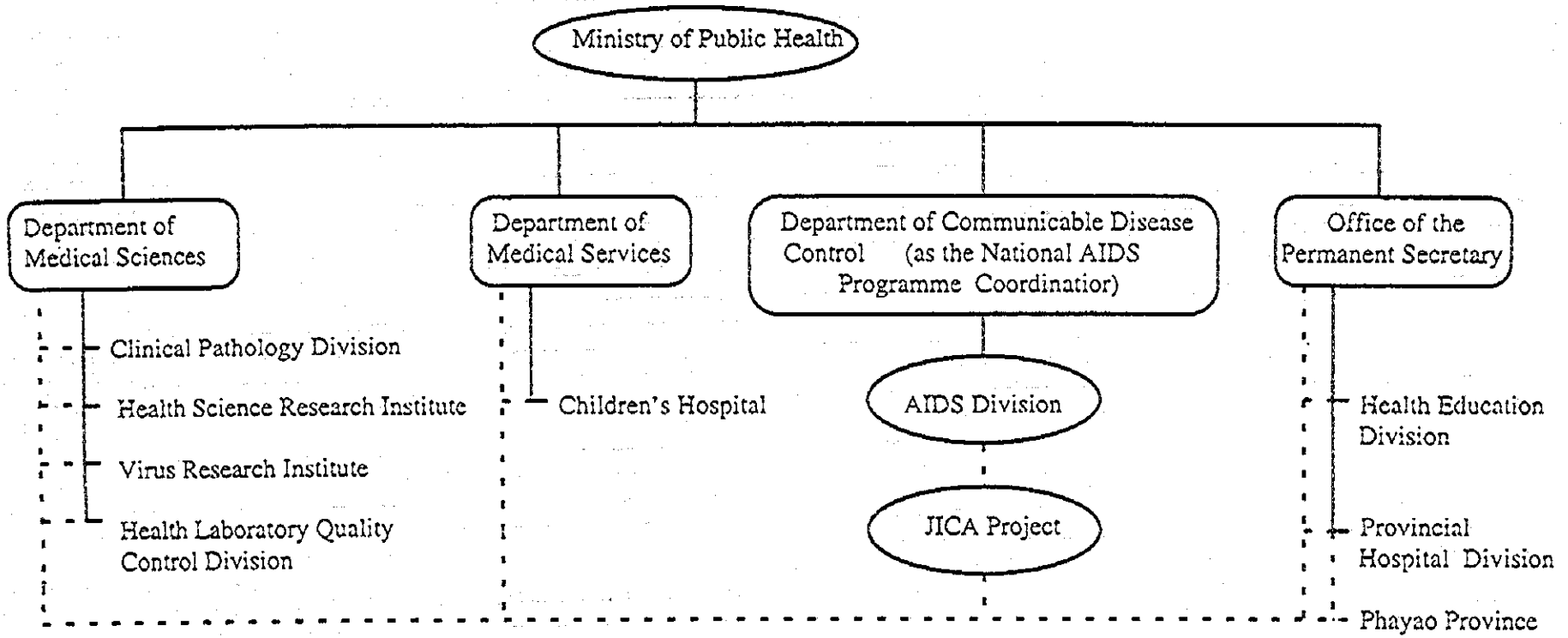
(1) The important is improved communication at all levels between the MOPH and the JICA. Since there is strong need for clear dialogue from very beginning of planning, followed by programme management based on spirit of collaboration of two parties.

(2) The area of collaboration should not be originated by one side initiative.

III. Future Collaboration

In common anticipation, the project will terminate by the end of June,1996.The MOPH, however, would expect that further collaboration should continue at least two more years. Thus, extended HIV/AIDS project would have been a collaboration on the basis of balancing of both bio-medical activities and intersectoral comprehensive intervention programmes. They cover prevention,control and care for HIV/AIDS cases in line with the National Policy on AIDS Prevention and Control. Hence it leads to the technical cooperation on HIV/AIDS sharing the overall outcomes with the neighbouring countries. That has to be FINAL GOALS of the MOPH (see ANNEX Concept Paper).

Annex I


Ministry of Public Health
Department of Medical Sciences
Department of Medical Services
Department of Communicable Disease Control (as the National AIDS Programme Coordinator)
Office of the Permanent Secretary
Clinical Pathology Division
Health Science Research Institute
Virus Research Institute
Health Laboratory Quality Control Division
Children's Hospital
AIDS Division
JICA Project
Health Education Division
Provincial Hospital Division
Phayao Province

Annex II

Current Situation of the JICA Project for Prevention and Control of AIDS by Sub-project as of December 1995

MOPH 's Agencies	Sub-projects	Target	Progress (Stage)
1. Department of Medical Sciences			
1.1 Clinical Pathology Division	Technical Tranfer and Joint Research Studies on Mycology , Bacteriology and Parasitology	To disseminate appropiate diagnostic technologies on opportunistic infections acquired from the collaboration to the Regional and Provincial Hospitals in Thailand.	Mycology: In progress Bacteriology: Starting Parasitology: In progress
1.3 Virus Research Institute	Technical Transfer for Optimization of PCR for Detection of CMV, Testing of Urine, Developing HIV Diagnostic kits and molecular epidemiology	To develop and distribute the simplified HIV testing kits	Detecting of CMV: In progress Urine testing: Final Developing of HIV diagnostic kits: In Preparatoin Molecular epidemiology of HIV: Finished
1.4 Health Laboratory Quality Control	Technical transfer for Evaluation of Sensitivity and Specificity of HIV Test Kits	To control the quality of HIV Testing kits both pre-and post-marketing	Pre-marketing: In progress Post-marketing: In preparatoin

2. Department of Medical Services			
2.1 Children's Hospital	Research on Pulmonary Infection of Pediatrics HIV/AIDS	To develop knowledge for pediatric HIV/AIDS treatment and formulate guidelines for District Hospitals	Starting
3. Office of the Premanent Secretary			
3.1 Health Education Division	- Joint Research on " Information, Education and Communication Programmes for AIDS Prevention and Control in Kanchanaburi Province : Focusing on the Family as a Communication Environment"	To develop a model of IEC dissemination for HIV/AIDS in rural communities through the public address system and Village Health Volunteers	Final
	- Technology Transfer for Video Shooting and Production and Support for Audio-visual Equipment	To develop skill of manpower in Health Education Division in production of IEC media for IEC dissemination	Finished

3.2 Phayao Province	- Prototype Model Development of Laboratory Standard at Provincial and Community Hospitals - Development of Community Based Health Information System - Promotion of Universal Precautions - Moblie AIDS Education by Video Caravan	To Develop comprehensive medical care and health services for prevention and control of HIV/AIDS provincial, district and community level	In progress Starting In progress In preparation

Concept on Thailand's Policy to Move Towards
Strengthening International Collaboration in HIV/AIDS
Prevention, Control, and Care

In view of the magnitude of HIV/AIDS epidemic currently tackling Thailand and the possible future perspective that northern provinces of Thailand will remain to be the epi-center of this epidemic for many years to come, the government of Thailand is now deciding to undertake a more balance development approach in HIV/AIDS prevention, control, and care. This balance approach is based on both short-term and long-term visions concerning anticipated needs of Thailand and its neighboring countries and possible achievement which could be made in due course. When these visions are translated into strategic actions the Thai government together with international agencies will collaborate in the pursuance of implementing a strategic plan comprising of major components described under the attached diagram.

In this diagram, the government of Thailand would like to invite potential partners to join hands in helping the people who are in great risk of suffering from HIV/AIDS particularly in northern Thailand and adjoining neighboring countries by making the investment necessary for implementing this strategic plan possible within a few years to come. This strategic plan will enable Thailand which has accumulated a lot of experiences in HIV/AIDS prevention, control, and care through comprehensive intersectoral intervention as well as bio-medical intervention to avail itself in providing the required technical cooperation to its neighboring countries. However, what Thailand would be most in need to

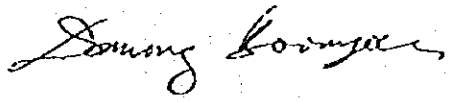
sucessfully engage in this pursuance especially in providing international training and in undertaking essential researches are as follows :

1) The development of field operation model in one province of the north to an extent that it could serve as a case-study qualified for use as training site and material for international training. In this connection, Phayao province is considered advantages since JICA-Thailand collaborative project in the past has helped developing many innovative activities and some required infrastructures are already in place. If this province would be chosen, further strengthening of its comprehensive intersectoral interventions would be achieved through additional investment and technical collaboration and would eventually enhance its capability to provide appropriate training with regard to field operation aiming at tackling the immediate problems.

2) It is rather critical for Thailand and countries in South-east Asia to embark on implementing long-term strategies aiming at achieving highest level of efficacy and effectiveness in HIV/AIDS prevention, control, and care. One possibility of doing so is the search for effective vaccine and treatment regimen for HIV/AIDS. These objectives will never be achieved or even progress towards the desired level of capability if the required investment in bio-medical facilities and technical collaboration are not forth coming. Some sites in the northern provinces of Thailand are considered most appropriate to invest in such endeavor but the required technological transfer must be ensured by all parties concerned including institutions both inside and outside Thailand. If progress could be made on this direction, bio-medical studies, findings, and researches could continuously flow into the evolving training courses making them a real strength for this part of the world.

3) The establishment of international training center in HIV/AIDS prevention, control, and care should receive greater attention for international collaboration because this center will be most appropriate to serve as a focal point of the network. Its function will enhance mobilization of manpower and training resources from institutions not only within Thailand but also from outside to participate in the development of the training curriculum, training modules, training materials and the management of international courses. The government of Thailand has expressed its strong will to offer this opportunity of providing manpower training and technological transfer to its neighboring countries, ASEAN coutries, and even outside the region.

These three major components of the strategic plan of Thailand require a balance approach in taking action. These actions in many cases require investment and technical inputs which at present remain to be far reaching if Thailand will struggle to pursue in isolation. Hence, it is advisable for Thailand to call for cooperation and attention from agencies and parties who join similar objectives. The definite requirement for implementing this strategic plan will have to be worked out in details whenever possible.

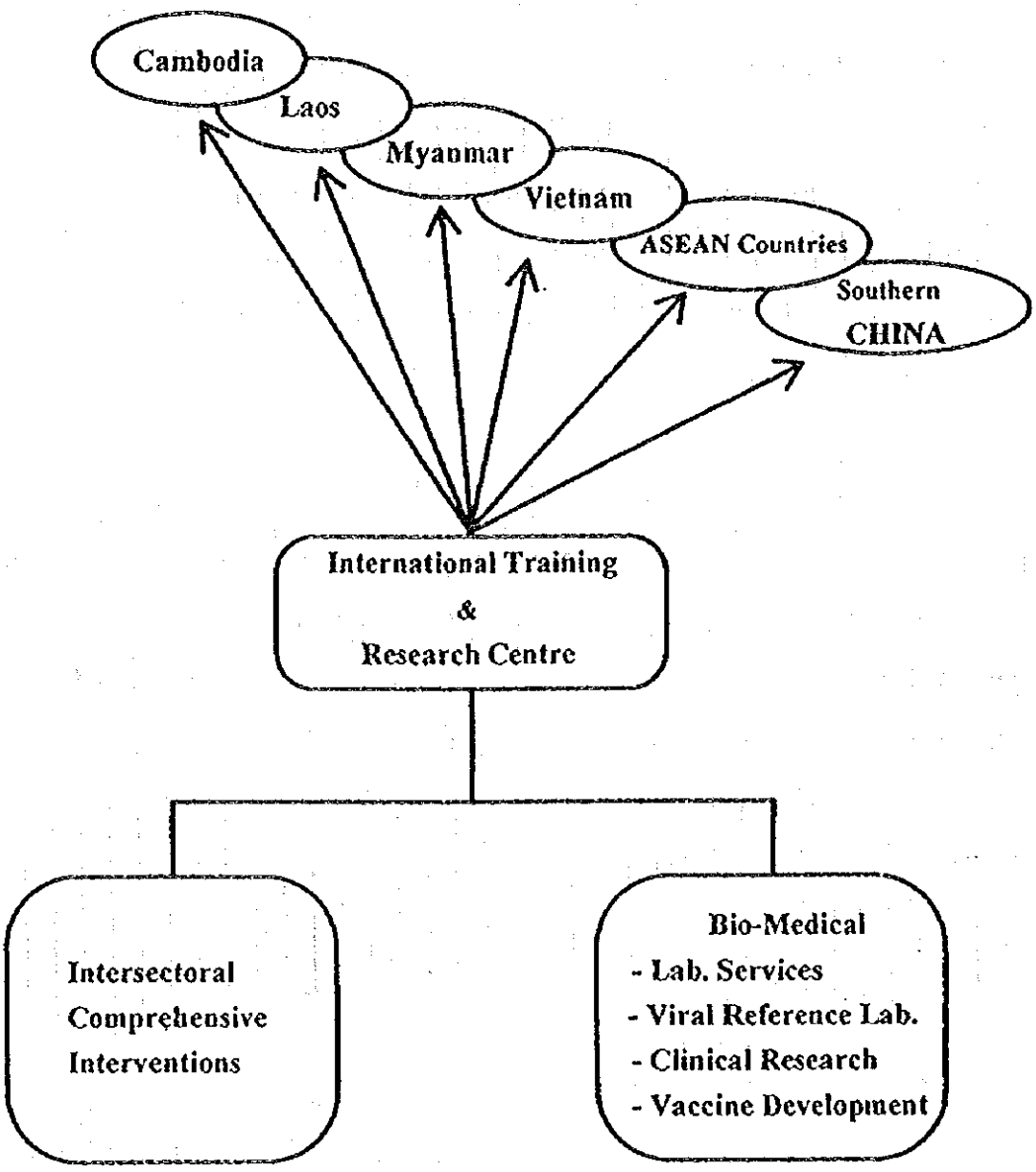


(Dr. Damrong Boonyoen)

Assist. Secretary to the National AIDS Prevention and Control Committee

November, 1995

International Collaboration in HIV/AIDS Prevention,Control ,and Care



Meeting on

Prevention and Control of AIDS project

Between

JICA Evaluation Team and DMSc.-AIDS Committee

January 9, 1996
National Institute of Health,
Department of Medical Sciences,
Thailand.

Summary of the achievement

There are four main activities that are included in the project for Prevention and Control of AIDS in Thailand through JICA, as followings

1) Establishment and improvement the diagnosis of HIV and opportumstic infections.

2) Characterization of HIV isolates in Thailand.

3) Establishment a specimen storage system for a quality control system and evaluation of various diagnostic kits.

4) Dissemination of the above mentioned technology.

According to the above mentions, More Than fifteen of Japanese experts were dispathed in each special fields under requests from Thai NIH through JICA. Three fellowships for Thai scientists were given by JICA for further training in the Fy 1994 - 1995. Moreover, many equipments were also given for supporting in these concerned activities. The achievement of all activities are reported into details by the enclosure A, B, and C.

List of Experts and Achievement

(June 1993-September 1995)

Topic	Acutivity	Expert/ Counterpart	Achievement
I Characterization of HIV infection in Thailand	1) Nucleotide sequence of envelop region proviral HIV DNA extracted from PBMC by automated DNA sequencer	Dr. Honda, Dr. Naganawa/ Mr. Wattana, Ms. Panasda, Ms. Sumlee Ms. Nonglak	1) About 256 blood specimens from HIV carriers with sexually transmitted diseasesand intravenous drug users were collected from each Regional Medical Science Center during 1994-1995 2) Optimization of amplification condition for Thai HIV-1 envelope gene (C2-V3 region) by nested PCR 3) Cloning of C2-V3 region of HIV gene 4) Nucleotide sequence of HIV-1 V3 gene were analyzed to identify the genotype of HIV-1 using computer software FACTURA and SEQUENCE NAVIGATOR from ABI Inc and GENETYX. The expert has optimized the condition of DNA amplification and DNA sequencing by automate system. MK/CO primers (from CDC, USA) found to be more susceptible toThai HIV-1 virus rather than OA/OD primers (from NIH, Japan) set. There are some difference from the gene sequencing results from PCR products amplified by OA/OD primers and MD/CO primers. By direct DNA sequencing method, OA/OD amplified product demonstrated HIV-1 subtype B while MK/CO amplified product demonstrated HIV-1 subtype E. By cloning method, we found co-infection of two subtype in some samples. More samples need to be analyzed for the conclusion.

List of Experts and Achievement

(June 1993-September 1995)

Topic	Activity	Expert/ Counterpart	Achievement
	2) Isolation of HIV form PBMC and neutralization assay	Dr. Tsuchie/ Ms. Panasda	- For HIV isolation , CD8-depleted cells from HIV infected carriers were prepared by using immunomagnet beads and then co-cultivated with normal CD4-depleted lymphocytes for improving the rate of HIV isolation - For Neutralization assay, Neutralizing antibody was determined by serial diluting of patient plasma and were incubated with a certain amount of the virus. Freshed CD4+ cells isolated from normal PBMCs were used for cultivation of the plasma-virus mixture. The P24-antigen was detected in culture supernatant by ELISA after 4 days of cultivation. The percentage of virus TCID50 reduction compared to virus control were determined.
	3) Molecular epidemiology	Dr. Takebe/ Mr. Suthon	Preliminary subtyping of HIV-1 in Thai IDUs was completed .
	4) Development of diagnostic reagent	Dr. Satoh/ Ms. Amonthip	A V3 sequencing technique for selection of epidemic strains was studied.
	5) HIV-RNA qualitative analysis	Dr. Tsukada/ Ms. Amonthip	RT-PCR and dot-hybridization for quantitation of viral RNA were studied frompediatric specimens.
	6) Immunopathology by eletronmicroscopy	Dr. Katsumoto/ Ms. Pruksawan	Several aspects on the study of pathological changes in HIV infection and AIDS weredicussed. The expert also explained the protocol of specimen preparation for immunoelectronmicroscopy.

List of Experts and Achievement

(June 1993-September 1995)

Topic	Activity	Expert/ Counterpart	Achievement
	7. Stydy on urine EIA for detection of HIV-1 antibody in a large scale study.	Dr. Yoshiharu/ Mr. Suthon, Mr. Nuanjian	1,193 IDUS specimens from both urine and sera were analyzed. An abstract was submited in Third International Conference on AIDS in Asia and the Pacific (ICAP).
I. Strengthening laboratory diagnosis of opportunistic infections in AIDS patients	1. Research and reference activties on pathogenic Nocardia, Candida and Cryptococcus	Dr. Mikami/ Ms. Natteewan	Isolation, identification and drug sensitivty of the pathogens were studied. One paper was presented at ICAP.
	2. Laboratory diagnosis of Pneumocystis carinii pneumonia by PCR	Dr. Tachigawa/ Ms. Siripan,et al	The PCR technique was studied. One VDO tape on PCR technique was record.
	3. Bacteriological Diagnosis of Tuberculosis 1) diagnosis of Mycobacterium tuberculosis by the conventional methods. 2 Rapid detection of M. Tuberculosis in clinical specimens.	Dr. Abe Dr. Minoru/ Ms Wantana, Mrs. Suranga	1) The knowledge and technique provided to diagnose M. tuberculosis were achieved by performing the following tests: a) Smear examination by using Ziehl-Nulson and commercial TB Quick stain methods. b) Culture examination using the centrifuge method to progress sputum before growing the bacteria onto selective meduims. c) Identification by biochemical and physiological test as well as the commercial DNA-DNA hybridization kit.

List of Experts and Achievement

(June 1993-September 1995)

Topic	Activity	Expert Counterpart	Achievement
			d) Drug susceptibility test of M. tuberculosis and other mycobacteria were determined by the absolute concentration method. 2) PCR was established to detect M. tuberculosis 3) Study on the distribution of bacteria in HIV infected mothers and children was initiated.
	4)Pilot Study on upgrading facilities and quality of Phayao General Hospital .	Dr. Konyama/ Dr. Paijit, Dr. Mayura, Ms. Siripan Mr. Suthon	- The situation analysis in terms of both need facilities and quality management of laboratory services has already been done by clinicians and laboratory personnels - Workshop to make a plan for upgrading laboratory facilities and quality will be held
	5) Laboratory diagnosis and seroepidemiology of CMV infection	Dr. Takeda/ Ms. Sukjai	IgG and IgM-EIA for seroepidemiology and CMV serodiagnosis from AIDS cases were studied.
III Establiling Quality Control system for diagnostic kits	1) Working for blood collection of AIDS patients at Chiengrai Hospital. 2) Preparation and standardization panel serum.	Dr. Yoshihara/ Ms. Wilai Mr. Viroj	The knowledge and techniques provided to prepare and standardize panel serum were achieved by performing the following activities:- a) Characterization of serum by using Gel Particle Agglutination (GPA), ELISA and Western blot(WB). b) Titration of panel serum by GPA and classification group of serum into weakly positive, medium positive and strong positive.

List of Experts and Achievement

(June 1993-September 1996)

Topic	Activity	Expert Counterpart	Achievement
	3) Recommendation for development of anti-HIV test kit evaluation laboratory.		c) Further studied on indeterminated serum by Polymerase Chain Reaction (PCR) was performed in Japan.
IV Establishing specimen storage system	Storage systems for: 1) Sera from normal population 2) Specimens related to HIV infectio	Dr. Miyamura/ Dr. Jakkriss, Dr. Mayura	Virus strains and reference control sera for AIDS project were stored in freezers provided by JICA. Specific area for freezers will be arranged. Bar-code system will be used as serum record.

List of Fellowships and Achievements

Topic	Activity	Trainee/Duration	Achievement
1) Laboratory diagnosis and Pathological studies of HIV infection	1. Isolation of HIV and Detection P24 antigen by ELISA. 2. Isolation and purification of HIV from plasma and detection by RT-PCR method. 3. Sequencing DNA of HIV and amino acid analysis. 4. Detection of Anti-HIV by Gel Particle Agglutination (GPA), ELISA and Western blot (WB). 5. Evaluation of diagnostic test kits.	Mr. Viroj Detcharoen / Feb 94 - Jan 95	The knowledge gained from training has been utilized in the following activities :- a) Collection of specimens. b) Preparation of panel serum. c) Characterization of serum by using Gel Particle Agglutination (GPA), ELISA and Western blot (WB) for HIV antibody and including HBsAg, anti HCV and VDRL. d) Evaluation of HIV test kits.

Topic	Activity	Trainee/Duration	Achievement
2) Laboratory diagnosis and Pathological studies of HIV infection	The technique of HIV isolation, PCR and gene sequencing were studied	Ms. Amorntip Muangprom / Jan 94 - Dec 95	Upgrade the capability of HIV isolation, PCR and gene sequencing.
3) Nucleotide Sequencing of HIV 1.	- Training program for virological diagnosis of HIV infection. - Nucleotide sequencing of HIV - 1.	Ms. Nonglak Saipradit / Jan. 94 - June 95.	1) The techniques for HIV diagnosis were studied. 1.1) HIV isolation peripheral mononuclear cells 1.2) Detection of HIV infection by Nested PCR 1.3) RT assay 1.4) RT PCR and DNA Sequencing.

Topic	Activity	Trainee/Duration	Achievement
			2) Nucleotide Sequencing of HIV-1 2.1 DNA Extraction for DNA analysis using Instra Gene Purification Matrix. 2.2 DNA ampilfication of V3 genome of HIV-1 by nested PCR technique 2.3 Dye Primer method 2.4 Dye terminator method 2.5 DNA Sequencing Technique

Publications

Original papers and books

1. Saguanwongse U., Muangprom A., Ruachusatsawat N., Wongcheree S., Warachi W.,Miyamura K.,Yamazaki S. and Honda M. : No HTLV-I / II in intravenous drug abusers with high rate of HIV-1 infection that decreases gradually in Central Thailand. Microbiol. Immunol. (presented)

2. Poonwan N. et al. : Pathogenic *Nocardia* isolated from clinical specimens including those of AIDS patients in Thailand. European J. Epidemiol. (in press)

3. Mikami Y. and Poonwan N: Manual book of identification guideline of pathogenic *Nocardia*.

4. Wongwanich S.: Laboratory manual on diagnosis of anaerobic bacterial infections.

Videos

1. Mikami Y. and Poonwan N. : Identification guideline of pathogenic *Nocardia*.

2. Tachikawa N. and Wongwanich S.: PCR technique.

(Some books and video tapes were compiled by Mr.Hirai, Mr.Sumida and Ms.Fukuhara, IEC experts of the project.)

Presentations

At Third International Conference on AIDS in Asian and the Pacific

1. Bhumisawadi B., Auwanit W., Isarangkura Na A., Duangchandra S., Saipradit N.,Sriwanthana B., Chompuk L., Naganawa S., Muangprom A., Jayavasu C., Miyamura K., Honda M., and Yamazaki S.:
Genotypic and serotypic analysis of HIV-1 in Thailand.

2. Isaragkura Na A.P., Duangchandra S., Saipradit N., Sriwanthana B.,Champuk L., Naganawa S., Muangprom A., Auwanit W., J. Bhumisawadi J, Jayavasu C., Miyamura K., Honda M. and Yamazaki S.
Appropriate method for genetic analysis of HIV-1 in Thailand.

3. Poonwan N., Kusum M., Mikami Y., Yazawa K. and Konyama K.: Pathogenic *Nocardia* isolated from AIDS patient in Thailand.

4. Saguanwongse S., Yoshihara N., Ruchusatsawat N. and Vongsheree S.: Evaluation of urine-EIA for the detection of HIV-1 antibody .

GENOTYPIC AND IMMUNOTYPIC ANALYSIS OF HIV-1 IN THAILAND : Auwanit W.[1], Isarangura Na Ayuthaya P.[1], Saipradit N.[1], Muangphrom A.[1], Bhumisawasdi J.[1], Jayavasu C.[1], Miyamura K.[2], Naganawa S.[2], Honda M.[2] and Yamazaki S.[2], [1] Department of Medical Sciences, Ministry of Public Health, Thailand, [2] National Institute of Health, Japan.

To well-understand the properties of field isolate of HIV-1 in Thailand. Bloods samples from 70 individuals seropositive for HIV-1 up to February 1995 were collected and classified to be 5 risk groups included adults, children, sex workers, women and infants and IV drug users. By using the PBMC and plasma, DNA and RNA were extracted and amplified by polymerase chain reaction using nested primers pairs that flank the sequences between C2 to V3 loop of HIV-1 env region. DNA products were purified and/or cloned polyclonally and were sequenced. Phylogenetic tree analysis of the filed HIV-1 were studied using the maximal parasimony.

All the sequences of HIV belonged to be clade B and E virus of HIV-1 and GPG tripeptide of the core sequence of PND were highly conserved. Interesingly, we detected many clade B viruses from North American-European type, not clade B from Thailand. Viral sequences of vertical transmitted babies were homogeneous. The results suggested that clade E virus of HIV-1 in mother might be easily transmitted to infants than other subtype. We futher compare the neutralization effects of the serum antibody to the genetic variation of the field isolates.

PD 207

SIMPLE METHOD FOR GENETIC ANALYSIS OF HIV-1 IN THAILAND : Isarangkura Na Ayuthaya P.[1], Muangprom A.[1], Auwanit W.[1], Saipradit N.[1], Bhumisawadi J.[1], Yamasaki S.[2], Honda M.[2] [1] Department of Medical Sciences, Ministry of Public Health, Thailand and [2] National Institute of Health, Japan

The objective of these studies is to establish simple method of genetic analysis for characterization of HIV-1 prevalence in Thailand using autosequencer. Accordingly, genomic DNA and RNA were extracted from PBMC and serum. Further, the DNA was amplified by nested PCR for HIV V3 domain using a thermal cycler. The following oligonucleotide sequences from HIV env gene were selected and synthesized as the outer and inner sets of primers for PCR, respectively; OA3 (nt 7345 to 7369), OD3 (nt 6962 to 6986) and EB2 (nt 6986 to 7009), EC2 (nt 7314 to 7336). Samples were first amplified by 35 cycles in the DNA thermal cycler. Reamplification of 5 µl of the first PCR product was performed in a second PCR making use of the inner primers, EB2-EC2, under the same conditions. PCR products were, purified by preparative soft agarose gel electrophoresis or Centricon centrifugation. The purified PCR product was cycle-sequenced by dye terminator method using EB2 or EC2 primers. Sequencing was performed using 373A automated DNA sequencing system (ABi, USA) and the plus strand DNA sequence of the C2-V3 region was confirmed by the results obtained by EC2 primer. Furthermore, the DNA sequences were also confirmed by cloning of the PCR fragment into plasmid pUC19 (Takara Shuzo co., Japan), transformed into Escherichia coli strain XL1 blue (Stratagene, USA) and the sequencing was performed with M13 primer. The advantages and disadvantages of this simple sequencing method will be discussed

PA105

EVALUATION OF URINE-EIA FOR THE DETECTION OF HIV-1 ANTIBODY

Yongsheree S., et al. Virus Research Institute, Dept. of Medical Sciences. MOPH.Nonthaburi Thailand.

OBJECTIVE:

To access the performance of a Urine-EIA for the surveillance of HIV-1 infection

METHOD:

1198 sera and urine specimens were collected from IVDUs at Thanyarak Narcotics Hospital during October to December 1994. The sensitivity and specificity of Urine-EIA (Calypte Biomedical Incorporation) were compared with sera test: EIA (Abbott 3rd generation), Particle agglutination (Serodia-Fujirebio Inc.) and Western Blot (Pasture)

RESULTS:

From 1198 IVUDs, 421 were seropositive while other 777 were seronegative. Urine EIA gave 404 anti-HIV positive and 717 anti-HIV negative. These Urine showed 95.96% sensitivity and 92.27% specificity.

CONCLUTION

This field evaluation of a urine EIA showed satisfactory performance for surveillance purpose which require a non-invasive method of sampling and simple laboratory test to perform.

PA405

PATHOGENIC *NOCARDIA* ISOLATED FROM AIDS PATIENTS IN THAILAND

POONWAN N*, KUSUM M*, MIKAMI Y**, YAZAWA K** and KONYAMA K***

*National Institute of Health, Nonthaburi, Thailand, **Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University, Chiba and ***JICA, Japan

Nocardiosis has been considered to be induced by various predisposing factors. The factors which are most commonly associated with nocardiosis include immunosuppressive therapy and hematological malignancy. Reported cases of infection are increasing in number in recent years, coupled with the increased usage of immunosuppressive agents and the number of AIDS patients. Characterization studies of pathogenic *Nocardia* solated from AIDS patients in Thailand from 1990 to 1995 are reported.

Methods: Nocardioform bacteria were isolated from clinical specimens at eleven hospitals in Thailand, using Sabouraud dextrose agar medium or Ogawa medium.

Results and discusslon: Forty strains of nocardioforms were isolated as clinical specimens including ones from AIDS patients in Thailand. Among them, 37 strains were found to belong to the genus *Nocardia*. Our identification studies revealed that most of the strains (25 strains) belong to the *N.asteroides* group, i.e., *N.asteroides* sensu stricto and *N.farcinica*. Three strains were identified as *N.otitidiscaviarum* and two strains *N.brasiliensis*. In addition, 7 strains of rare pathogenic *N. transvalensis* were also isolated. All cases of human infection due to *N.transvalensis* known so far have been mycetoma and no systemic nocardiosis due to the bacterium, has been reported. This is the first reported cases of nocardiosis due to *N.transvalensis* in Asia. Only a few cases due to *N.otitidiscaviarum* infection have been reported until now. Interestingly, in the present experiment we could confirm three cases, one from sputum and other two are from skin biopsy. Although the relationships between nocardiosis and HIV infection has not been fully elucidated, in the present studies, sero-positive patients for HIV were more than 25 %. Therefore, further detail epidemiological studies may be necessary to determine a possible association between AIDS and nocardiosis.

ANNEX V

Report on Collaboration of Project for Prevention and Control of AIDS,1995

The Children's Hospital; Department of Medical Services, MOPH, is one of the collaborator in the JICA Project for Prevention and Control of AIDS which started the cooperative activities since 1994. The shipment and installation of most of the equipments and reagents from JICA to Children's Hospital began on mid 1995. The activities on laboratory diagnosis of HIV infection and immune status of HIV exposed children also started on October 1995. The well established activities within the year 1995 were as followed,

1. Equipments & Reagents

1.1 Equipments (Recieved)

No.	Item	Specification	Manufacturer	Q'tity	Date
1.	Flow Cytometer	Facscan : Flow Cytometer System, Facstation Data Management system	Becton Dickinson	1	6 June 95
2.	Centrifuge	Clay Adams - Dynac II 24 X 15 ml Angle Rotor	,,	1	,,
3.	Biosafety Cabinet	BHA 120 Biohazard Class II	Clyde - Apec	1	6 July 95
4.	ELISA Equipment	ELISA Reader : Automated Endpoint Microplate Reader - LP 400	Sanofi Diagnostic	1	19 July 95
		ELISA Washer : Automated Microplate Washer - LP 35	,,	1	,,
5.	Deep Freezer	Upright Freezer -86 C , 13.4 cu.ft. Model : ULT - 1386 - 7 V	REVCO Scientific	1	29 Nov 95

1.2 Reagents

No	Item	Specification	Manufacturer	Q'tity		Date
				Recieved	Not Recieved	
1.	Reagent for CD4/CD8 (Facscan)	-Negative Control Gamma1/Gamma2a (50 tests)	Becton Dickinson	24	-	6 June 95
		-Leucogate (50 tests)		8	16	18 Sep 95
		-CD3/CD4 (50 tests)		8	16	,,
		-CD3/CD8 (50 tests)		8	16	,,
		-Facs Lysing Solution (100 ml)		4	6	,,
		-Facs Flow Buffer (20 L)		3	-	,,
		-Polystyrene Tube (1,000 tubes)		5	-	,,
2.	Reagent for P24Ag(ICD)	-HIV P24 Antigen (96 tests)	Coulter	-	3	
		-ICD Prep Kit		-	3	
		-Positive control		-	1	
3.	Reagent for Western Blot	HIV - BLOT Version 2.2 (36 tests)	Diagnostic Biotecnology	-	15	

2. Fellowship from Children's Hospital to Japan

FY	No	Name	Period	Activity
94/95	1	Ms.Salinee Panakitsuwan	1/95 - 5/95	HIV Laboratory diagnosis
95/96	2	Dr. Naris Waranawat	10/95 - 12/95	HIV and opportunistic infection
95/96	3	Ms. Rujada Wanotayan	1/96 - 4/96	Laboratory diagnosis of HIV and oportunistic infection

3. Japanese expert to Children's Hospital

NONE

4. The project activities between Children's Hospital, NIH (Thailand) and JICA experts on HIV infection in children and their mothers (1995)

4.1 A total of 90 blood specimens were collected from HIV-exposed children and their mothers.

4.2 HIV-1 antibodies were assayed by WB and synthetic peptide based ELISA.

4.3 HIV-1 genomes were detected by PCR using Pol-region as primers.

4.4 Genotype was studied by peptide-base ELISA and V-3 region based PCR followed by DNA sequencing.

4.5 Some specimens were used for detection of HIV-1 RNA by RT-PCR

4.6 Some children were analysed expression of cell surface antigens of PBMC. Fas antigen which related to apoptosis on activated CD4+ cells were detected.

4.7 Viral isolation and their biological characterization are in progress.

4.8 Bacterial isolation from blood specimens was carried out. Some bacteria and fungi were detected from more than 10 cases.

5. The project activities at Children's Hospital

5.1 CD4 and CD8 count from Facscan equipment were studied for 29 tests.

5.2 P24- ICD test is during the process of installation at new laboratory site (new building).

IV. CONCLUSION AND RECOMMENDATION

As a result of the joint evaluation work and discussions, Japanese and Thai sides reached the following conclusions :

1. In general, most activities of the Project scheduled to be ended on June 30th, 1996 are coming to the stage of their target.

2. Both sides realize the need to start a new phase of cooperation with the understanding of up-to-date situations, since AIDS epidemic still remains as a serious issue in Thailand. In this regard the both sides agree to continue to make the best use of the equipment and technology which have been provided and transferred by Japan during the current project term.

3. Both sides recommend that the Phayao Model Project be continued, because many of the activities in this collaboration have not yet been completed.

4. Both sides recommend the need to set up two related projects; the public health project including the Phayao Model Project and the project at NIH as the main base.

5. Both sides agree that JICA will take a new measure to combat against AIDS, the epidemic being a very complicated issue. The Japanese side recognizes that the future JICA cooperation may consider a scheme such as a collaborative research programme between the two countries, e.g. enabling recruitment of personnel by the project budget.

List of Annexes

ANNEX 1 : Report on Achievements in F.Y. '93/94, F.Y. '94/95 & F.Y. '95/96 (JICA Project Team)

ANNEX 2 : SUMMARIZED REPORT on JICA EXPERTS' ACTIVITIES (JICA Project Team)

ANNEX 3 : Review of JICA Project for Prevention and Control of AIDS in Thailand (CDC)

ANNEX 4 : Meeting on Prevention and Control of AIDS Project between JICA Evaluation Team and DMSc.-AIDS Committee

ANNEX 5 : Report on Collaboration of Project for Prevention and Control of AIDS, 1995 (Children's Hospital, DMS)

2　専門家最終業務報告書

第１１回出張業務報告

JICA Project on Prevention and Control of AIDS
プロジェクトリーダー
紺山和一

報告者は平成８年６月２日から月２９日までタイ保健省AIDS Division にプロジェクトリーダー業務のため出張した。主な業務はプロジェクト終了に伴う技術的ならびに事務的な整理である。

プロジェクトの現状

３年間の協力は最後の時期を迎え、保健省では今後のJICA協力の新方向に期待をもって待っている。しかし、医科学局では、日本側協力組織が主体で事が決する従来の伝統がそのまま持ちもされるようである。ワクチン開発を前面に置いた専門家の活動がNational Institute of Public Health Sciences で展開されると思われる。
一方タイ側が強く望むパヤオの公衆衛生プロジェクトは新しい立ち上がりが定かでない。タイ側の期待の強さは、６月のDTECとの話し合いでも、パヤオが優先度第一で保健省から要請がでたことからも知れる。

しかし、リーダーとして、また公衆衛生で保健サービス開発にかかわる領域で仕事を続けて来た立場で見るとき、パヤオでの協力はJICAのみならず、これを担当する専門家グループにとっては大きなチャレンジである。タイカウンターパートのほうが経験も豊富であり、協力はむしろともに汗を流し、泥を被って共同作業という労力提供になる可能性が高い。とすれば、専門家の資質が問題である。高いレベルでカウンターパートとかかわりを持ち、政策・戦略決定、活動企画ができる専門家という人選が必要であろう。パヤオのみならず一般に公衆衛生部門では、タイの協力にはカウンターパートがすでにexpertの段階にあることを認識すべきである。

医科学局

新しく着任した局長は予研の提示したワクチン開発に興味を示しているようである。しかし、これは省内全体、そしてAIDS問題委員の意向であるとは言えない。従って感染対策局が明示する、policy/strategy-linked project として、 National Institute of Public Health Sciencesが果たさねばならない緊急の業務もあわせて協力に含むべきである。すなわち、臨床検査サービスの全体的格上げ作業、ｻｰﾋﾞｽ面の quality control /

assurance で協力できる分野を手がけるべきである。　局が重要視しているのは referral 機能である。これは保健省全体が望むところである。
これに関して過去にリーダーは提言して置いた。

更に保健省中央では人材の欠如を指摘し、マヒドン大學に協力を依頼、共同で人材開発が開始される。これは National Institute of Public Health Sciences の今後を決定的にするもので、日本側としても積極的に協力方法を提示すべきであろう。

この局が HIV 検査技術を標準化し地方に広めるため、各大學、研究所の代表を集め技術的会合を重ねてきた。これには JICA プロジェクトが根回しに加わり、会合にも資金的協力を続けてきたことは報告して置いた。しかし、JICA 専門家は技術面で参加しなかったのは残念である。プロジェクトの性格上かかる分野にこそ JICA プロジェクトの存在を示したかったのである。
その結果として標準化された検査法のマニュアルが完成した。更に医科学局の強い要望があり、プロジェクト協力期間中最後の日である６月２８日、全国の Regional Referral Centre と Regional Hospital の検査室の代表の集まりに資金的協力を行った。リーダーは会に出席した。

しかし、このような AIDS に関する開発には、感染対策局の AIDS Division に申し入れれば予算は容易に準備できるはずである。それにもかかわらず JICA に申し入れてくるのは、この組織の体質または、AIDS Division との間の疎遠を示すもので、恐らくその両方であろう。

前回の報告に述べて置いたように、AIDS Division で National Institute of Public Health Sciences 内部に標準血清の depository を開設するため WHO を通じ、第三国 に依頼するような動議があった。そこでこれは是非 JICA プロジェクトでと申し入れ、宮村専門家に早い対応を願って置いた。国内委員の対応を期待したい。保健省内のかかる動きはプロジェクトマネージメントとして今後も注意しなければならない。　専門家は National Institute of Public Health Sciences で孤立していることを避けねばならない。

感染対策局

この局、特に AIDS Division をプロジェクトの最初の接触点、そして活動企画の相手とすることは重要である。ところがパヤオ県の AIDS Action Centre も活動は、Office of Permanent Secretary に属する Provincial Chief Medical Officer の実際的指揮下にあり，運営には地方病院科が統括する人材、予算に左右される。とすれば、中央では、AIDS

DIVISIONならびに、地方病院科とも近く位置せねばならない。今後パヤオの協力が新しく始まることを想定して、AIDS Division のプロジェクト事務室は確保して置いた。WHO もプロジェクトが中断した今も部屋は確保している。

パヤオ県

ここでの協力が一応終了することで、カウンターパートと話し合い、器材の引き渡し式を６月１２日現地で県知事参加で開いた。その詳細は annex 1 を参照されたい。専門家の参加したサブプロジェクトはその総合報告が提出されるが、リーダーの総括は annex 2 で添付して置いた。なお、木本専門家は６月１５日にバンコックに引き上げた。

MOPH and JICA Joint Workshop

前回報告しておいたようにプロジェクトは三年間にわたるカウンターパートとの協力内容、そして完成されたパッケージの発表を期し、保健省で共催のワークショップを６月６日開催した。会には Dr. Jamrun Mikanon, Deputy-Permanent Secretary が保健省を代表した。マヒドン大学前総長の Prof. Natth Bhamarapravati の招待講演は、Guidelines for JICA Collaboration で今後 JICA が HIV/AIDS 予防プロジェクトを保健省で続ける上で非常に示唆にとんだものであった (Annex 3)。会には本省のみならず大半が地方からの出席者で総数 80 名を超えた。

発表は三部に別れ、すべてカウンターパートによってなされた。まず、第一部で Institute of Public Health Sciences の研究結果が示された。第二部、第三部はパヤオの協力で、Universal Precautions 普及関連、そして臨床検査サービス環境調査で発表があった。AIDS Division はその proceeding を現在タイ語で作成している。

第三国研修

６月１９日 JICA 研修部からミッションが訪れた。将来 HIV/AIDS 予防の第三国研修をタイを基地とした開く可能性を検討が目的である。また、バンコック事務所もその構想を持つようである。その依頼でプロジェクトの立場で構想をまとめたものが annex 5 である。近隣諸国の現状はタイと格差が大きいが、この国の保健制度建設の成功例にタイの HIV/AIDS 予防関連のプロセスを含めて研修内容とすることは意義が高い。人材は大学に比べ HIV/AIDS 予防関連では保健省に多い。

最後に

保健関連の開発は段階があり、現在タイは非感染症対策を作り上げる時期にある。これとHIV/AIDS予防は無関係ではない。それは前者は従来の感染症対策とは本体的に異なったinnovative な制度の導入が必要である。そしてここで考えられるサブプロジェクトは何れも後者のHIV/AIDS予防に応用されて良いものである。この意味あいを保健省の政策決定者は感じとり、公衆衛生専門家もその方向で対策を企画運営しているようである。この意味で、パヤオで開発された地域ケアモデルは、HIV/AIDSのみならず、今後考えられる、地域高齢者保健サービス、成人病対策、情報システム（健康調査、疾患調査、施設利用調査）などに転用できる。疫学関係でも、従来の急性疾患ではなく、慢性疾患の情報システム開発に新しい試みが待たれている。これはHIV/AIDS監視体制を構築する上で考えられるシステムと共通性が高い。特に、健康人を含む住民対象で生活慣習の変化を求める保健教育などは最も良い例である。AIDS保健教育はかかる長期計画のもと実施が望まれる。

最近の監視情報ではHIV感染は一息ついたようである。しかし、AIDS患者のケア問題、母子感染の今後、そして国内他地域への広がりは今後も観察を要する。タイ政府の強い決意も変更なく、国を挙げての努力がつづくであろう。また、国境を越えた近隣諸国と協調も必要である。この意味でJICAにとっても国際協力では意義の高い領域であろう。今後ともJICAの対応、そしてこれに関係する国内諸機関、参加する専門家の真剣な取り組みを期待したい。

最後に、三年間にわたりリーダーを支持、日夜協力業務に励まれた専門家及び調整員の諸氏に厚く感謝したい。同時に、またとない新しい次元の保健問題に取り組める貴重な機会を与えくださった国内委員とJICA本部、バンコック事務所の諸氏に深く感謝する次第である。作業をともにしたカウンターパートには、HIV/AIDS防止が一日も早く、この国の新しい保健問題の成功例となることを心から祈りたい。

ANNEX 1

The Report of the Travel to Phayao

Dr. K. Konyama
Project Leader
JICA Project on Prevention and Control of AIDS

A travel was made from 11 to 12 June 1996 to Phayao Health Department for the ceremony of handing over equipment from JICA to donate to Phayao. The group consisted of the JICA project leader and two experts, Fukuda DDS, Ms Fukuda and Mr. Makino, the co-ordinator. Mr. Sumita, the head of the JICA Bangkok Office and Mr. Ogawa, a staff member traveled together..

1. Ceremony handing over the equipment

The ceremony took place in the meeting hall of the provincial health department. There were the Governor of Phayao province was the guest of honour, staff members from the AIDS Centre of the department, Phayao and Chiangkam general hospitals presented as witness of the ceremony. The total number was around 30.

The ceremony began by Dr. Petchsri, Chief Provincial Medical Officer, made a opening remark reporting the provincial plan of action on the control of AIDS in the past and now taking place. She indicated the areas where JICA working jointly. This was followed by words of appreciation of the Governor. For JICA side Mr. Sumita responded with his appreciation JICA had opportunities collaborating in the province.

In the period 1995 and 1996, there were JICA involvement could be listed as followed:

1. Promotion of Universal Precautions in Phayao and Chiangkam General Hospitals, targeted to non-medical employees.
2. Study on service capacity of clinical laboratories of Phayao and Chiangkam General Hospitals and donation of equipment(total cost of 2.0 and 3.0 million Baht respectively. One fellowship to each hospital.)
3. Basic health information system development in two model districts.
4. Strengthening AIDS Action Centre through provoking office equipment.

JICA project despatched one public health expert posted in the AIDS Action Centre for

11 month. In all action plans JICA experts had involved to the degree that their achievements could have demonstrated successfully in the MOPH and JICA joint workshop held in MOPH 6 June 1996. That had convinced all attendants that JICA contribution helped a national model development of a comprehensive care system

The Governor and Mr. Sumita exchanged their signatures on the letters listing JICA donation.

Finally, Dr. Konyama, the Project Leader made his words of appreciation at the end of the ceremony.

2. Field trip

The provincial health department arranged a field trip for the JICA Office staff to visit operational sites in the following 12 June 1996 as followed. That gave JICA office staff the first time to contact operational level and HIV/AIDS cases in community.

2.1 Tom Health centre, Amphur district

To observe community programmes of HIV/AIDS surveillance and self care system.
The local health problems are known according to priority:

1) HIV/AIDS
2) Diarrhoea
3) Liver fluke
4) NCD
5) Environmental

The centre has just renovated its facilities and programmes shown are working effectively by a group of well trained personnel.

2.2 Phayao General Hospital

The meeting with hospital staff was prepared and visited the clinical laboratory with newly JICA S/E.

2.3 Dok Kam Tai Community Hospital, Dok Kam Tai district

To observe one of high HIV endemic districts and its district centre.

2.4 Chun Community Hospital, Chun district

The same as Dok Kam Tai community hospital.

2.5 Chiangkam General Hospital

To see HIV/AIDS control activities in the district close to the Laotian Border. The team had seen urgent problems particular to the border with both sides are rather free to travel. The hospital administration took the team visiting the spots where JICA collaboration could have brought changes like laboratory, the ongoing activites among non-medical workers and the practicew of Unversal Precautions.

2.6 Laotian border

Chiangkam locates very close to the Laotian border where inhabitants both sides can move rather freely. Moreover, this spot is known with illegal migration is occurring between Laos, China and the Thai territory. As a result, MOPH prepared to assume quarantine measures some time. That is witnessed by a new building already attached to part of border guard office.

Conclusions and recommendations

The trip had two purposes for the JICA project management. First, this was the last official visit before the end of the project. The leader made the final contact with all levels for expressing gratitude for co-operation given by the counterparts at all levels. Secondly, a strong local expectation asking JICA co-operation to continue along with successful achievements would be convincing the JICA Bangkok Office. The hope was to convince JICA Office really exposed to such the atomosphere of locality.

The Phayao project should continue for the following two major reasons:

MOPH has a strong expectation from the provincial development for a country model

of comprehensive HIV/AIDS care system. Possibility of the success is very high because of strong action-oriented group at all levels under capable leader..

To continue the collaborating in this project, JICA would impress MOPH for JICA's real intention of collaboration is highly relevant in terms of policy/strategy-linked programmes..

It is expected that the Phayao programme is possessing high possibility of the success in time. The development will be not only would be utilised by MOPH further in the rest of the country as a comprehensive care model. Moreover, in the occasions such the third country training course taking place jointly between MOPH and JICA, it might be useful as a regional model. From cost-effective and resources needed aspects from JICA in such the third country course, it is highly advisable from public health point of view, the Phayao project should be given more attention by JICA.

ANNEX 2

The Report of the MOPH and JICA Joint Workshop on JICA Project on Prevention and Control of AIDS

June 6 1996

Meeting Hall No. 2
Office of the Permanent Secretary
Ministry of Public Health

Dr. K. Konyama
Project Leader
JICA Project on
Prevention and Control of AIDS

Executive Summary

MOPH and JICA Project on Prevention and Control of AIDS (JICA Project) organised jointly a one day workshop in the meeting room of the Office of the Permanent Secretary in 6 June 1996. The objectives were to present various activities took place during the past three years under the JICA project. There were the Thai counterparts attended from different sectors both central and provincial levels in the MOPH ever worked together with the JICA experts. These were the delegations such the National Institute of Public Health Sciences, Phayao province, Khon Kaen Regional Hospital, Nakhon Ratchasima Regional Hospital, Children's Hospital. The total number exceeded 70.

The workshop was presided by the Dr. Jamrun Mikanon, The Deputy-Permanent secretary on behalf of the Permanent Secretary. In addition, Dr. Damrong Boonjeun, the Director-General of CDC chaired the whole sessions on the position of the Secretary to the Chairman of the AIDS Control Committee of MOPH. While Prof. Natth Bhamarapravati, the chairman of the MOPH Committee on Control of AIDS Vaccine Development and Assessment was invited as the key-note speaker. From JICA there also Mr. E. Sumita, the head of the JICA Bangkok Office was present.

In the opening ceremony in response to Dr. Wiput Phuncharung, the Director of AIDS

Division, CDC who reported the purposes of the workshop and the overall activities taken in the JICA project, Dr. Jamrun gave a remark on importance of the JICA project as part in its long history of collaborations with MOPH. He expressed his deep appreciation for JICA contribution this time made in the area of AIDS control.

Dr. Damrong gave his view over HIV/AIDS situation in general with stress on importance of continuing efforts of all sectors. He expressed also the hope that JICA collaboration will resume soon along the direction of ministry policy and strategies.

Mr. Sumita made his speech expressing gratitude for warm collaboration extended to all the JICA experts for their achievements. He also stated that JICA will try every means that the new project starts again in time.

Prof. Natth Bhamarapravati made his speech for 45 minutes on the special subject of the suggested guidelines for the JICA collaboration in the coming period. This was an extremely useful message to JICA in case the project will make its restart.

The presentation by the Thai counterparts were programmed to be three separate sessions. The first session was given to the group of the Institute of Public Health Sciences, Department of Medical Sciences, in the presence of Dr. Chunrudi Chaiyavasu, assisted by Dr. Phaijit Varajit as the moderator. The presentations comprised of research works took place in the institute by the JICA experts and their counterparts. One of the highlight was molecular epidemiology of HIV using CPR and DNA sequencing methods. It proved a trend change occurring in the epidemics. That could demonstrated that the type E strain is increasing among general Thai population. It showed that the latest technology introduced by JICA could have narrowed the uncertainty of genetic determination under conventional testing like ELISA .

There were also a series of research works on AIDS related cases and laboratory diagnosis of fungal infections superposed the HIV cases, like Norcadia for example. It had produced not only publications, in addition, a set of teaching materials, a video, slides were also developed.

Interesting comments were made by the staff of the institute regarding research co-ordination. It expressed their hope, more effective communication should precedes JICA experts making a research plan. In that process they hope would be well informed and

participate in planning. To that end there should be a definite rationale kept by both parties. Dr. Damrong responded that every piece of tasks, regardless of basic science or medical and social intervention, all should be made policy and strategy-linked. That will assure the action priority in many proposals competing each other.

There were two sessions prepared for the Phayao activities. The first session started with the groups from the Faculty of Nursing Education, Chiangmai University reported their research model of the study over the capacity of clinical laboratories of health facilities in Phayao. The study objectives, methodology and actual study plan were given. Based on that two studies were accomplished in Phayao and Chiangkam General Hospitals. The study was aimed at to reveal the existing constraints of different categories. JICA and counterparts considered that such the study is essential for strengthening laboratory regardless of either side is responsible.
The study was designed a participatory action plan, modified from utilisation study of health care systems.

The introductory report was followed by the staffs of both Phayao and Chiangkam General Hospitals. Two parties reported their results of investigation accomplished together with the Chiangmai group. Not only problem identification, however, the presentation gave the remedial actions followed in both places in order to improve servicing environment. These were demonstrated that the study gave great impact. Presently both places had action groups from administration, clinical and laboratory sectors formulated and working necessary steps of improving laboratory status. Moreover, they had the response form centre for budgetary provision. Moreover, the centre took the study model using in the rest of the country.

The second part was presenting the new model of Universal Precautions enforcement in the above two hospitals. The model was first developed in collaboration with the Health Education Unit of Khon Kaen Regional Hospital. JICA experts worked jointly there in the period from 1994 to 1995 in the developing teaching model. The model was made a package focused on the non-medical staff who often expose to the risk of hospital accidents from HIV contaminated materials and spreading it in the hospital settings.

The model comprised of communication media, like poster, stickers, manual and workshop programmes including a set of instrument used in KAP measurements before and after training. The prototype was first invented in Khon Kaen and brought to

Nakhon Ratchasima before Phayao province. Khon Kaen group presented the whole process such the media and a simple manual could be developed locally through a short course. All those developed were then brought to workshops attended by the target groups. These works all shared by the Khon Kaen and JICA groups. After preparations for one year all the developed were brought to actual use in Phayao.

In fact, non-medical personnel were missing target in this kind of training regarding promoting UP. The JICA initiative therefore, was highly appreciated. As a result, Provincial Hospital Division made a plan of promoting this to the rest of hospitals with sufficient budgetary provision.

In each session discussions were opened to floor and Dr. Damrong and Wiput co-ordinated and encouraged the active interaction. Also both made comments at every interaction from the health policy-maker and administrator points of view.

The last session was a panel discussion between Dr. Damrong, Dr. Wiput, Dr. Phaijit from their specific positions. Each outlined possible further collaboration expected JICA. There came the hope that JICA collaboration will bring all the results to the step that Thai become able to conduct a regional course for the neighbours in HIV/AIDS control. Dr. Konyama was the last speaker who expressed his deep appreciation to all Thai counterparts. His comment was expressing his hope of the success in AIDS control in Thailand. That might make possible that all products may go beyond the borders to the neighbouring countries. JICA co-operation will continue in the way that the third country training and collaboration will be stemmed out from the success in Thailand.

Finally Dr. Damrong concluded the workshop was one of clear evidence that JICA collaboration has come up with the highly useful achievements. His hope will be the new phase of joint activities resume soon and accelerating MOPH in the success of HIV/AIDS control project.

(K.K./k.k.)

ANNEX 3

Suggested Guidelines for JICA AIDS Project

Prof. Natth Bhamarapravati
Ex-Rector
Mahidol University

Chairman of MOPH Committee of Control
AIDS Vaccine Development and Assessment

This was delivered in the MOPH and JICA Joint Workshop on the JICA Project on Prevention and Control of AIDS, held 6 June 1996 in the Ministry of Public Health.

Suggestions

1. Determine the needs which have not been covered by Thai authorities and by other donors

   - Filling the niche of AIDS related activities

2. Look for development and strengthening of existing local health infrastructure, for integrating AIDS service. This should include areas like health laboratory service, referral system, counselling, family and home care, home visits by volunteers and health care personnel, and community supported care.

3. JICA support should be a catalyst for participatory action between, Government, University, NGO and local community.

4. Fostering linkage between neighbouring countries and Thailand, and enhancing the support that Thailand could assist its neighbouring countries.

5. JICA AIDS project should continue some involvement and giving assistance to former JICA projects such NIH, ASEAN institute for Health Development, and South East Asian Medical Information Centre (SEAMIC).

6. Strengthening of human resource through research, training, and post graduate education in Thailand, supplemented by shorter training period in Japan. Thailand could be a site for third country training in AIDS related disciplines, before trainees are sent to Japan.

7. Research with action should the top priorities.

MOPH-JICA Joint Workshop 06/06/96

Session: The Future Aspect of the JICA Collaboration

The Future Aspect of the JICA Collaboration

Dr. K. Konyama
Project Leader
JICA Project on
Prevention and Control of AIDS

HIV/AIDS is a border-less issue, with an increasing magnitude threatening the neighbouring countries. Its overall implication far goes to the mutual progress of the region in social, economic as well as demographic dimensions.

Our common concern is the coming of a new paradigm of health services would much be affected. Such the NCD control scheme development could have been pushed back behind AIDS. Health development as well face the problem of resource allocation to the certain extent. Yet, it is imperative to support high priority.

We are serious with the success of control programmes which might rely much on the following:

The central commitment supporting policy/strategies linked action
Health infrastructure and human resources mobilised
Professional morale supported by the past success
Intersectoral collaboration
Working local care systems
New innovation
Funding
Mobilising private sector and NGOs

The present situation is reviewed regarding Thailand on the health development, it is understood that the country has now reached the interim country level. It is utmost important that we should accept the issue positive instead. The current challenge, therefore, must be taken as an entry point to the new development. The whole health care system should re-structured and put into new order totally for the tomorrow. What-so-ever the development is against HIV/AIDS should be a new step toward a new era of health care system. That system will stay remaining with us even after HIV/AIDS. That adequate and efficient enough for us to control all health problems tomorrow which fall into the category called NON-INFECTIOUS DISEASE.

It is quite certain that Thai has great potential. It has proved in the past. Malaria control, malnutrition control, primary health care and blindness control as well. All are the very proud of this country. Why not with HIV/AIDS. The success in the control of HIV/AIDS would leave behind a new success story in public health and a new system.

HIV/AIDS epidemic came to this country where people were busy at life style change. People failed to act in time because of the whole society and society members were kept lived unwise. Civilisation and living skills did not met economic gain. STD is rather easy to prevent with wise people. Behaviour change therefore, the key to people safe from such HIV/AIDS.

Any health action will start with need identification and prioritisation. It appears that the same should happen in many others. The threat is now common in the region. It is highly imperative to this country to take very initiative in the developing control model and share experience with the others. TCDC or S-S collaboration is very relevant to MOPH.

It is sure would one day MOPH produce a regional model. It will go beyond

the border To all the neighbours. Thai will be the centre in the region with the regional plan of HIV/AIDS control. The regional role of this country is so great in this aspect.

JICA will be very please with the coming of such the days. Our collaboration will continue in that direction.

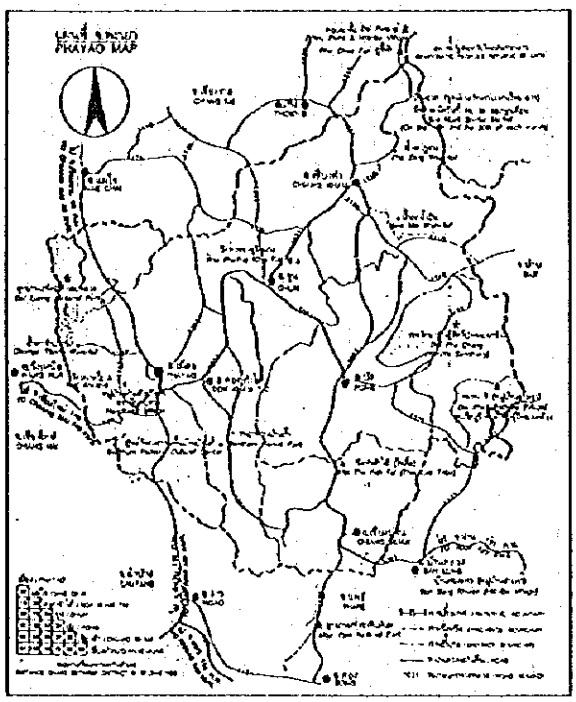
K. Konyama, M.D., Ph.D., M.P.H.
Project Leader
JICA Project on Prevention and Control of AIDS

パヤオ県包括的HIV/AIDS ケアシステム建設協力について

JICA PROJECT OF PREVENTION OF AIDS

プロジェクト・リーダー　細山和一

パヤオ県は人口は６０万に満たない小さい県で、北タイではかって話題に乏しい県であった。



（パヤオ県地勢図）

ところがここ１０年間は高率の HIV/AIDS 流行で有名になり、最近に至って、妊婦及び新生児の HIV 垂直感染、AIDS 患者の頻発で、社会問題となった。かってバンコックなどに集団で売春婦を送り出す地域として知られていた。これが結果として、地域に高い HIV 陽性率と AIDS 患者が地域問題として起こった素因でもある。

この県で行われてきた JICA の協力は保健省が目指す包括的地域ケアシステムのモデル作りに加わった公衆衛生学的活動である。パヤオ県の活動プランはハイテク機材の導入を前提にしたハード主体ではなく、既存のガイドライン・マニュアルなどにとらわれない自由なコンセプトで始まる。活動はオペレーショナルリサーチで始まり、その結果の積み重ねで、ある目的をもつ保健システムが作られていく。ハードに頼ることの少ない、ソフトで勝負する定型的な公衆衛生学の地域実践である。特に留意せねばならない点は、国際機関のミッション、そして民間団体の活動内容との違いである。JICA は二国政府間協力である以上、保健省レベルで把握、明示された命題で協力テーマが決まる。そのうち、優先する領域を選んで問題解決に向けた活動モデルを作る。そして成果は、保健省モデルとして中央に持ち帰る。それが国内で広く用いられ得る "研究・開発パッケージ" として完成すれば貢献として成功であろう。パヤオ県衛生部が目指すのはこのようなパッケージの完成である。その一部を JICA が担当するのである。

臨床検査室環境調査

HIV/AIDS 診断技術は新旧症例を多数抱えるパヤオ県の一次・二次レベルの病院では臨床検査水準の標準化と強化が急務である。ところが、これは臨床検査室全体のレベル強化から始まるも

のでなければならない。過去に多く見られたような機材を見繕って投入するのではなく“オペレーショナルリサーチ“のかたちで協力を始めた。先ず、県レベルの病院、下って郡病院、そして保健所設備まで含めた、臨床検査室利用データーの獲得を目指した、現場立ち入り環境調査である。臨床サイドの利用状況から始まり、臨床医の満足度、検査室のサービス水準調査、更に、将来を予測したサービス量の変化など、すべてを加味した調査を実施する。ここには検査サービスの質(QUALITY CONTROL)のみではなく、各面のインパクトまで加味したQUALITY ASSURANCE の情報が得られるようにプログラム化した調査を実施した。
このような企画では、問題は果たして専門家を日本から短期間受け入れて、企画、プログラム化、専門家による調査実施で押し進められるだろうか。そこで、現地人材の登用、利用という事になる。先ず、現地の人材に企画を理解させる。そのうえ、調査活動の詳細まで共同でプログラム化、そして実施してくれるような現地グループを取り込んだチームが必要である。これを養成、指導監督できるという専門家が必要になる。

Universal Precautions 普及と強化

HIV/AIDS の院内感染防止といっても一般に保健施設で行われている対策と変わったことは少ない。また、単発的に行うものでなく、施設全員のKAP に係わる教育、訓練、予防対策の実施、監視の総合システム導入である。現状把握、問題点と対策、従業員の習性と意識の変化、視聴覚教材の作製と伝達方法、予防資材の投入、監視体制、記録・報告制度などのサブシステムが考えられる。従って、プロジェクトの期間、予算、更に専門家の技量で協力範囲を考えねばならない。（福田専門家報告参照）

地域住民保健教育モデル

過去の経験はHIV/AIDS 教育は恐怖心のみあおり、かえってHIV/AIDS 患者の隔離につながった。今は社会科学的に時間をかけたアプローチがとられている。主流は一般住民の文化、習慣にたち、住民グループ別の戦術が採用されるようになった。IEC のある部分だけを突出した形で持ち込んでも受け入れ側によっては意味は少ない。 また、文化、慣習などのメッセージは外来者にとっては未知の分野が多い。一方 HIV/AIDS 啓蒙はこれのみを突出すれば住民の拒否で成果は少ない。そこでHIV/AIDS メッセージをうまく混入したパッケージが必要である。
また、バヤオの地域性を考えるとき、保健教育はPHC時代から存在しているが、戦略としては、むしろその整備から始め、これを効果の高い、持続性が各地域で確保できるシステムを作るべきではないかと考えられる。ここでも必要なのは公衆衛生的、社会科学的発想で始まるoperational research の積み重ねである。しかしこのような活動は示威的な結果以外は短期間に求められない。
公衆衛生学の地域に活動は次の三つの目的を持つものである。

1, Demonstrative
2. Services
3. Research

以上の三要素をいかなる配分で活動内に含めるかは選んだ保健問題の性格できまる。時に上部の政治的配慮で左右されることもある。即ちプロパガンダ化である。そして妥協が必要となる。そこでJICA プロジェクトはとしては熟慮の後次の戦略を考えた。

保健教育はHIV?AIDS流行とは関係なく地域単位で郡病院、保健所が継続して行うものである。時の話題は優先度があろうが、地域特有の問題は常に優先する。
PHCにはすでに保健教育のの基盤が作られており、それを利用拡大、効率化、そして維持する。常に新鮮な機軸を打ち出し住民に受け入れられる話題を供給する。

戦術は

住民参加で地域保健所単位で継続する。
そのため、県レベルは標準モデルを作り、地域保健所スタフの教育、技術指導、機材供与、新教材提供で補足的活動になるようつとめる。
話題は、まずHIV/AIDS を中心に置くが、これにとらわれず地域を調査して決めた話題でくるむ。
効果判定が自動的になされる指標と達成すべき基準を求めておく。
特に留意する点は従来のように、住民に甘えて出席率を高める方法は避ける。

具体的に話題は、

日常生活に直接影響する保健問題。
生活の知恵につながる生活改善の指針
保健、環境、地域開発、教育、文化的生活の具体的例

ここに横たわるコンセプトは、タイももはや途上国の域から中進国のレベルに向け前進できる環境にある。そこで、それに相応しく、生活に文化性を持たせよう。健康は自己のみならず、家庭、地域でもあらゆる活動に生産性を発動できる財産である。
タイはこれまでに幾多の保健問題を他の国より先に解決してきた、HIV/AIDSも同様必ず制圧できる。しかし、これは住民すべてが参加しなけ

ればならない。
HIV/AIDSのあともっと解決困難な保健問題がやってくる。非感染症である。これに向けた住民参加の準備が今のHIV/AIDS予防制圧である。

基礎的保健情報システム

コンピューターの普及は医学界にも深く浸透し、広く見られるものは、個人または大小のビヤグループによる、地域或いは診療設備での情報処理への応用である。かってPHCで集積された保健情報の整理にも持ち込まれている。
しかし、地域に持続的に残る制度は別次元である。これは国のコミットで、各レベル、領域の意見を組み込んだモデルを目指さねばならない。ソフトは常にハードの進歩によって変化するが、国家モデルは全国スケールでアップデートできねばならない。その方向は近く導入されるであろう、"National Health Study"，"Morbidity Study"，"Health Facilities Utilisation Study" に直結されるものであらねばならない。、定期的に県レベルの情報が、全国から集められるようになり、上記の資料となるであろう。
従って、HIV/AIDS情報はその一部であって、それが単独で存在するものとして今作られても高価で、かつ精度は悲観的なものでしかないことは、疫学的見地で明らかである。現存のsentinel surveillance の数値を上回る保証はない。
そこでJICAプロジェクトが目指すのも、上記の諸点を考慮したものであるべきである。
具体的開発段階としては、次の段階が考えられる。

保健省のコミットは全国的な規模を目指すシステム開発である意志表示。
各領域の専門家の動員
ハードの今後の動静、例えば、金融界、supermarket、fast food業界などの趨勢を観察して情報入力、流れ、そしてネットワークの方向を見定める。
現行の情報の仕分けと区分、優先度決定
パヤオ県でのモデル作製と評価

パヤオではリーダーが企画をまとめマスタープランを作製、福田、木本両専門家全員が関係した。（木本専門家の報告を参照されたい。）

異常の段階界でJICAの分担は何か決めるべきである。ここで特に注意する点は、この動きに便上してHIV/AIDS情報だけを取り出す動きである。

母子保健関連の協力

以上のシステム作りは長期にわたる気長い活動で、すべての段階で投資効果などの配慮が必要である。ところがこれと性格の違う活動として母子感染の問題がある。これは性格上、システム作りであるが同時に、disaster management あるいは rescue operation 的性格をも持つものである。予防体制、HIV陽性妊婦のANCと新生児の管理、ケア、そして地域の受け入れや、孤児問題など社会的なパッケージを考えねばならない。
政府側と民間団体の役割の仕分けがあり、資金の確保を容易でない。パヤオでこのモデルを作らねばならないが、泥沼にはまる恐れが考えられる。特に JICA 活動の内容は民間団体とハッキリした一線を画さねばならない。この領域に手をつけるのは時間的に余裕がなかったのは誠に残念である

おわりに

以上プロジェクトが修了する直前にリーダーの私見をまとめた。過去二年間は先述の線で協力してきたが、二年間で結果がでるわけはない。しかし、方向としては公衆衛生学の目指すところを正しく守ってきた。これを支えてくれた専門家、調整員各位の努力はありがたかった。厚く深謝したい。嬉しかったのは、タイ保健省の各レベルで有能かつ実行力のある人々が育ったのを目のあたりにできたことである。

道は遠い。本格的公衆衛生学的活動は果たして日本の公衆衛生学グループで可能なのか。答えは可能である。活動が協力である以上、タイに存在する人材、技術などを十分取り込むことでこの目的を達成できる。要はJICA本部自身の戦略転換であり、国内委員各位の国際協力の理解、参加する専門家の資質、技量。更に専門家の採用を医学界のみに限らないという見識と実行力である。

これなくしては今後は AIDS プロジェクトのみならず JICA は発展するこの地域の国の協力ではますます顔の見えないものとなり、協力の原点を忘れたグループに利用されるだけであろう。

タイ国におけるエイズの流行とその傾向

福田　英輝
ＪＩＣＡエイズ予防対策プロジェクト

Ⅰ　タイ国におけるエイズ患者、およびＨＩＶ感染者の現状

タイ国において確認された最初のエイズ患者は、１９８４年９月に米国から帰国した男性同性愛者であった。当初のケースは海外から帰国した男性同性愛者に限られていたが、１９８７年、および１９８８年に麻薬常習者の間で爆発的な広がりをみせ、それ以降は性風俗従事者、および異性間性交渉による一般の人々へと感染は広がっていった。また、１９９１年からは母子感染のケースも報告され始めている。

タイ国ではエイズ患者を把握する制度として「公的医療機関などからの届け出」制度がある。また、ＨＩＶ感染の広がりとその将来を予想するための制度として「全国感染予測状況調査」、および「新規徴兵者に対するＨＩＶスクリーニング調査」が実施されている。以下に、これらの制度の概要と結果について報告する。

Ⅰ-1「公的医療機関などからの届け出」制度

エイズ患者に関する疫学情報は「公的医療機関などからの届け出」制度により把握され、毎月公表されている。この制度は、１９８５年から実施されているが、１９９１年からは人権問題も絡みエイズ患者を認めた場合の報告義務の必要性がなくなり、報告は医療機関側の自由意志に任せられることになっている。また、同１９９１年度より具体的な症状のないＨＩＶ感染者の把握は困難であるとの考えから、ＨＩＶ感染者は届け出の対象外とされている。

「公的医療機関などからの届け出」制度によると１９９６年３月３１日現在でエイズ患者は36,629人と報告されている。内訳は、性交渉に関するものが７８％、麻薬中毒者における静脈注射に関するものが７％、母子感染に関するものが６％、および不明のものが９％となっている。また、男女比は５．４対１となっている。[1]

Ⅰ-2　「全国感染予測状況調査」

エイズ予防対策を講じる際には、ＨＩＶ感染者の現状を把握し、将来数を予測することが必要不可欠である。しかしながら、具体的な症状を呈しないＨＩＶ感染者を正確に把握することは非常に困難である。タイ国では感染者数の現時点における推定、および将来予想を目的としてタイ国保健省による「全国感染予測状況調査」、および次に述べるタイ国陸軍による「新規徴兵者に対するＨＩＶスクリーニング調査」が実施されている。

「全国感染予測状況調査」は１９８９年に始まり毎年６月と１２月の年２回実施されているサンプリング調査である。対象地区はバンコクを含むすべての７６県であり、対象集団は、献血者、妊産婦、麻薬中毒者、男子性病患者、直接的売春婦[2]、間接的売春婦[3]の６つの集団である。集団間別に見ると、麻薬中毒者の間での感染率の伸びが鈍化しているのに対し、直接売春婦の間での感染率が増加している。また、感染率は低率ではあるが妊産婦の間での感染率も増加している。また、地域別にみると中央タイ、北部タイの感染率が高く、東北タイは他の地域に比較して低いことが報告されている。

１９８５年６月の第１３回調査より調査方法の改正が実施された。それによると、年２回の調査は年１回、６月のみの調査に改められた。また、定義が不明瞭であった直接売春婦、および間接売春婦の区別がなくなり、性サービスを提供するすべての場所を取り混ぜて調査を実施することとなった。[4,5]　なお、１９９５年１月に保健省感染症対策局性病対策課の調査によると売春婦の数はタイ国内で７万８５８１人とある。[6]

I-3　「新規徴兵者に対するＨＩＶスクリーニング調査」

タイ国では、男子が２１歳を迎えると約２年間の兵役が義務づけられている。ただし徴兵は行政地区別に実施される「くじ」による選出であり全員が徴兵されるわけではない。また、身体的障害を有する者、あるいは学生時代に軍事教練を受けた経験のある者等は例外として兵役を免除される。

タイ国陸軍では、上述の手順にて毎年徴兵される成人男子に対するＨＩＶスクリーニング調査を１９８９年から実施している。調査開始年度である１９８９年にはＨＩＶ陽性率は０．５％であったが、１９９２年には３．５％、１９９３年には３．７％と急増している。しかしながら１９９４年の調査では３．０％へと減少傾向が認められている。[7]

II　タイ国におけるエイズ患者、およびＨＩＶ感染者の将来予測

II-1　国家経済社会開発局（ＮＥＳＤＢ）ワーキンググループからの報告

内閣官房に属する国家経済社会開発局（ＮＥＳＤＢ）は、タイ国の経済、および社会計画を設立するうえでの基礎となる将来人口予測を行っている。また同局は国家経済社会開発計画（ＮＥＳＤＰ）の枠内で国家エイズ予防管理計画（ＮＡＰＣＰ）を策定するための調整機関でもある。

タイ国内のエイズ流行に伴う人口への影響を計ることを目的として１９９４年４月「ＨＩＶ／ＡＩＤＳ将来予測のためのワーキンググループ」が国家経済社会開発局を中心として設けら

れた。当グループは、タイ国保健省、タイ赤十字、マヒドン大学人口・社会問題研究所、East-West Centerの機関で構成されていた。

当ワーキンググループの報告書[9]によると、１９９３年におけるＨＩＶ感染者数をおよそ700,000人であると予測している。この予測は、国家エイズ予防管理計画[9]に基づいた活動のみが実施され、エイズ予防に関する予算が特に増額しないという条件を仮定している。また同条件下では、累積ＨＩＶ感染者数は西暦２０００年において1,300,000人、累積エイズ患者は470,000人に達するものと予測している。

また、当ワーキンググループはＡＩＤＳ患者、およびＨＩＶ感染者の予測の他に、エイズが及ぼす人口学的な影響として以下の３点を指摘している。

1．新規のＨＩＶ感染者は１９９１年より減少傾向を示している。
2．エイズによる死亡の多くは生産労働人口に集中している。
3．女性における新規ＨＩＶ感染者は増加している。

II-2　その他からの報告

エイズ予防対策の評価指標のひとつとして新規ＨＩＶ感染者数があげられる。国家経済社会開発局におけるワーキンググループは前述のように１９９１年より新規ＨＩＶ感染者は減少傾向を示しているとの予測しているが、ここでは当傾向を支持する他からの報告を紹介する。

II-2-1　新規徴兵者に対するＨＩＶスクリーニング調査

すでに前述したように、タイ国陸軍は新規徴兵者に対するＨＩＶスクリーニング調査を実施している。ここで紹介する論文は、１９８９年１１月から１９９４年１１月までに新規に徴兵された311,108人についてのＨＩＶ－１スクーリング調査からのものである。[10 11]

同論文によると新規徴兵者におけるＨＩＶ陽性率は、１９８９年の０．５％から上昇し、１９９３年には３．７％とピークに達し、その後１９９４年では３．０％へと減少している。最新の疫学情報である１９９５年１１月では２．４％とさらに減少していることが報告されている。この減少傾向は地方からの徴兵者と都市部からのそれには差が見られず、タイ国すべての地区において認められている。また、同減少傾向は対象者の教育程度など、個人の社会背景には差が見られないと報告している。

当論文の対象である新規徴兵者は、比較的に教育程度の低い、貧しい家庭の者が多いと言われている。対象者に以上のような偏りが存在するものの、健常な青年男子に対する同規模の調査は他になく貴重な調査となっている。当論文は新規ＨＩＶ感染率はピークを迎えており、これらの結果は国をあげてのＨＩＶ感染予防対策プログラムの効果ではないかと結論づけている。

II-2-2　性感染症（STD）患者の経年的傾向

ＨＩＶの流行に伴いタイ政府は売春宿でのコンドーム着用を強制するプログラムを実施した。このプログラムは１９８９年にラチャブリ県にて試験的に実施され、１９９１年８月には国家エイズ委員会における公式な保健政策として取り入れられた。

ここで紹介する論文は次の３つの点から当プログラムの評価を実施している。[12]

１．売春宿でのコンドーム使用率

売春婦からの聞き取り調査より顧客のコンドーム使用率を算出した。当プログラムが開始された１９８９年から１９９３年でコンドームを使用している者の割合は１４％から９０％へと上昇している。

２．コンドーム供給量

１９９２年において政府は４千５百万個に上るコンドームを売春宿へと配布した。この量は売春宿で行われる性行為の数を十分に上回るものと予想されている。

３．ＳＴＤ患者数

政府関連診療所から報告のあったＳＴＤの新規ケースについて報告している。報告によると男性、女性共にＳＴＤの新規患者数は減少している。

この調査においては次のような制限を認めている。

１．　売春婦がコンドーム使用量を誇張して報告している可能性

２．　コンドームの供給量のみで、コンドームの実際の使用量はわからない。

３．私立の診療所、および薬局からのＳＴＤケースは統計に含まれていない。

上のような制限があるにもかかわらず、当コンドームプログラムはＳＴＤ予防においては効果的であったと結論づけている。また、売春を通じてのＨＩＶ感染予防も間接的ではあるが効果を上げているのではないかと推測している。

II-3まとめ

タイ国におけるエイズの流行とその傾向を見てきた。現時点のタイにおけるエイズ患者は約３万７千人程度との報告があり、ＨＩＶ感染者は１９９３年時点で約７０万程度と予測されている。このようにタイ国におけるエイズ問題は深刻さを極めていることに疑いはない。しかしながら、徐々にではあるがタイ国をあげてのエイズ予防対策が効果を上げていることが、新規ＨＩＶ感染者数や、新規ＳＴＤ患者数などを通じて示されて来ている段階でもある。今後とも継続したエイズ予防対策が実施されることを期待する。

[1] HIV/AIDS Situation in Thailand UPDATE: March 1996
AIDS Division, Department of Communicable Disease Control, Ministry of Public Health.

[2] 売春行為を主たる目的とする置屋などの施設に従事する売春婦をいう。

[3] 付帯的に売春を目的とするｺﾋｰｼｮｯﾌﾟ、カラオケなどの施設に従事する売春婦をいう。

[4] The 13 Round of HIV sentinel surveillance in Thailand
June 1995, Thai AIDS Journal Vol. 7, Number 4, 1995

[5] AIDS Newsletter Vol. 8, No11.1995
Div. of AIDS Dept. of CDC Ministry of Public Health

[6] AIDS Newsletter Vol. 8, No11.1995

[7] Declining prevalence of HIV-1 infection in young Thai men.
Carl J. Mason. etc., AIDS 1995, 9:1061-1065

[8] Projections for HIV/AIDS in Thailand : 1987-2020,
The NESDB Working Group on HIV/AIDS Projection, November 1994

[9] Thailand National AIDS Prevention and Control Plan (1992-1996), Office of the Prime Minister

[10] Declining prevalence of HIV-1 infection in young Thai men
Carl J. Mason, etc. AIDS 1995, 9:1061-1065

[11] Result of HIV serosurveillance, 12th, Round, December 1994, Thailand
Thai AIDS Journal Vol. 7, NO1, 1995

[12] Impact of Thailand's HIV-control programme as indicated by the decline of sexually transmitted diseases. Robert S Hanenberg, etc., The lancet, vol344, July 23, 1994

院内感染予防対策プログラム

福田　英輝
ＪＩＣＡエイズ予防対策プロジェクト

Ⅰ　はじめに

タイ国におけるエイズ患者の増大は、エイズ患者と医療機関に従事する者との接触の機会をも増大させた。残念なことに、ここタイ国の医療機関においても日本と同様にＨＩＶ感染に関する知識の不足や、医療機関における院内感染予防対策の不備からエイズ患者に対する偏見を生じているのが現状である。また、この偏見は、医師、看護婦といった医療従事者よりも掃除婦、看護助手、患者移送担当者といった非医療従事者において深刻のようである。

以上の状況に鑑み、タイ国ＪＩＣＡエイズ予防対策プロジェクトはパヤオ県に存在する２つの県立病院において非医療従事者を対象とした院内感染予防対策プログラムを企画した。当プログラムは非医療従事者を対象とすること、およびプログラムをパッケージ化することを目的として実施された。このパッケージの内容は、病院内の現状分析に始まり、問題点の把握、セミナーや教育資材を投入してのキャンペーンの実施、および評価という一連の活動である。

当感染予防対策プログラムはコンケン地方病院、パヤオ県病院、チェンカム県病院の３つの病院で試行錯誤を繰り返しながら展開された。今回は３つの病院での経験を交え、最終的に完成されたプログラムをパッケージの内容順に説明を加えていきたい。

（なお、各病院での調査結果等は別添の資料を参考のこと）

Ⅱ　院内感染予防対策プログラム

Ⅱ-１ 院内感染予防対策を担当するグループの編成

院内感染予防対策プログラムの最初の段階として、プログラムの計画、および実施主体となるチームの編成が必要となる（以下、チーム）。タイ国のほとんどの医療機関においては院内感染を管理することを目的として「感染症対策委員会」が設置されている。院内感染予防対策プログラムに関しても同委員会を中心としたチームの編成が効率的と考えられる。しかしながら、当委員会は医師、看護婦が主要なメンバーを占めていることが多い

ので、必要に応じ病院管理職の者、非医療従事者の代表者などを参加させるようにすべきである。

II-2　現状分析

院内感染予防対策の具体的な計画に先立ち、対象者である非医療従事者における院内感染に関する知識、および感染予防対策の実施状況の正確な把握が必要となる。広く一般には質問票による現状分析が行われているようだが、回答者からの表明と現実の作業との間には隔たりが大きいため、質問票による調査のみでは正確な現状分析は不可能である。一部には長期に渡る観察を通じて現状を把握しようという調査もみられるが、すべての資源に大きな制限を抱える県病院においては非常に困難な調査と考えられる。

当プログラムは、資源に制限のある公的医療機関において、簡便に、かつ信頼性の高い現状分析を実施できるよう企画した。そのため、現状分析ではアンケート調査のみに頼ることなく、複数の調査を実施することとした。以下にその調査内容を紹介する。

1）病院内で発生した血液感染の恐れを伴う事故の調査

ほとんどの医療機関においては、血液感染の恐れを伴う事故が発生した際には医療機関当局に対して事故内容を報告することが義務づけられている。また、当報告に基づき医療機関当局は状況に即した、しかるべき処置を事故当事者に対して施すことになっている。

当調査では、過去数年にわたる事故報告書の詳細な検討を通じ、多発事故の原因究明、および事故予防対策を考察した。

2）非医療従事者におけるＨＩＶ感染、および院内感染予防に関するアンケート調査

非医療従事者を対象として、ＨＩＶ感染、および院内感染予防に対する知識、態度に関するアンケート調査を実施した。当アンケート調査の結果は、引き続き実施されるセミナーを企画する際の基礎資料とされた。

3）非医療従事者におけるＨＩＶ感染、および院内感染予防に関する集団面談調査

2）のアンケート調査と同様の目的で非医療従事者に対して集団面談調査を実施した。アンケート調査だけでは把握できない院内感染予防対策の現状を質的に分析するためにも当調査は必要不可欠のものであった。

4）非医療従事者の労働現場における観察調査

非医療従事者が働く現場、特に病棟、廊下、ゴミ処置場、および洗濯場などを中心として実際に観察を行った。観察するポイントとしては、病院施設、および感染予防器具の質

と量などであった。さらには、観察を通じて感染予防システムの不備などが指摘された。

5）病院内に分配されている感染予防資材の質、および量に関する調査

当調査では、非医療従事者に対して配給されている感染予防資材、例えば、手袋、マスク、帽子、エプロン、および消毒薬液などの質と量を点検した。過去の配給記録についての記述疫学的な調査、現場で働く者への面談調査、および観察調査などといった複合的な調査となった。

II-3 問題の明確化

チームでは上述した複数の調査結果をもとに問題の明確化を図った。異なる調査から同様の結論が得られたり、あるいは特定の調査結果が他の調査結果との比較分析を通じて異なる結論に達したりと様々ケースがあげられた。チーム全体での十分な討議と検討を必要とする。

II-4 活動計画の策定

先にあげられた明確化された問題とその優先順位から具体的な活動計画を策定する。その際に考慮すべき点は、時間の配分、担当責任者の明確化、必要資材の確認とその予算、および期待される結果などである。

II-5 実施

II-5-1現状分析に関する調査報告書の作製

現状分析に基づき活動計画を策定する同時に、現状分析に関する調査報告書を作製する必要がある。この調査報告書は、病院院長をはじめ、各セクションの担当責任者へと分配され、すべての病院スタッフが問題点への認識を共有するに役立つと考えられる。

II-5-2院内感染予防対策マニュアルの作製

先にあげた問題点を明確化する作業を通じ、病院の実状と対象にあわせた院内感染予防対策マニュアルを作製した。今後の全ての活動はこのマニュアルに沿った内容を用意するべきでありマニュアル作製にあたっては十分な討議が必要となる。もちろんのこと、大枠においてはタイ国保健省の推奨する方法を踏襲すべきである。

II-5-3教育資材の開発

当プログラムの対象者は非医療従事者であり、繰り返しの、かつ簡便な手法を用いた教育が必要となってくる。ＩＥＣ専門家との共同の作業を通じて以下のようなものを作製した。　（詳細はＩＥＣ専門家の報告書に委ねる）

1）感染予防対策に関連する各種ステッカー
2）感染予防対策に関連する各種ポスター
3）セミナー時に使用するテキスト

II-5-4感染予防資材の適正配分

現状分析において実施した感染予防資材に関する調査を基に、不足している資材に対しては資材の充足を、適切でない資材に対しては取り替えや各種アイデアを活かした工夫を加えるなどの活動を実施した。

II-5-5セミナーの実施

現状分析により把握された問題点、および先に作製した院内感染予防対策マニュアルを基にセミナーの内容を検討した。講義を中心としたものではなく、実践的な実演形式のセミナーが効果的のように思われた。

今後の課題としては、非医療従事者に対するセミナーの効果的な繰り返しの時期を選定することがあげられる。そのためには、対象者における知識、態度、および行動が低下するメカニズムを探る必要があるであろう。

II-5-6キャンペーンの実施

開発した教育資材を利用して院内感染予防キャンペーンを病院をあげて実施した。教育資材は適所に、かつなるたけ多く掲載するように努め、日常生活における感染予防対策が確実に実施されることを期待した。

II-6 評価

現状分析で明確になった問題点を中心に、これらが改善されたかどうかの評価が必要となる。現状分析と同様の方法で評価できる場合もあるが、特別の評価方法を考案する必要もあるかもしれない。チェンカム病院の例では、対象者の知識、態度の変化をみるためにアンケート調査を、また現場での改善点を評価するために観察調査を実施した。いずれの調査においても前向きな評価が得られた。しなしながら、今回の評価においてはコスト分析が十分に検討されなかった。当プログラムを他の医療機関に拡大させる際の重要な情報となるものなので、コスト分析は次回の最優先課題としてあげられる。

プログラムにおいて問題点としてあげられていながら、様々な資源の制約のためにプログラム実施期間中に着手できない事項も多々見られた。これらの事項はプログラム再計画の際の貴重な資料となるので提言という形で残すべきである。

III　まとめ

院内感染予防対策は病院に従事するすべてのスタッフに関連する事項である。本プログラムにおいてはややもすると対象者として取り残されていた非医療従事者への対策を中心としたプログラムを計画した。病院内での様々な活動が医療従事者間のみで展開されることが多いなか病院の基本的なシステムを見直す良い機会が得られたものと考える。

本プログラムの目的は一連の活動をパッケージ形式として開発することにあった。これらの活動の内容はすでに上で見てきた通りである。パッケージの開発に当たっては、県病院の有する資源の枠内で自力で展開することができるように心掛けた。当パッケージがタイ国における他の県病院へと拡大されることを期待する。

ＪＩＣＡエイズ予防対策プロジェクトの協力として当プログラムの開発に当たってきた。医療機関におけるエイズ対策というとエイズ患者に対する施設の拡充、あるいはＨＩＶ検査器機の導入などがあげられることが多い。しかしながら、実際の現場においては、エイズ患者のみならず、他の患者に対する病院サービスを支える基礎的な事項がなおざりにされていることがままある。今回取り上げた院内感染予防対策もその一つであると考えられる。本プログラムがきっかけとなりこのような基礎事項の拡充が医療機関当局によって自覚的に進められることを期待したい。

添付資料－１

１）コンケン地域病院における院内感染予防対策

保健省地方病院課、およびコンケン地域病院との協力のもと、非医療従事者を中心とした院内感染予防対策を企画、実施した。ここに従事する４６８人の非医療従事者を対象とした。当プログラムの内容は以下の通りである。

１）ＨＩＶ感染、および院内感染予防に関する意識調査

平成７年１月に３００人の非医療従事者を対象としたサンプル調査を実施した。当調査は２）の院内感染予防対策に関するセミナーの内容の検討、およびプログラム評価に役立てられた。

２）院内感染予防に関するセミナーの実施

平成７年２月に非医療従事者を対象とした一回半日のセミナーを実施した。セミナーでは、血液を介して感染するおそれのある疾患に対する院内感染予防の正しい理解とその技術の普及を目的とした。

３）教育資材の開発と配布　（添付資料－１）

コンケン地域病院に所属する保健教育教材開発課との協力のもとステッカー４種類、ポスター２種類を開発した。これらはセミナー時に配布すると同時に病院内の主要な箇所へと提示された。また、セミナー受講時の参考書として簡単なテキストブックを作成した。

４）プログラム評価

平成７年６月に２度目のアンケート調査、および約２０人の非医療従事者からなる集団面談調査を実施し、当プログラムの評価とした。

セミナー受講群と非受講群では院内感染予防に関する知識、技術の理解に差がみられた。コンケン地域病院に対しては院内感染予防対策の継続した実施を提案した。

補足、コンケン地域病院における調査方法、およびデータ分析に関する講義

上記プログラムにおける非医療従事者に対する調査は、コンケン地域病院保健教育課との協同作業であった。この際、同課スタッフの調査データに関する取り扱いの不備を感じた。また、同課スタッフも調査方法全般に関する講義の実施を希望していたため、コンケン病院保健教育課スタッフに対し平成７年８月に３日間にわたる講義、演習を実施した。内容は以下の通りである。

１）調査の一般的な手順とその留意点

２）実際の調査票を利用して、そのデータのインプットと編集

３）コンピュータを利用した分析方法

4）報告書作成

2．パヤオ県立病院における非医療従事者を対象とした院内感染予防対策

（内容）プログラムの内容はコンケン地域病院と同様のものとした。

（しかし、セミナー受講群と非受講群へはランダムで割り付けた。）

平成7年5月と8月にアンケート調査の実施した。同年5月、および9月に院内感染予防に関するセミナーを半日で実施した。しかしながら、同病院における評価結果ではセミナー受講群と非受講群とで差がみられなかった。原因としては以下のことが考えられた。

1）講義中心のセミナー。

2）開発した教育資材（ポスター、ステッカーなど）の不適切な利用。

3）看護部を中心とした偏ったチーム編成。

これらの反省をもとに、パヤオ県病院では平成8年4月に少人数編成によるセミナーを再度実施した。セミナー後にはアンケート調査を実施しており、対象者における知識の向上が有意に認められたとの報告があった。

3．チェンカム県立病院における院内感染予防対策

パヤオ県に存在するもう一つの県立病院であるチェンカム県立病院において院内感染予防対策プログラムを平成7年12月より実施した。当病院ではコンケン地方病院、およびパヤオ県立病院での課題として残っていた総合的な調査の実施を計画した。以下にその内容と結果を示す。

1）病院内で発生した血液感染の恐れを伴う事故の調査

過去2年間で16件（うち14件が針刺し）の事故が発生していた。事故当事者職種別の結果は以下の通り、

医師2件、看護婦9件、看護助手1件、非医療従事者3件、看護学生1件

2）非医療従事者におけるHIV感染、および院内感染予防に関するアンケート調査

従事者の基本的属性、およびHIV感染、院内感染予防に関する知識の調査を実施した。さらに、医療事故についての質問を実施した。20%の従事者がかつて医療事故（すべて針刺しのケース）を経験しているが、うち50%の者が病院当局に対して報告していなかった。

3）非医療従事者におけるHIV感染、および院内感染予防に関する集団面談調査

感染予防資材の分配、および質の問題が明らかになった。

4）非医療従事者の労働現場における観察調査

針の処理（点滴用のプラスチック、から箱）、沐浴用器材（浴槽、スポンジ）、および検体の処理（トレー、ふたがない）などが問題点としてあげられた。

5）病院内に分配されている感染予防資材の質、および量に関する調査

めがね・エプロン・マスクが不足していることが明らかとなった。

以上の調査結果を基に、問題点の明確化を目的として平成８年１月にチーム全員による会議を実施した。以下に当日会議のまとめを記述する。

問題点：ＵＰが実施されていない。

原因：　1）モチベーションがない。

2）サプライの不足、および不適切な分配。

3）標準化されたシステムがない。

戦略：ＵＰ実施の向上

1）対象集団におけるモチベーションの向上

－セミナー

－教育資材を用いてのキャンペーン

2）状況、環境の整備

－サプライの見直し

－システムの標準化

・針に関すること

・医療事故報告に関すること

・医療ゴミに関すること

3）監視するためのチームの編成

以上の３つの戦略的事項に基づき、感染予防資材の適切な分配、感染予防対策マニュアルの作製に伴う各種システムの標準化、実演を中心としたセミナーの開催、および教育資材を用いてのキャンペーンを実施した。平成８年４月から５月にかけてアンケート調査と観察調査を実施し、当プログラムの評価とした。いずれの調査においても前向きな評価が得られた。

パヤオ県エイズ予防対策プロジェクトに関する私見

木木 絹子

ＪＩＣＡエイズ予防対策プロジェクト

1） HIV／AIDS情報システム開発プロジェクトについて

タイにおける HIV／AIDS 感染者・患者数は、１９８９年６月に開始された特定集団別 HIV 抗体保有率横断調査と１９９１年以降の患者報告制度によって、保健当局者にその傾向が把握されてきた。

しかしながら、現在、とりわけ北部タイにおいて HIV／AIDS 問題が、主要には異性間性交渉を媒介に若年主婦層に急速に浸透するという深刻な流行期段階を迎え、特定集団別抗体保有率横断調査の限界性が、保健当局者を中心に各方面から指摘されるようになった。

このような状況を背景に、パヤオ県衛生部は、他県に先がけ、独自の病院基盤 HIV／AIDS 情報システム（AIDS 患者、妊婦外来、献血者）、地域社会基盤 HIV／AIDS 情報システムの開発・コンピューター化を手がけてきたが、１９９５年１０月より、病院基盤 HIV／AIDS 情報システムは、HIV/AIDS 情報システム･チームにより独自に開発されたソフトウェアを基に実行段階に入った。コンピューター端末入力は、主に各県・郡病院の看護婦が担当し、その訓練過程は、情報の機密保持や健康指標に関する意識向上も意味している。

地域社会基盤 HIV／AIDS 情報システムは、目下、チュラロンコン大学研究者の指導のもと開発中であるが、情報が保健所レベルで収集されることが前提であり、機密保持、情報の信頼性、職員の作業負担増、目的意識向上、コンピューター導入予算の問題等、解決すべき課題を多く抱えている。とりわけ、保健所職員による情報の直接利用可能な状況下においては、機密漏洩はほぼ不可避であり、厳しいシステム管理があらかじめ構想されることが基本であろう。

しかし、情報の有効性・有用性を高めるためには、タイのプライマリー・ヘルスケア・システムの発展と共に開発・整備されてきた、既存の地域社会基盤基本保健システム枠内での情報システム（家族別健康調査、世帯別衛生状態調査、母子保健、家族計画、予防接種記録、保健所利用状況等）への HIV/AIDS 情報システムの組み込みが必須と考えられているが、将来的課題の段階に依然として留まっている。

HIV/AIDS 情報システムのみが突出することの是非は、現在、見直される必要性に迫られている。そして、既存の地域社会基盤基本情報システムを枠組みとした適切な健康指標の取捨選択とコンピューター・ネットワーク事業は、本来、将来の全国的ネットワークを視野に

いれ、タイ保健省とパヤオ県衛生部での政策決定に基き、モデル化が企画され、プログラム化されることが必要であることは、専門家チームの考えるところである。

JICA 側からは、上記に示したようなコンセプトを基に、HIV/AIDS 情報は、基本保健システムの中で収集・管理・利用されるべく、かつ、機密保持の観点から、情報の流れを基本的には、末端の保健所から中央データバンクの一方通行に限定できるようなシステムが、青写真として提案された。

一方、JICA に対しては、ハード・ウェア面の支援が強く要請されているが、保健・医療情報に限らず、情報システムにおいては、ソフト、ハードは、今や切り離すことの不可能な一体の技術であり、援助のあり方もまた中央レベルを含んだタイ・JICA 双方の忌憚のない意見交換の上に十二分な検討が必要と考える。

2）移動健康教育プロジェクトについて

県衛生部健康教育課は、セミナー、スライド上映、ティーン・エイジャー向けラジオ放送等を媒介としてエイズ予防教育を実践してきた。エイズ・アクション・センターもトレイナー・トレーニングを中心に教育活動をしてきたが、村落住民参加型のより効率的な教育法の開発の必要性を感じていた。

パヤオ県衛生部より、移動健康教育用のビデオ・プロジェクターとスクリーン供与の要請が、 JICA への援助協力要求事項のひとつとして提出されたが、その当初の意図は、パヤオ・エイズ・アクション・センターが保管している HIV/AIDS 教育用のビデオを、住民教育に活用することにあった。

JICA 側からは、こういった住民参加型の健康教育が、一時の HIV/AIDS キャンペーンに終わることなく、県民に対する衛生部の健康教育サービスの一環として、将来的にも成人病、職業病・身体・精神障害等の住民教育に対応可能な方法論が提出され、タイ側との合意を得た。

また、プロジェクトの目標として、住民の健康知識・意識の向上と並び、保健所職員の職業意識・教育能力の向上のための訓練とすることが、JICA 側から強調され、この点に関してもタイ側の理解・合意を得ることができた。

具体的には、まず、各保健所の管轄地域ごとに健康問題をリストアップし、問題の重大性の優先順位を決定する。パヤオ県では、保健省が定めている到達目標、過去３年間の傾向、マヒドン大学で開発されたスケール（通称マヒドン・スケール）等を基に、優先順位が決定されている。

次に、管轄地域における優先順位の高い問題に関してＩＥＣのメソッドを導入、必要なメッセージを、必要なターゲット・グループに対し、最も有効なメディアを媒介に伝達する。質問票を使った調査やフォーカス・グループ・ディスカッション等も、適宜、参考にしていく。

さらに、健康教育の評価・モニタリングのための指標を設定しておくことが望ましい。

今回、JICA側が提案した方法論は、幾度かの討論を経て、概ねタイ側にも受け入れられたが、プロジェクトの時間的制約もあり、ターゲット地域は、衛生部からのアクセスの便利なドッコムタイ郡内の３村が選択された。ターゲット・グループは、各村により若干相違があったものの共通して15-40才の若年・青年層に焦点があてられた。

質問票を使った戸別調査やＩＥＣのためのワークショップが、保健所職員を対象に開催され、保健所職員自身が、質問事項を作成する運びとなった。メディアについても、保健所職員の自主性を引き出すべく、既成のものにとらわれない態度が求められた。職員にＩＥＣ概念の理解、戸別調査のノウハウ等に、少なからぬ混乱が観察されたが、我々JICAが、AIDS予防対策を目的にパヤオ県を支援しているということ、方法論に関してはタイ・JICA双方の合意を得たものの、供与器材としてビデオ・プロジェクターとスクリーンがタイ側から要請され、それがJICAの協力により実現したという事実を鑑みる時、現場の混乱と抵抗は避け難かった感を禁じ得ない。

IECワークショップは、JICAの福原専門家が、マネージメントを担当し、福田専門家は、戸別調査やIECのワークショップに際し、コンサルタントとして参加した。

結果的に、ドッコムタイ郡の３村は、AIDSを深刻な健康問題として選択、メディアとしては、ビデオとスライドの組み合わせが選択された。コンドームの使用説明や、ＰＷＡ(People with AIDS)で構成するフレンド・クラブのアピール等を加えたHIV/AIDS教育が３村にて催された。全体としてお祭り行事的であった感は否めないが、その中にも衛生局健康教育科職員と保健所職員間、保健所職員と村落住民間の活き活きとした力動関係を観察することができ、保健所職員の意識向上を促したという意味では、一定の成功を治めたと評価してもよいのではないかと思う。