WORLD HEALTH ORGANIZATION

REGIONAL OFFICE FOR THE WESTERN PACIFIC

REPORT OF THE

WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES

Suva, Fiji
2 to 12 April 1979

Manila, Philippines
August 1979

ICP/ESD/001 (STD) ORIGINAL: ENGLISH

WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES

Sponsored by the

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR THE WESTERN PACIFIC

Suva, Fiji

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REPORT

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OF THE WORLD HEALTH ORGANIZATION
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August 1979

NOTE

The views expressed in this report are those of the consultants and participants in the workshop and training course and do not necessarily reflect the policies of the Organization.

This report has been prepared by the Western Pacific Regional Office of the World Health Organization for Governments of the Member States in the Region and for those who participated in the Workshop and Training Course on Sexually Transmitted Diseases which was held in Suva, Fiji, from 2 to 12 April 1979.

CONTENTS

1. INTRODUCTION

1.1 Objectives

Many health administrators have come to realize the need for more effective control programmes to stem the intrusion and spread of sexually transmitted diseases with their associated clinical and socioeconomic expenses. On request of concerned health administrators of the Pacific area the WHO Regional Office for the Western Pacific decided to convene a practical workshop in Suva, Fiji (2-12 April 1979) with the following objectives:

(a) to strengthen the management of the control of sexually transmitted diseases;

(b) to promote the development of national control programmes on sexually transmitted diseases;

(c) to improve the competence of laboratory and clinical personnel in confirming the diagnosis of sexually transmitted diseases, particularly of penicillin-resistant gonorrhoea.

1.2 General

The workshop was opened by Dr C.J. Ross-Smith, WHO Programme Coordinator, who read the message from the WHO Regional Director for the Western Pacific (see Annex 1 for text) and by Dr A. Penington, Principal Medical Officer on behalf of the Permanent Secretary, Ministry of Health, Fiji (see Annex 2 for text). Respect was paid to those who so tragically lost their lives in the disaster caused by cyclone "Meli" a few days prior to the workshop.

The workshop was attended by 30 participants from 15 countries and areas of the Western Pacific Region (see Annex 3 for full list of participants and secretariat). Participants were divided into two groups according to their field of activity; 15 participants joined the laboratory diagnostic element (Annex 4) which was held at the Hoodless House near the Colonial War Memorial Hospital; another 15 participants attended the epidemiological-clinical element which took place at the Grand Pacific Hotel where interpreters were available.

The epidemiological-clinical element lasted for seven working days (2-10 April) while the laboratory diagnostic element extended for two additional days (2-12 April).

The programme (Annex 5) included joint sessions for both elements aimed at promoting the dialogue between the two services and members of the health team. Not less than 59 background and reference documents were distributed among various groups of participants in view of the limited availability of specialized literature in the area of participants (Bibliography: Annex 6).

Pre-course questionnaires were used to obtain information on participants' qualifications, activities and treatment practices (Annexes 7 and 8). In post-course questionnaires participants were given opportunity to evaluate the subjects discussed or introduced, regarding their usefulness, relevance and the time spent (Annexes 9 and 10).

2. WORKSHOP CONTENTS

2.1 Clinical/control element

2.1.1 Uncomplicated gonococcal infections

Risk of acquisition of infection for a man exposed to an infected woman is 25%, for a woman exposed to an infected man is 50%. The male develops symptoms of dysuria and/or discharge in 95+% of cases after an incubation period of 2-5 days, but occasionally as long as 10-14 days. The female may develop an abnormal vaginal discharge, dysuria, mentrual abnormalities or lower abdominal pain, but most are nonsymptomatic or fail to notice symptoms. Infections spread to adjacent mucosal structures if treatment is delayed. Patients untreated eventually develop resistance with subsidence of symptoms and spontaneous resolution of symptoms but are liable to severe complications.

Diagnostic methods include: examination of men for urethral discharge; gram stain smear of urethral discharge or endocervical material; culture of urethral and endocervical material on selective media, and confirmatory tests of isolates. Specimen collection techniques were reviewed.

The logistics involved in the extension of culture facilities to peripheral units and the transfer of specimens to centres capable of making a presumptive diagnosis raised considerable interest among participants. The transfer of gonococcal specimens in holding media (Stuart, Ames) at elevated ambient temperature is an unsuitable technique. Preliminary studies carried out in Singapore indicate that compared to immediate incubation (36°C) of streaked plates, exposure of plates for not more than 24 hours to an ambient temperature of $\pm$ 30°C (but not less than 24°C) in an CO_2 environment would result in a 7% loss of gonococci only. However, the problem of specimen transport for extended periods at elevated ambient temperatures has not yet been solved satisfactorily.

Treatment failures with penicillins, ampicillin (amoxicillin) and tetracycline are related to the *in vitro* susceptibility (MICs) of the organisms. From the MICs of organisms, failure rates expected with various treatment regimens can be calculated. Penicillinase-producing gonococci (PPNG) are resistant to all forms of penicillin because the enzyme destroys the beta-lactamase ring.

The serum penicillin levels and their change over time vary greatly with various penicillin preparations. Probenecid increases the peak serum levels by transiently blocking urinary excretion. Different drugs have different advantages, including prevention of post-gonococcal urethritis and incubating syphilis, and disadvantages, including side-effects and the patient's compliance.

References: 9, 9a, 10, 15, 21b, 22, 23, 24, 25, 26, 27, 28a, 28b, 31

2.1.2 Complicated gonococcal infections

Pelvic inflammatory disease (PID) occurs in 15% of women infected with gonorrhoea and is the most important complication of this infection because of hospitalization, infertility and ectopic pregnancies. Factors other than gonococcal infection which predispose to PID include: (1) prior PID, (2) intrauterine devices, (3) surgical or obstetrical manipulation of the uterus. To minimize the severity of PID, the diagnosis must be considered in women with lower abdominal pain or pain on cervical traction and adequate treatment for gonorrhoea given; a ten-day antibiotic regimen as a minimum. Sex partners should be identified, since male partners may be nonsymptomatic, and treated. Reduction in PID will occur with overall reduction in gonorrhoea and the reduction in the duration of infection in women by: (1) promptly locating and treating 'steady' female partners of men with gonococcal urethritis and (2) promptly treating women with minor symptoms of gonorrhoea before PID develops.

Disseminated gonococcal infection should be suspected in young patients with acute, monoarticular arthritis. Cultures for N. gonorrhoeae should be obtained from multiple sites. Treatment can often be successful on an outpatient basis.

Gonococcal ophthalmia neonatorum is a preventable condition if all newborn are treated with silver nitrate (1%) eye drops or tetracycline or erythromycin ophthalmic ointment.

References: 9, 9a, 10, 11, 12, 13, 14

2.1.3 Epidemiology of penicillinase-producing N. gonorrhoeae (PPNG)

The emergence of PPNG poses serious difficulties in gonorrhoea control, particularly in the Pacific, since these organisms have become established in many different countries. PPNG strains should be sought if the case (a) was acquired in Singapore, Thailand, the Philippines, Malaysia, and perhaps China (Province of Taiwan) and Bali, or (b) failed to respond to treatment with an effective penicillin regimen. Testing an unselected series of gonococci from cases which did not respond well to penicillin treatment for penicillinase production will determine the presence of PPNG strains.

References: 9, 20, 21a, 21b

2.1.4 Syphilis

Primary syphilis lesions may be overlooked unless the examination is thorough, including the rectum and mouth of homosexuals. The rash of secondary syphilis may be difficult to differentiate from other skin conditions. Syphilis in pregnant women results in foetal death, neonatal death and congenital syphilis. Only 20% of pregnancies among syphilitic mothers will result in delivery of a normal, uninfected baby. Late consequences of congenital and acquired syphilis include central nervous system disease, cardiovascular disease and gummas.

Diagnosis of syphilis by clinical criteria is inaccurate except for the typical primary chancre, condylomata lata or palmar-plantar rash. Darkfield microscopy provides definitive evidence of syphilis when typical motile spirochetes are present. Serological tests become reactive early in the course of syphilis and persist in high titre for several years. After treatment of early syphilis, nontreponemal tests become nonreactive within 1-2 years; after treatment of longer-duration syphilis, nontreponemal tests may change little. Treponemal tests should only be used as confirmatory tests for patients where there is a diagnostic problem; often clinical evaluation and a quantitative nontreponemal test is sufficient for diagnostic purposes.

Syphilis should be treated with long-acting penicillin preparations (benzathine penicillin or P.A.M.) to ensure completion of therapy. Other antibiotics should be avoided unless the patient is penicillin-allergic. Screening pregnant women may prevent congenital syphilis, but should be done both in early and late pregnancy for maximum effect. Treatment of groups at high risk for syphilis without diagnosis was suggested, including sexual partners of a patient with early syphilis, was discouraged unless careful follow-up of these people could be ensured.

Syphilis control efforts include diagnosis of symptomatic patients and screening, especially those at high risk; location of sexual partners of cases; repeated screening of selected groups, and antenatal screening to prevent congenital infections.

References: 32, 34, 35, 36, 42, 43

2.1.5 Genital ulcerations

Genital ulcers caused by infectious diseases include herpes simplex virus types 1 and 2, syphilis, chancroid and donovanosis. Genital herpes may be recognized if typical grouped vesicles or tiny superficial ulcers are present. Infection of the female is most serious since women have more severe local disease and may transmit infection to her infant at delivery. No effective therapy exists. Donovanosis is common in Papua New Guinea but is otherwise rare. This disease causes distinctive lesions which may cause mutilation or disseminate. Therapy with streptomycin and tetracycline is ineffective in Papua New Guinea, but chloramphenical 2gm daily for 6-8 weeks is effective. Chancroid is an uncommon cause of ulcerative disease in Pacific countries. When it occurs, severely painful ulcers develop often with a unilateral bubo.

The cause of genital ulcerations varies throughout the world. It was suggested that participants carefully evaluate a small series of patients to determine how much is due to syphilis.

References: 6, 44, 45, 46

2.1.6 Chlamydial infections

Improved diagnostic methods have made feasible the recognition of the many problems caused by genital chlamydial infections. These include nongonococcal urethritis and epididymitis in males; cervicitis, salpingitis and Bartholin abscess in females, and finally neonatal inclusion conjuctivitis, pneumonitis and serous otitis media from infection of the newborn at delivery. Nongonococcal infections can be differentiated from gonococcal infections by gram stain smear, but diagnostic tests to identify those due to chlamydia are not available for routine work. Tetracycline for at least seven days is effective therapy.

References: 6, 29, 30, 31, 47, 48

2.1.7 Vaginitis

Successful management of patients will benefit STD control, since patients with one STD are more likely to have another. In addition, women will be encouraged to attend clinics promptly when symptoms occur, diminishing the chances of developing complications from gonorrhoea or syphilis.

Trichomoniasis and moniliasis are the most common causes of vaginal infections. These can be diagnosed clinically in few cases but diagnosis is easier with saline suspensions of vaginal discharge, examined microscopically for the agent. Trichomoniasis can be treated with a single dose of 2gm metronidazole; moniliasis may be treated with vaginal pessaries or creams of gentian violet, nystatin or miconazole.

References: 6

2.1.8 Homosexuals and STD

Homosexuals often have many sexual partners who are not known which puts them at large risk for STD. Both gonorrhoea and syphilis are unusually common among homosexuals since asymptomatic infection of the rectum or oropharynx may occur. Many enteric infections have been recognized as unusually common among homosexuals, including: hepatitis B, probably hepatitis A, amoebiasis, giardiasis, shigellosis and perhaps salmonellosis. These infections are probably spread by oro-anal sexual practices. Frequently homosexuals are not recognized as a high-risk group because they fail to utilize usual health services and if they do, clinicians fail to consider this possibility.

(References: nil)

2.1.9 STD diagnostic tests: demonstrations

Demonstration of gram staining methods was done and gram stained smears were examined to show: typical smear of male gonorrhoea with many white blood cells containing gram negative diplococci; male NGU with only white blood cells; female gonorrhoea with only occasional white blood cells containing typical gram-negative diplococci; female endocervical smears without gonococci but many other organisms.

The appearance of gonococci and the suppression of other organisms by selective media was shown as well as the oxidase reaction. Tests for PPNG were demonstrated as were confirmatory sugar fermentation tests.

VDRL test performance was demonstrated including titres for a reactive serum. TPHA test results were also demonstrated.

References: 15, 16, 18, 19, 20, 21a, 34, 35, 38

2.1.10 Assessment and importance of gonorrhoea

Efforts to control gonorrhoea must begin with an estimation of the number of cases occurring and the complications caused. This information will be used to persuade decision-makers to allocate appropriate resources to this problem and it will be used to plan the control effort, targeting control efforts on priority problems and locales.

Estimating the number of male cases is easier than female cases, since most men develop urethritis and will be easily recognized. Therefore, initial efforts should focus on estimating these cases. Reporting of cases is often incomplete; thus, sample surveys of cases occurring over a short period of time may give a better estimate of the total cases occurring. Such a survey must include: cases occurring in government facilities in central and peripheral areas, private practice, and others, including pharmacists in some countries. Complete demographic information about all such cases would be valuable for designing control efforts, but cannot be collected for most commencing programmes.

Because clinical findings in women are nonspecific and gram stain smears are undersensitive, cultures may be the only feasible way to establish female cases of gonorrhoea. Culture surveys should focus on groups attending special VD clinics (if they exist), symptomatic women attending hospital facilities and other groups at high-risk, e.g. barmaids, masseuses, etc.

The major complication of gonorrhoea is salpingitis. Cases of PID seen in hospital can be used as a first estimate of the magnitude of the problems. To establish the portion of PID due to gonorrhoea, endocervical cultures of N. gonorrhoeae should be obtained from these women. This information can then be used to estimate the importance of this complication by calculating the costs for hospitalization, work loss, recurrent PID episode, surgical interventions needed and ectopic pregnancies.

Reference: 13

2.1.11 Assessment of importance of syphilis

The decision to implement a syphilis programme and how extensive that programme should be, must be predicated on counting cases of syphilis, and the direct outcome of undiscovered (and untreated) cases and congenital syphilis. Direct counting of cases may be difficult since the majority may not come to medical attention, and congenital syphilis may not be diagnosed. Results of syphilis treponemal serology appear to give the most accurate information, but there is still great difficulty in knowing how to interpret such data since other treponematoses may have been or are still present and results cannot be used to estimate the age when infection occurred. Serological data in infants are problematic because maternal antibody crossing the placenta and giving a (+) reaction in the infant cannot be interpreted as representing true infection in the baby.

Some sources of syphilis data include:

(1) clinic diagnosis/serology results

(2) special groups: premaritals, blood donors, military, prisoners, prostitutes

(3) hospital admission serology

(4) antenatal screening programmes

(5) private sector physicians/physicians seeing male homosexuals

(6) special screening efforts

(7) perinatal death records

(8) abortion/stillbirths (vs normal birth, both by sero (+) or sero (-))

2.1.12 Standard treatment programme

Standardized treatment practices for the entire country can ensure that treatments give optimal cure rates and minimize selection of resistant organisms. Recommended syphilis treatments for various stages of syphilis and gonorrhoea were discussed.

Selecting treatments for gonorrhoea were discussed in more detail, emphasizing the need to estimate efficacy of various regimens in the local situation on the basis of MICs and treatment trials; the effects of various treatments including failure rates, side-effects of drugs and drug effect on possible syphilis concurrently acquired; and the feasibility including cost, availability and chances to influence widespread use of the recommended schedules.

Specific recommendations were discussed for the patient with uncomplicated disease, the patient failing to continue with therapy and the penicillin-allergic patient, both pregnant and non-pregnant.

References: 22, 42, 53

2.1.13 Clinical services and STD control

For clinical services to be an effective element of the disease control, team services must be accessible, both physically and psychologically, to infected patients. To ensure adequate evaluation at all health care facilities, guidelines should be developed for each provider. Standardized management suggestions include therapy, follow-up to identify failures or complications, and contact tracing. Contact tracing (Syn. Outreach to sexual partners) can be done by:

(1) the patient notifying and motivating partner(s);

(2) using the patient to deliver an appointment slip (contact slip);

(3) eliciting names of sexual partners and health workers sending letters, phoning or visiting. All clinical services should be encouraged to report cases.

Specialty clinics for STD can perform some needs of the STD control programme including:

(1) operational research,

(2) training of health workers,

(3) collection of detailed data on disease patterns, etc.,

(4) referral centre either by phone or patient referral for problem cases.

References: 49, 50

2.1.14 Prevention of STD

STD are greatly affected by behavioural changes in the society, so control efforts limited only to patients will be less effective than a broader, community-based approach. For example, urbanization removes many people from their societal constraints and exposes them to new behaviour patterns. Broadly-targeted educational efforts thus should be an important part of a control programme.

Prophylaxis, including gonococcal vaccines, were discussed. Although they are useful, none are likely to be completely effective. Health legislation aspects were reviewed, including laboratory reporting laws, central seroreactor registry, minor treatment laws, antenatal screening, screening of other high-risk groups, and use of eyedrops for all newborns to prevent ophthalmia neonatorum.

References: 51, 52

2.1.15 A simplified approach to STD control: Swaziland

The simplified approach to STD control when diagnostic laboratory tests are not available was reviewed. This example may be a feasible first step where facilities are limited. However, when possible, more accurate diagnostic tests should be used as the basis for control efforts.

(References: nil)

2.1.16 Laboratory services and STD control

Rational organization of laboratory services is essential when resources are extremely limited. Organization of laboratory services should use laboratory resources available throughout the country. For example, culture facilities in hospitals could begin gonorrhoea culturing or university facilities could do MIC testing. Also stressed was the need for communication between laboratory personnel and clinicians to ensure that patient care and STD control could be achieved.

(References: nil)

2.1.17 STD control: overview

STD control should begin with an assessment of the magnitude of the problem. Then an evaluation of existing STD control efforts should be made, including government, practitioner and community groups. The feasibility of various control efforts should then be estimated and control priorities developed. Finally, strategies for implementing a control programme could be devised which are consistent with the country health plans.

2.1.18 Individual plans toward STD control

At the end of the workshop participants were requested to discuss their short-term plans for the improvement of STD control activities in their area of work.

American Samoa

Syphilis has not yet been documented. Increase of gonorrhoea among American Samoans.

(1) Genital lesions and pelvic inflammatory disease to become notifiable.

(2) Implementation of an STD orientation programme for physicians.

(3) Improvement of laboratory capability to identify β-lactamase-producing *N. gonorrhoeae*.

Cook Islands

One public health clinic sees STD cases.

(1) Information to health workers on STD situation in the South Pacific.

(2) Evaluation of available statistical data.

(3) Consultation with physicians in preparation of standardized treatment programme.

(4) Introduction of gonococcal culture technique.

(5) Introduction of contact slips.

(6) Establishment of a central syphilis serological reactor register.

(7) Expansion of health education.

Fiji

(1) Intensification of health education/information activities to public and physicians.

(2) Extension of VDRL screening programme to other parts of the islands.

French Polynesia

Among 205 reported cases of syphilis about 25 had symptomatic early lesions. Widespread syphilis serological screening programme. Central laboratory tests about 10 000 sera annually. One-quarter of the population live on 80 islands surrounding Tahiti and are difficult to reach. Of primary importance is to convince medical practitioners to pay more attention to STD. No infertility problem. Activities envisaged until September 1979.

(1) Report on STD workshop will be given wide publicity, particularly stressing sequelae of gonococcal infections.

(2) Health information activities directed to local medical practitioners (seminars) and the public (mass media).

(3) Changes in syphilis treatment.

Gilbert Islands

(1) Introduction of gonorrhoea culturing in antenatals to provide data.

(2) Establishment of a central syphilis serological reactor register.

(3) Training on STD various levels of health providers (medical officers, medical assistants, village health aides).

(4) STD training to be incorporated into the nursing curriculum.

Guam

100 000 inhabitants. Notified cases (1979): 15 latent syphilis, 258 gonorrhoea (estimated true incidence about double) from which 18 β-lactamase producers could be isolated. Considerable number of short-term visitors and tourists. Thirty cases per month of salpingitis of unknown origin.

(1) Extension of gonorrhoea and syphilis laboratory diagnostic capabilities to the periphery in an attempt at least to assess the extent of the problem.

(2) In support of objective No. 1, inservice training for nurses in specimen taking and culture techniques.

(3) Establishment of procedures for the management of anaphylactic and procaine reaction and subsequent training of health personnel.

(4) Review of the recommended treatment schedules in view of anaphylactic reactions and possible alternative treatment with tetracycline.

Lower priority

(5) Providing information to private physicians.

(6) Implementation of screening procedures on females with salpingitis in the hospital emergency room.

(7) Development of health educational material for schoolchildren.

(8) Organization of national STD workshops for physicians for two years.

New Hebrides

(1) Adoption of a standard treatment regimen.

(2) Assessment of the extent of STD problem by data review including enquiry with pharmacists and herb doctors.

(3) Rallying the support of groups (politicians, clergy, etc) which had been opposed to the inclusion of STD in mass media advice.

(4) Commencing a hospital-based STD control programme which would eventually expand into a nationwide programme.

(5) Setting up educational programme on STD for various members of the health team and extension to general public and schoolchildren.

(6) Assessment of need for laboratory equipment and supplies.

(7) Establishment of central syphilis serological reactor register.

(8) Screening programme covering various high yield groups: Pelvic inflammatory disease, abortion and antenatal clinics.

New Zealand

(1) Educational/information programme directed to private physicians and especially gynaecologists to obtain better cooperation.

(2) Promotion of dialogue between health department and hospital boards on closer link between clinical and epidemiological services.

(3) Investigation into the problem of disseminated gonococcal infection.

(4) Intensification of surveillance for β-lactamase-producing gonococcal stains.

(5) Establishment of a central syphilis serological reactor register.

(6) Research into sexually transmitted chlamydia problem and sequelae of perinatal transmission.

Papua New Guinea

The plans for 1979 are still under discussion and consist of the following activities in the order of priority:

(1) revision of national treatment schedules, particularly for gonorrhoea

(2) training and recycling of health personnel in STD management as integral part of their curriculum

(3) studies and research would include surveillance of β-lactamase-producing N. gonorrhoeae and efficacy of treatment regimens

(4) coordination with the Division of Health Education and eventual transfer of health education for STD control to the programme

(5) unification of contact tracing methods and its extension to the periphery.

Priority is given to areas with known STD prevalence.

Tonga

There were 35 cases of gonorrhoea (including two females) and three cases of primary syphilis (1978).

(1) VDRL screening of all contacts of the syphilis cases.

(2) VDRL screening of all prostitutes.

(3) Implementation of a standardized treatment programme.

Trust Territory of the Pacific Islands

Tourist trade is increasing and so is the foreign labour which might import syphilis into the country. Among the antenatals a high gonococcal infection rate was found by culture. Urethral strictures have become more frequent.

(1) VDRL screening of prostitutes (six monthly) and foreign labour (annually).

2.2 Teaching contents - laboratory

(1) The method of choice for diagnosis of gonococcal urethritis in males is to examine microscopically a gram stain smear. As the method is highly specific and 98% sensitive there is no necessity to use the more costly method of culture. However, in certain circumstances such as test of cure, asymptomatic patients (e.g. sex contacts), research and detection of N. gonorrhoeae from other sites, culture is preferred. (References: 9, 15, 16, 29, 30, 31)

(2) In the best of hands, gram stain smear examination will detect not more than 60% of gonococcal infections in females. Because of lack of sensitivity, and the presence of other bacteria which may mimic N. gonorrhoeae, culture by the use of an enriched selective medium, such as the modified Thayer Martin medium, is preferred for the diagnosis of gonorrhoea in females. The site of choice for specimens is the endocervix. The addition of a culture from the rectum will increase the isolation rate by 10% but its practical application will depend on the prevalence of the disease in the population examined. The enrichment and inhibitors may be prepared by laboratories at low cost. (References: 9, 16, 18)

(3) The method of choice for the detection of beta-lactamase is the rapid iodometric method. It is fairly simple, cheap and results may be obtained in an hour. Using this method it is possible to screen large numbers of isolates in one session. The use of cephalosporin 87/312 is simpler but the antibiotic is at present not readily available in most countries. (References: 9, 21a, 21b)

(4) The determination of MIC of drugs against N. gonorrhoeae is valuable in evaluating the appropriate drug of choice in the treatment of gonorrhoea in a country. The technique is a sophisticated one, and laboratories regularly isolating N. gonorrhoeae in selective medium should attempt to develop it. The recommended method is the one used by Centre for Disease Control, United States of America, and control strains with known MIC values should always be used. (References: 9; MIC method from CDC)

(5) It is advisable that laboratories should use only one non-treponemal and one treponemal test for syphilis serology. Addition of more tests will not help but will further confuse the results. Besides, it is costly. The non-treponemal test advocated is the VDRL slide test which is fairly simple to perform, and is used by most countries. The treponemal test advocated is the MHA-TP test. It is simpler to perform than the FTA-ARS test and is less costly to set up. (References: 35, 36, 37, 38)

(6) To obtain reliable test results, stringent quality control measures should be observed by laboratories. Such internal quality control is designed to ensure reproducible results. However, to ensure that the different laboratories are producing results of equivalent standards, national laboratories should participate in the CDC proficiency test programme conducted through WHO auspices. This will help to standardize test performances among national laboratories. Such national laboratories should then undertake to conduct similar programmes among laboratories in their respective countries.

(7) It is desirable that laboratories should maintain a healthy working relationship with their clinical counterparts to ensure a minimum of wastage in resources. A continuing dialogue should be maintained to solve common problems so that limited laboratory resources can be utilized effectively.

2.3 Extracurricular activities

A bilingual scientific session for interested participants was held on Sunday, 8 April, when members of the secretariat and participants reported on their recent research activities.

Members of the secretariat participated in the first public forum on sexually transmitted diseases at the University of the South Pacific on Monday, 9 April. It was attended by over 120 persons. After a short introduction of the subject, the secretariat replied to written questions.

3. RECOMMENDATIONS

The secretariat to the Regional workshop on sexually transmitted diseases (STD), held in Suva, Fiji, April 1979, recommends the following activities towards the development of more efficacious national STD programmes in the South Pacific.

3.1 Once the epidemiological component of the WHO intercountry epidemiological team (ESD 001) has become fully established, STD control should be incorporated into the team's activities.

With this aim in mind, it is recommended that the team leader together with an STD epidemiologist and a consultant fully conversant with STD diagnostic technology, should visit island territories of the Pacific area, consult with the authorities on progress made in the assessment of the STD situation, evaluate proficiency in laboratory diagnostic techniques and draw up cooperative activities to further strengthen national control programmes. This would provide the team leader with valuable experience and would enable him to follow up the plans drawn up in consultation with health authorities.

The holding of a one or two-day national seminar on STD case management and control at the time of the visit could further the aim of the mission.

3.2 It is most important that participants in the laboratory diagnostic component of this workshop, after return to their home countries, be given the opportunity to apply some of the techniques they have learned during the workshop.

Towards this end, laboratory workers were provided with glassware and reagents to carry out syphilis serological tests. The provision of additional supplies (by the Western Pacific Regional Office) is necessary if the following minimal activities are to be carried out prior to the visits recommended in the previous paragraph:

(a) It is recommended that each territory be encouraged to establish a VDRL seroreactor profile on sera obtained from hospital admissions per attached table 1. The aim should be to test about 50 sera per sex and group; if possible, weakly reactive and reactive sera should be checked by TPHA (MHA-TP). These data would help in the evaluation of yaws/syphilis transmission in the examined population and allow comparison with similar data obtained from other population groups.

(b) Likewise, the trained laboratory workers should aim to obtain about 100 N. gonorrhoeae strains from male urethritis cases and test these strains for β-lactamase production. A comparison with direct smears would provide a measure to assess the proficiency achieved in the performance of the culture technique and to estimate the frequency of nongonococcal urethritis.

An optional activity would be the culture testing of male urethritis cases before and three days after treatment following the outline provided to participants to evaluate treatment efficacy.

3.3 To keep the interest alive and to promote the exchange of ideas and experience between relatively isolated participants on implementation of techniques discussed during the workshop, use may be made of the educational satellite telecommunication system. At these conferences the moderator would be able to respond to technical questions related by participants for the benefit of all listeners.

3.4 β-lactamase-producing strains of N. gonorrhoeae are being identified in a number of South Pacific laboratories and speed of identification of foci of infection with such strains may well enable their timely control and eradication.

It is recommended that health authorities be encouraged to notify their counterpart authorities in other countries/areas promptly, providing them with as much detailed epidemiological information as possible (time, place of detection, source of infection, etc.) which would assist in locating foci in their area of jurisdiction.

Any epidemiological information on cases from which these strains have been isolated should also be forwarded to the Western Pacific Regional Office of WHO (Attention CDS) to ensure dissemination of relevant data to other national health authorities.

3.5 The attention of health administrations should be drawn to training and referral facilities available at the WHO Collaborating Centre for Venereal Disease Serology and Bacteriology (Director Dr E.H. Sng), Department of Pathology, Outram Road Hospital, Singapore; also, problem sera may be sent to the WHO Collaborating Centre for Treponematoses Serology (Director Dr M. Garner), NSW Institute of Pathology and Clinical Research, Westmead, Sydney, Australia.

Table 1

Hospital admission (for any cause)
VDRL serological tests

Age (in years)

	0 - 2		3 - 5		6 - 14		15 - 25		25 - 40		40 +	
	M	F	M	F	M	F	M	F	M	F	M	F
N R												
W R												
1:1												
1:2												
1:4												
1:8												
1:16												
1:32												
1:64												
1:64												
TOTAL												

ANNEX 1

Official Opening

Address by Dr C.J. Ross-Smith
WHO Programme Coordinator for the South Pacific

Ladies and Gentlemen,

As you have heard from Dr Tin Maung Maung and as you can see, Dr Senilagakali is unfortunately not with us this morning. The emergency situation in the eastern and southern islands of Fiji, wrought by devastating cyclone Meli, has prevented his presence. Dr Senilagakali left early this morning with other health staff to visit islands in the Lau group - which were hit by the cyclone.

I am sure you would all join with me in extending our deepest sympathy to the people of Fiji at this sad time. Dr Penington is representing the Ministry of Health today and it would be much appreciated, Dr Penington, if you could please pass on this message to the Fiji Government through the Minister of Health.

Will you all please join with me in observing a short silence as a mark of respect for those who so tragically lost their lives in the cyclone disaster.

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Annex 1

MESSAGE OF THE REGIONAL DIRECTOR
AT THE OPENING OF THE WORKSHOP AND TRAINING COURSE
ON SEXUALLY TRANSMITTED DISEASES

Suva, Fiji, 2-12 April 1979

Ladies and Gentlemen,

It is my regret that I am not able to attend your meeting today but unfortunately this is due to a heavy work schedule and prior commitments in the Philippines. To carry my message to you at the commencement of this important gathering, I am asking Dr Charles Ross-Smith, the WHO Programme Coordinator for the South Pacific, to represent me.

I have become aware through many official and non-official communications from governments in the South Pacific of the fact that sexually transmitted diseases are becoming an increasingly serious problem in the area. In particular, syphilis and gonorrhoea are on the increase, giving rise to severe malformations and infertility, as well as other tragic social consequences. In fact, the situation at present creates a public health problem of considerable magnitude.

All of you will know that throughout the world where statistics are readily available, the prevalence of sexually transmitted diseases was quite low after penicillin became widely available in the late 1940s. An upsurge then has been explained mostly by higher transmission rate owing to increased permissiveness, greater mobility of population facilitated by an increase in travel and growth of tourism. At the same time, traditional control measures could not cope with the dramatically increasing numbers in sexually transmitted diseases. Recently, with the streamlining of epidemiological control measures, some of the more developed countries have been able to stem and reverse the tide and a reduction of cases from STD has been documented in those countries.

This hopeful development, however, has been countered by the emergence of beta-lactamase producing strains of the gonococcus which are penicillin-resistant. All countries are subject to this threat. While the more developed countries with strong control services may be able to deal with this new problem, the developing countries face a double handicap. Not having yet developed satisfactory control mechanisms for the classical STD they are now confronted by the new face of STD which makes the problem even much harder to control.

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It can be predicted that the problem of sexually transmitted diseases in countries of the South Pacific will get worse before it will get better. Cases will tend to increase until better control mechanisms are developed. This must include adequate provisions to detect and deal with penicillin-resistant gonorrhoea.

Your presence here today makes it clear that the governments of the South Pacific area have taken cognizance of the serious public health problem posed by sexually transmitted diseases and that your countries are planning to do something about it.

I appreciate the kind gesture of the Government of Fiji for agreeing to host this important workshop and training course and I would like to thank them in particular for making available the facilities which are to be used for the practical training activity.

I am confident that the consultants and the members of the secretariat who have come from many countries abroad will do their very best to provide you with all the necessary information so as to enable you to develop and improve programmes in your countries on the STD control. To all participants, I trust that this meeting will prove a most fruitful and rewarding learning experience.

Finally, I am pleased to note that Dr Jona Senilagakali, the Permanent Secretary for Health of Fiji, will be with you today and that he has kindly consented to deliver the opening address.

ANNEX 2

OPENING ADDRESS BY THE PERMANENT SECRETARY
FOR HEALTH, FIJI

(DELIVERED BY DR A. PENINGTON ON BEHALF OF THE FIJI GOVERNMENT)

The Workshop Director, Dr Antal,
The Consultants, Dr S. Thompson C.D.C. Atlanta, U.S.A.,
and Dr Sng from Singapore,
Distinguished Guests,
Delegates from the Regional Countries,
Colleagues,
Dr Charles Ross-Smith,
Ladies and Gentlemen,

In the absence of Dr Senilagakali, who has been called away because of the emergency situation following hurricane Meli, it is my honour and privilege to be here with you this morning to perform the official opening of this Workshop and Training Course in Sexually Transmitted Diseases, and to deliver Dr Senilagakali's address.

May I welcome, on behalf of the Minister of Health, and the staff of the Ministry, all colleagues and friends who are visiting Fiji for the first time. I hope you'll find our weather and hospitality agreeable.

Likewise, I would like to extend a warm welcome to all delegates, from American Samoa, Australia, Cook Islands, Gilberts, Guam, New Caledonia, New Hebrides, New Zealand, Papua New Guinea, Solomons, Tonga, Trust Territories and Samoa.

At its twenty-eighth meeting in May, 1975, the World Health Assembly had as its subject for Technical Discussions the "Sexually Transmitted Diseases". This subject had been chosen because of the increasing world incidence of this group of infectious diseases and their effect in infant mortality and morbidity and the loss of economic productivity and costs to the community of these diseases in both males and females, particularly in the younger age groups. Among these infections, gonorrhoea had become the most commonly notified infectious disease in the United States of America, and the number of cases being reported in other countries was increasing proportionately to the populations. Not only was there an increase in the number of cases of gonorrhoea, but also others of these diseases were apparently on the increase, with an increase in morbidity and often prolonged ill health or infertility in younger females. An increase in the number of syphilitic infections was also reported and the Assembly discussed some of the factors which were apparently contributing to this worldwide epidemic.

Annex 2

Opening address delivered by Dr A. Penington (cont')

During the course of the discussions it was pointed out that comparison of statistical data between countries were difficult owing to variations in the criteria and standards of diagnosis and reporting, the facilities available, and the extent to which treatment was given by private practitioners, pharmacists and others, including the patients themselves, who may have resorted to traditional local remedies for treatment. Even in developed countries, the official statistics may indicate only a fraction of the total extent of the problem as underreporting of these diseases is usually very high.

The increase in the number of cases of syphilis reported was a cause for concern, as syphilis, through its complications, could be associated with significant morbidity and cost to the community involving death, cardiac invalidism, mental deterioration, blindness and deafness. It was also considered that in regions where yaws had been eradicated and new susceptibles have arisen, syphilis may appear as a new disease.

The hopes for control of sexually transmitted diseases through the demonstrated effectiveness of penicillin in treatment had not been realized, and in the case of gonorrhoea, the development of penicillin-resistant gonorrhoea with beta-lactamase producing organisms has been demonstrated in many countries, and appears to be an increasing problem, and while there has been an increase in the numbers of sexually transmitted diseases in all age groups, there is a disturbing trend towards higher rates of increase in females in the age group 15-19 years. It was concluded that the existing methods of control as then applied, had only limited success, and this limited success now appears to be even less apparent.

It was recognized that the various factors leading to the present increase in the number of cases of all types of sexually transmitted diseases were demographic, medical, socioeconomic, technical and behavioural in origin. These factors still apply in all communities, and exist on a worldwide scale. It is not surprising, therefore, that there has been an increased recognition of many forms of sexually transmitted diseases which had previously been regarded as non-sexual in character. These include chlamydia which has been found in about 40% of males affected by non-gonococcal urethritis and may represent a genital focus for trachoma. About 1.0% of patients with non-gonococcal urethritis develop the classic Reiter's syndrome with associated rheumatic, ocular and sometimes cardiac complications. Genital infection with herpes type II virus may be responsible for systemic infection in the newborn which is usually fatal, but is also suspect in the causation of carcinoma of the cervix. Granuloma inguinale and chancroid are found more commonly in certain countries than in others, while genital warts are seen in most countries, but have not hitherto been reported uniformly nor have they been included in the list of notifiable infectious diseases.

Annex 2

Opening address delivered by Dr A. Penington (cont')

While the worldwide epidemic of these diseases has been well recognized, it is only within recent years that these conditions have become more commonly recognized in Fiji. The incidence of gonorrhoea in Fiji showed a dramatic increase during the 1960s, and the maximum number of 1506 cases occurred in 1971. The number of reported cases remained in the vicinity of 900 per year except for 1978, when 1073 cases were reported. An even more dramatic and disturbing situation applies to syphilis, which has now become a major cause for concern. Others of the sexually transmitted diseases are less common in Fiji, and our major problems lie with gonorrhoea and syphilis, although non-gonococcal urethritis and herpes infections are being seen, even if not reported under our Notifiable Disease Ordinance.

The same factors leading to the increase in these infections apply in Fiji as in other more developed countries. Fiji has, during the past fifteen years, undergone rapid changes in the social and economic areas, and population movements have been accelerated through improved transport systems. Similar changes are taking place in most countries in the South Pacific area, and it is possible that the same increase in sexually transmitted diseases could occur in other countries of this area.

It is for this reason that the World Health Organization has organized this workshop and training course, which will meet one of the "felt needs" of those engaged in public health in the various territories. It is my sincere wish that all will benefit from the course of training which is being provided for you and that all countries will benefit from the course which you are attending.

Last, but certainly not least, may I extend our appreciation to the World Health Organization for its collaboration in this workshop.

I now have great pleasure in declaring this Regional Workshop and Training Course in Sexually Transmitted Diseases, open.

ANNEX 3

FINAL LIST OF PARTICIPANTS, TEMPORARY ADVISERS, CONSULTANTS, SECRETARIAT, OBSERVER

1. PARTICIPANTS

AMERICAN SAMOA

Dr Tofiga Liaiga
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FIJI (continued)	Ms Stella Driu Laboratory Technician Lautoka Hospital Lautoka
	Mr Vinod Lal Laboratory Technician Pathological Laboratory C.W.M. Hospital Suva
FRENCH POLYNESIA	Dr Jacques Louis Epidemiologiste Institut Recherches Louis Malarde Papeete
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	Ms Margaret Joy Green Scientist National Health Institute Wellington
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PAPUA NEW GUINEA (continued)	Dr Joseph D. Igo Assistant Secretary National Health Laboratory Services Port Moresby General Hospital FMB Boroko
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	Mr Nicholas Kikini Laboratory Technician Ministry of Health & Medical Services Honiara
TONGA	Dr S.T. Puloka Senior Medical Officer, Public Health Ministry of Health Nuku'alofa
	Mr Taniela Moala Assistant Laboratory Technician Vaiola Hospital Nuku'alofa
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2. SECRETARIAT

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SECRETARIAT (continued)

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Short-term Consultant	Dr E.H. Sng Department of Pathology Outram Road Singapore 3 Republic of Singapore
Short-term Consultant	Dr Sumner E. Thompson Chief, Clinical Research Section Venereal Diseases Control Division Center for Disease Control Atlanta, Georgia 30333 United States of America
	Dr Tin Maung Maung WHO Medical Officer P.O. Box 113 Suva, Fiji
	Dr P.N. Wang WHO Medical Officer c/o Ministry of Health Nuku'alofa Tonga

3. OBSERVER

Dr Tim Kuberski
South Pacific Commission
Noumea
New Caledonia

ANNEX 4

GROUPS FOR LABORATORY PRACTICALS

(Venue: Pathology Laboratory, Fiji School of Medicine, at Hoodless House)

GROUP A	Team 1	Mr Sile Koria (American Samoa) Ms Stella Driu (Fiji)
(Dr C.S. Lee)	Team 2	Mr Vinod Lal (Fiji) Mr Louis Marsters (Cook Islands)
GROUP B	Team 3	Mr Tebebeku Teia (Gilbert Islands) Ms Teresita Bolano (Guam)
(Dr P.N. Wang)	Team 4	Mr Taniela Moala (Tonga) Mr Sebio Shoniber (TTPI)
GROUP C	Team 5	Ms Margaret Joy Green (New Zealand) Dr Asaua Faleniu (Samoa)
(Dr N.U. Rao)	Team 6	Mr Arua Igua (Papua New Guinea) Mr Nicholas Kikini (Solomon Islands)
GROUP D	Team 7	Ms Jeanne Lecaill (French Polynesia) Dr Hubert Schill (New Caledonia)
(Ms R. Haessig)	Team 8	Mr Kalfabun Esau (New Hebrides) Ms R. Haessig

REMARKS:

1. Put protective gown on before you start laboratory work.
2. Take every precaution against laboratory infection with pathogenic microorganisms.
3. Clean your bench-top and tidy your bench after finishing your work.
4. No smoking in the laboratory.

ANNEX 5

PROGRAMME

WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES
SUVA, FIJI, 2-12 APRIL 1979

MONDAY, 2 APRIL

Joint Session at GPH Hibiscus Room

09.30	Official Opening Message from Regional Director WHO/WPRO Global STD situation Fiji STD situation
10.15	Coffee
10.30	Official photograph
10.45	Introduction of faculty and participants Organization and orientation of workshop Precourse questionnaire
12.00	Lunch
14.00	"Uncomplicated gonococcal infection" Clinical spectrum Diagnostic methods Discussion
15.00	Antibiotic resistance and therapy Discussion
16.00	Close

TUESDAY, 3 APRIL

Clinical and epidemiological at GPH Hibiscus Room		Laboratory at Hoodless House
08.30 Treatment of uncomplicated gonorrhoea	08.30 - 12.00 Exercise	- Preparation of modified Thayer-Martin medium
09.30 "Complicated gonococcal infection"		- Haemoglobin solution
Salpingitis		- GC agar base
Discussion		- Autoclave above solutions

Annex 5

TUESDAY, 3 APRIL (continued)

Clinical and epidemiological at GPH Hibiscus Room		Laboratory at Hoodless House
09.15	Coffee	
09.30	Disseminated gonococcal infection (DGI)	Lecture - Laboratory method for the isolation and identification N. gonorrhoeae
	Gonococcal ophthalmia	
11.00	"Epidemiology of penicillinase producing N. gonorrhoeae"	Exercise - Preparation of enrichment and inhibitors
	Discussion	- pour plates and label
		Discussion - media types
12.00	Lunch	12.00 Lunch

Afternoon - Joint Session at GPH

14.00	"Syphilis" Clinical aspects and differential diagnosis Congenital syphilis and other sequelae Discussion
15.00	Coffee
15.15	Diagnostic methods Discussion
16.00	Close

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WEDNESDAY, 4 APRIL

Clinical and epidemiological at GPH Hibiscus Room		Laboratory at Hoodless House
08.30 Treatment	08.30 - Lecture -	"Presumptive testing of
Discussion	12.00	gonococci"
	Exercise -	perform presumptive tests on previously inoculated MTM
09.30 Control		
Discussion		- subplate to instructor's CA
10.15 Coffee		
10.30 "Syphilis epidemiology in Fiji"	Lecture -	Quality control of CG culture medium"
Discussion	Exercise -	Perform quality control testing on participants' MTM, comparing it with instructor's MTM
12.00 Lunch		
14.00 "Genital ulcer disease"		- test unknown swabs using MTM and CA
Donovanosis (granuloma inguinale)		
Discussion	Lecture -	"Maintenance of stock cultures"
15.00 Coffee		
	12.00	Lunch

Annex 5

WEDNESDAY, 4 APRIL (continued)

Clinical and epidemiological at GPH Hibiscus Room			Laboratory at Hoodless House
15.15 Genital herpes	14.00 - 16.00	-Lecture -	"Laboratory identification of peniccilinase-producing gonococci"
Discussion			
Chancroid			
Discussion		Exercise -	Penicillin susceptibility test by disc diffusion
16.00 CLOSE		Demonstration -	Confirmatory test by carbohydrate utilization
	16.00	CLOSE	

THURSDAY, 5 APRIL

08.30 "Vaginitis"	08.30 - 12.00	Lecture -	"Diagnosis by Gram stain smear"
Discussion			
"Chlamydial infections"		Exercise -	perform Gram stain on smears and examine
Discussion		-	read quality control plates and evaluate
10.45 Coffee		-	read unknown strains and
11.00 "Unusual STD among homosexuals"			perform presumptive tests
Discussion		-	read disc diffusion plate
12.00 Lunch		Demonstration -	Carbohydrate utilization

Annex 5

THURSDAY, 5 April (continued)

At Hoodless House

14.00	STD diagnostic tests		Lecture	- "Specimen collection, handling and quality control at peripheral level"
	Laboratory demonstrations			
15.00	Coffee			
15.15	Laboratory demonstration (continued)	12.00	LUNCH	
		14.00 16.00	Lecture	- "Review GC laboratory services"
16.00	CLOSE			
			Discussion	- Antibiotic susceptibility testing
			Lecture	- "Laboratory diagnosis of syphilis"
		16.00	CLOSE	

FRIDAY, 6 APRIL

08.30	"Assessment of importance of gonorrhoea"	08.30 12.00	Lecture	- "VDRL slide test"
	Discussion		Exercise	- VDRL test
10.15	Coffee			- prepare test needles
10.30	"Assessment of importance of syphilis"			- check rotator speed
	Discussion			- prepare VDRL antigen
				- prepare VDRL antigen with control sera
				- test unknown sera

Annex 5

FRIDAY, 6 APRIL (continued)

Clinical and epidemiological at GPH Hibiscus Room		Laboratory at Hoodless House
12.00 LUNCH	12.00	LUNCH
14.00 "Standard Treatment Programme"		Exercise - test unknown sera (cont'd)
15.15 Coffee		- review results
15.30 Discussion		Lecture - "Glassware cleaning, reagents prepation, handling and transportation of specimens"
16.00 CLOSE		
	16.00	CLOSE

MONDAY, 9 APRIL

8.30	"Clinical services and STD control"	08.30 12.00	Lecture - "Quality proficiency testing for peripheral laboratories"
	Accessibility		
	Evaluation (proficiency testing)		
	Management (follow-up, contact tracing)		Exercise - test unknown specimens by VDRL
	Discussion		- review results and discussion
10.15	Coffee		Visit Central Pathology Laboratory
10.30	"Prevention of STD"	12.00	LUNCH
	Prophylaxis Community participation Health education	14.00 16.00	Lecture - Introduction to Rapid Plasma Reagin test"
	Legislation		Demonstration - RPR card test
	Discussion		- darkfield microscopy for T. pallidum.
12.00	Lunch	16.00	CLOSE

Annex 5

MONDAY, 9 APRIL (continued)

14.00 "A simplified appraoch to STD control: Swaziland"

Discussion

15.00 Coffee

15.15 "STD control, an overview"

Discussion

16.00 CLOSE

TUESDAY, 10 APRIL

Joint Session AT GPH Hibiscus Room
08.30 - 10.15

"STD Control - Laboratory Services"

discussion

(continued - in separate sessions)

Clinical and epidemiological at GPH Hibiscus Room			Laboratory at Hoodless House
10.45 Individual short and medium plans	10.15 12.00	Lecture	- "Treponemal tests"
Discussion		Exercise	- TPHA test - prepare TPHA reagents
12.00 Lunch			- perform tests on unknown sera
14.00 Individual plans, continued			
15.00 Coffee	12.00	Lunch	
15.15 Discussion	14.00	Lecture	-"Profiency testing: sera preparation, distribution and interpretation"
Course summary	16.00		
CLOSING CEREMONY BY WPC			
CLOSE MEDICAL OFFICER PROGRAMME	16.00	CLOSE	

Annex 5

WEDNESDAY, 11 APRIL

08.30	Exercise	read TPHA test results
12.00	Exercise	test 15 unknown sera by VDRL and TPHA tests
	Lecture	"Interpretation of syphilis serologic reactions"
12.00	Lunch	
14.00	Lecture/ Demonstration	Laboratory services for other STD including LGV, chancroid, Donovanosis, trichomoniasis, herpes"
16.00	CLOSE	

THURSDAY, 12 APRIL

08.30	Exercise	read TPHA tests
12.00		Discussion
	Lecture	"Responsibilities of central laboratory and relationship to other countries"
		Discussion
12.00	Lunch	
14.00	Course summary and discussion	
	Course questionnaire and critique	
16.00	CLOSE	

ANNEX 6

BIBLIOGRAPHY

ADMINISTRATIVE MATTERS

1. Information Bulletin No.1

2. Information Bulletin No.2

3. Information Bulletin No.3

4. Programme

REVIEWS

5. The World Situation on Sexually Transmitted Diseases and its New Aspects - G.M. Antal

6. Sexually Transmissible Conditions other than Gonorrhoea and Syphilis - by Willim M. McCormack

7. Sexually Transmitted Diseases - by Gavin Hart

8. Revue generale - Methodes de laboratoire utilisables pour le depistage et la surveillance des maladies a transmission sexuelle - by G.M. Antal and G.Y. Causse

GONOCOCCAL INFECTION

Review:

9. Neisseria Gonorrhoeae and Gonococcal Infections - WHO Technical Report Series No.6

9a. Gonococcal Infection - S.T. Brown

Epidemiology

10. Simplified Cycle of Gonorrhoea Transmission, E/F

Clinical aspects

11. Disseminated Gonococcal Infection - by K.K. Holmes, G.W. Counts H.N. Beaty

12. Complications of Gonococcal Infection - by Ronald K. St. John

13. Economic Consequences of Gonorrhoea in Women: Experience from an Urban Hospital by R.C. Rendtorff, J.W. Curran, Chandler, W.L. Wiser and H. Robinson

Annex 6

Diagnosis

14. Gonorrhoeal Conjunctivitis - by R.W. Thatcher and T.H. Pettit

15. Criteria and Techniques for the Diagnosis of Gonorrhoea

16. Procedures for Use by the Laboratory in the Isolation and Identification of Neisseria Gonorrhoea

17. Preparation of Nephelometer (McFarland)

18. Simplified Media for Isolating Neisseria Gonorrhoeae - by E.H. Sng, V.S. Rajan and A.L. Lim

19. Identification of Neisseria Gonorrhoeae by Carbohydrate Disc Reactions on a Modified Fermentation of Medium - T.O. Odugbemi and S. Hafiz

β-lactamase producing N. gonorrhoeae

20. Detection of Penicillinase-producing Neisseria gonorrhoeae by Starch Paper Technique (modified)

21. Rapid Laboratory Tests for β-lactamase Production by Bacteria

21b. -lactamase-producing N. gonorrhoeae - Weekly Epidemiological Record - No. 45 p. 357

Treatment

22. Gonorrhoea Treatment Schedules, 1979 - MMWR Morbidity and Mortality Weekly Report

23. National Gonorrhoea Therapy Monitoring Study - by Jaffe, Biddle, Thornsberry, Johnson, Kaufman, Reynolds, Wiesner and the Cooperative Study Group

24. Therapy for Incubating Syphilis - Effectiveness of Gonorrhoea Treatment by Schroeter, Turner, Lucas and Brown

25. Adverse Reactions to Drugs Used in the Treatment of Venereal Diseases - by Harold W. Jaffe

26. Clinical Survey . ANAPHYLAXIS - Course, Mechanisms and Treatment - by J.F. Kelly and R. Patterson

27. Comparison of Aqueous Sodium Penicillin G in Lidocaine and Aqueous Procaine Penicillin G for Treatment of Gonorrhoea - by M.G. Adams, M. Turck and K.K. Holmes

28a. Single Dose Aqueous Procaine Penicillin G. Theraphy for Gonorrhoea: Use of Probenecid and Cause of Treatment Failure - by K.K. Holmes, W.W. Karney, J.P. Harnisch, P.J. Wiesner, M. Turck, and A.H.B. Pedersen

Annex 6

28b. Nature et importance des reactions secondaires a la penicilline, compte tenu notamment des case mortels par choc anaphylactique - by O. Idsoe, T. Guthe, R.R. Willcox and A.L. de Weck

NON-GONOCOCCAL URETHRITIS

29. Diagnosis of Non-gonococcal Urethritis - by Stephen L. Swartz

30. Gonococcal and Non-gonococcal Urethritis in Men - by N.F. Jacobs and S.J. Kraus

31. Prompt Pointers to the Aetiology of Male Urethritis - by P.S. Nathan, M. Jegathesan and S. Ramalingam

SYPHILIS

Review:

32. Syphilis - by S.T. Brown

33. Epidemiological Aspects of Syphilis in Fiji - by A. Penington

Diagnosis:

34. Spirochete Differentiation

35. Criteria and Techniques for the Diagnosis of Early Syphilis

36. The Laboratory Diagnosis of Syphilis - New Concepts - by Harold W. Jaffe

37a. Micro-haemagglutination Assay for Treponema Pallidum

37b. L'epreuve d'hemagglutination du treponeme (MHA-TP) por Ride et D'Coster - WHO/VDT 76.410

38. Manual of Tests for Syphilis - 1969

39. Materiel et Verrerie

40. Reaction VDRL sur Lame

41. Preparation des serums de controle et des enchantillons pour les epreuves d'efficacite

Treatment

42. Recommended Treatment Schedules for Syphilis, 1976

43. Section: Syphilis in Pregnancy and Congenital Syphilis - The Value of Penicillin Alone in the Prevention and Treatment of Congenital Syphilis - by N.R. Ingraham

Annex 6

CHANCROID, DONOVANOSIS, LYMPHOGRANULOMA VENEREUM

44. Chancroid, Donovanosis, Lymphogranuloma venereum

45. Donovanosis in Papua New Guinea - by I. Maddocks, E.M. Anders and E. Dennis

HERPES

46. Treatment of Genital Infections with Herpesvirus Hominis - Editorial

CHLAMYDIAL INFECTION

47. Chlamydiae as Agents of Sexually Transmitted Diseases - by J. Schachter, G. Causse, M.L. Tarrizo

48. Chlamydia Infections - S.T. Brown

CLINICAL SERVICES

49. The Establishment of a University-Based Venereal Disease Clinic I: Description of the Clinic and its Population - by Peter E. Dans

50. The Need for Problem-Oriented Venereal Diseases Clinics - by J.H. Armstrong, P.J. Wiesner

CONTROL ELEMENTS

51. The Prophylaxis of Gonorrhoea - by E. Barrett-Connor

52. Antenatal Screening for Gonorrhoeae in Christchurch - by A.B. Maclean, S. Paltridge, W.M. Platts

53. Outline for Comparison of Drug Regimens in Uncomplicated Gonococcal Infection

RESOLUTIONS BY WORLD HEALTH ASSEMBLY

54. Resolution 58 - Control of Sexually Transmitted Diseases (1975), E/F

55. Resolution 59 - Control of Sexually Transmitted Diseases (1978), E/F

ANNEX 7

PRE-COURSE QUESTIONNAIRE SUMMARY
Participants to the clinical/control element
(n= 13 of 14 attenders)

Prior education

11 Physicians, many from Fiji Medical School
2 non-physicians - 1 health extention officer for 7 years
1 BS, environmental health

Advanced degrees (MD's)

4 Public or community health degrees
3 Specialty boards: Ob-gyn pediatrics, general practice
2 Diplomats Venereology
1 EPI I, II, III

Employment

12 Full or parttime government
- some physicians also in private practice
1 Researcher (leprosy, filariasis, dengue, STD)
2 also unversity posts

Job duration

4 10+ years (3 Directors of Public Health)
4 2-4 years)
4 less than 2 years) variety of positions
1 No answer)

Gonorrhoea therapy

5 adequate
1 or 2 may be adequate
4 or 5 probably inadequate: PAM, benzathine, APP6 1.2 mu qd x 6, Pen (?) 2 mu + .5g qd x 2d
2 no answer (no patient care)

Syphilis therapy

4 No syphilis (TTPI, Cooks, American Samoa, New Hebrides)
4 Adequate therapy
3 Excessive therapy PAM daily x 10-15d; Pen (?) 25 mu, APP6 (?PAM) 1.2 qd x 30 d
2 No answer (no patient care)

ANNEX 8

PRE-COURSE OF QUESTIONNAIRE SUMMARY
Participants to the laboratory-diagnostic element

Laboratory

No. of participants	- 15
No. of countries	- 14 (Fiji - 2 participants)
No. doing MHA-TP	- 3 (Suva, Lautoka, Papua New Guinea)
No. FTA - ABS	- 3 (Guam, New Caledonia, French Polynesia)
No. CDC proficiency	- 6 (Suva, Guam, American Samoa, New Caledonia, Samoa, Trust Territory of the Pacific Islands)
No. G.C. culture	- 13 (except Cook Islands, Papua New Guinea)
No. using selective medium	- 7 (Suva, Lautoka, American Samoa, New Zealand, Guam, New Caledonia, French Polynesia)
No. MIC	- 1 (New Zealand)

ANNEX 9

SUMMARY OF EVALUATION ON THE WORKSHOP AND TRAINING COURSE
ON SEXUALLY TRANSMITTED DISEASES
SUVA, FIJI, 2-12 APRIL 1979

An evaluation questionnaire was distributed to each of the seventeen medical officers and fifteen laboratory participants. Eleven medical officers (64.7% response rate) and fifteen laboratory respondents (100% response rate) completed the postcourse questionnaires and information furnished was used to assess the usefulness and conduct of the workshop.

The objectives of the workshop were:

(a) to strengthen the management of the control of sexually transmitted diseases;

(b) to promote the development of national control programmes on sexually transmitted diseases;

(c) to improve the competence of laboratory/clinical personnel to confirm the diagnosis of sexually transmitted diseases, particularly of penicillin-resistant gonorrhoea.

I. Medical Officers

The responses of the eleven medical officers to the questions on the usefulness of the workshop were tabulated in Annex 1. In the questionnaire assessing the usefulness of the workshop, two replies were required for each topic covered, the relevance/usefulness of the ideas and the appropriateness of the time devoted to each topic. Participants were requested to use the following rating scales:

(a) Utility scale - 5 (Extremely useful to me), 4 (Moderately useful), 3 (Some use), 2 (Not much use), 1 (Irrelevant for me);

(b) Time spent - 5 (Much too long), 4 (Slightly too long), 3 (Time just right), 2 (Slightly too short), 1 (Inadequate time).

A column on "no answer" was added in Annex 1. The mean or average of the ratings/scores for each topic was computed. The mean ratings/scores for the topics were ranked in descending order (highest - 5, lowest - 1) separately for the utility or relevance scale and for the time spent scale (Annex 1a).

It is noted in Annex 1a that the medical respondents considered the following topics: Epidemiology of penicillinase-producing N. gonorrhoeae; Complicated gonococcal infection; Chlamydial infections; Prevention of STD; STD control: laboratory services; Syphilis; Standard treatment programme; Clinical services and STD control, as extremely useful (with mean scores of 4.5-5.0) and the following: Assessment of importance of gonorrhoea;

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Uncomplicated gonoccocal infection; Individual plans and discussions; Genital ulcer disease; Assessment of importance of syphilis; Laboratory demonstrations; STD control, an overview; Vaginitis; A simplified approach to STD control; and STD among homosexuals, as moderately useful (with mean scores of 3.5-4.4). Please refer to Annex 1a for the ranking of the mean scores of the topics.

In addition, the Medical officers commented (Annex 1a) that the time spent for the discussions of most of the following topics: Assessment of importance of gonorrhoea; Standard treatment programme; Uncomplicated gonoccocal infection; Assessment of importance of syphilis, STD control, an overview; Epidemiology of penicillinase-producing N. gonorrhoeae; STD among homosexuals; Laboratory demonstrations; A simplified approach to STDcontrol; Clinical services and STD control; Genital ulcer disease; Prevention of STD, syphilis; vaginitis; STD control: laboratory services; and Complicated gonoccocal infection and chlamydial infections were just right (2.5-3.4) and time spent on the Individual plans and discussions were slightly too short (1.5-2.4).

II. Laboratory Participants

The responses of the fifteen laboratory participants to the queries in the postcourse questionnaire were tabulated in Annex 2. Participants were requested to use the following rating scale: 1 (strongly positive), 2 (slightly positive), 3 (neutral), 4 (slightly negative) and 5 (strongly negative). A column on "no answer" was added in Annex 2. The mean or average of the ratings/scores for each query was computed. The mean ratings/scores were ranked in descending order (highest - 1, lowest - 5) separately for the practical workshop, for practicals on gonorrhoea, and practicals on syphilis serology (Annex 2a).

The reactions of the laboratory participants (Annex 2a) towards the statements related to the practical workshop, practicals on gonorrhoea and the practicals on syphilis serology were as follows:

	(Statements)
Strongly positive	- Participants could follow the lectures. - Practicals on Gonorrhoea were relevant to their work and would be useful to them in their future work. - Practicals on Syphilis Serology would be useful to them in their future work.
Slightly positive	- Practicals in Syphylis Serology were relevant to their work.
Neutral	- The practical workshop was too long; there were too few lectures; the lectures were delivered too fast. - Practicals on Gonorrhoea were too simple - Practicals on Syphilis Serology were too simple

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Slightly negative	- There were too many lectures; the practical workshop was too short - Practicals on Gonorrhoea were too difficult. - Practicals on Syphilis Serology were too difficult.
Strongly negative	- None

Inasmuch as the answers of laboratory participants to the last 3 questions are quite varied, a listing of the responses are in Annex 3. The respondents stated the subjects which they feel should be omitted as well as the subjects to be included in future courses; the general impressions of the respondents were also included in Annex 3.

In summary, the Medical Officers considered 8 of the 18 topics covered to be extremely useful to them and the rest of the topics as moderately useful (Annex 1a). With the exception of the time allotted/spent for individual plans and discussions, the Medical Officers stated that the time spent for the 17 topics covered were just right (Annex 1a).

The laboratory participants had positive reactions towards the following statements:

- Participants could follow the lectures.
- Practicals on Gonorrhoea were relevant to their work and would be useful to them in their future work.
- Practicals on Syphilis Serology were relevant to their work and would be useful to them in their future work.

The negative reactions of the laboratory participants to the statements in the questionnaire should be taken into account in planning future courses of this nature.

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REPLIES OF THE MEDICAL OFFICERS TO THE QUERIES IN THE POSTCOURSE QUESTIONNAIRE
WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES
Suva, 2-12 April 1979

Topic	Utility Scale (Relevance)							Time Spent						
	Extremely useful to me 5	Moderately useful 4	Some use 3	Not much use 2	Irrelevant for me 1	No Answer	Mean	Much too long 5	Slightly too long 4	Time just right 3	Slightly too short 2	Inadequate time 1	No Answer	Mean
1. Uncomplicated genococcal infection	5	4	2				4.3		3	5	3			3.0
2. Complicated genococcal infection	9	1	1				4.7		1	6	3	1		2.6
3. Epidemiology of penicillinase N. gonorrhoeae	10		1				4.8		2	7	1	1		2.9
4. Syphilis	6	4	1				4.5			9	1	1		2.7
5. Genital ulcer disease	5	3	3				4.2		2	6	2	1		2.8
6. Chlamydial infections	0	1	1				4.7		1	4	5	1		2.5
7. Vaginitis	3	4	4				3.9		1	5	4		1	2.7
8. STD among homosexuals	2	4	5				3.7	1	1	7		2		2.9
9. Laboratory demonstrations	3	5	1		1		3.9	1	2	3	5			2.9
10. Assessment of importance of gonorrhoea	5	5	1				4.4		5	5	1			3.4
11. Assessment of importance of syphilis	3	6	2				4.1		3	6	1	1		3.0
12. Standard treatment programme	7	3	1				4.5	1	2	7	1			3.3
13. Clinical services and STD control	6	4	1				4.5		2	5	4			2.8
14. Prevention of STD	6	4				1	4.6			8	2		1	2.8
15. A simplified approach to STD control	3	4	2	1			3.8			10	1			2.9
16. STD control: an overview	2	7	1	1			3.9		3	5	3			3.0
17. STD control: laboratory services	5	4				2	4.6			6	3		2	2.7
18. Individual plans and discussion	5	3	2			1	4.3		2	3	2	3	1	2.4

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REPLIES (MEAN OR AVERAGE) OF THE MEDICAL OFFICERS TO THE QUERIES IN THE POSTCOURSE QUESTIONNAIRE (MEANS RANKED IN DESCENDING ORDER)

Rank	Topic	Utility Scale Mean	Utility Scale Range	Rank	Topic	Time Spent Scale Mean	Time Spent Scale Range
1	Epidemiology of penicillinase-producing N. gonorrhoeae	4.8	Extremely useful	1	Assessment of importance of gonorrhoea	3.4	Time just right
2	Complicated gonococcal infection	4.7		2	Standard treatment programme	3.3	
3	Chlamydial infections	4.7		3	Uncomplicated gonococcal infection	3.0	
4	Prevention of STD	4.6		4	Assessment of importance of syphilis	3.0	
5	STD control; laboratory services	4.6		5	STD control, an overview	3.0	
6	Syphilis	4.5		6	Epidemiology of penicillinase-producing N. gonorrhoeae	2.9	
7	Standard treatment programme	4.5		7	STD among homosexuals	2.9	
8	Clinical services and STD control	4.5		8	Laboratory demonstrations	2.9	
9	Assessment of importance of gonorrhoea	4.4	Moderately useful	9	A simplified approach to STD control	2.9	
10	Uncomplicated gonococcal infection	4.3		10	Clinical services and STD control	2.8	
11	Individual plans and discussions	4.3		11	Genital ulcer disease	2.8	
12	Genital ulcer disease	4.2		12	Prevention of STD	2.8	
13	Assessment of importance of syphilis	4.1		13	Syphilis	2.7	
14	Laboratory demonstrations	3.9		14	Vaginitis	2.7	
15	STD control, an overview	3.9		15	STD control: laboratory services	2.7	
16	Vaginitis	3.9		16	Complicated gonococcal infection	2.6	
17	A simplified approach to STD control	3.8		17	Chlamydial infections	2.5	
18.	STD among homosexuals	3.7		18	Individual plans and discussions	2.4	Slightly too short

Rating scale:	Score	Range
Extremely useful to me	5	4.5-5.0
Moderately useful	4	3.5-4.4
Some use	3	2.5-3.4
Not much use	2	1.5-2.4
Irrelevant for me	1	0-1.4

Rating scale:	Score	Range
Much too long	5	4.5-5.0
Slightly too long	4	3.5-4.4
Time just right	3	2.5-3.4
Slightly too short	2	1.5-2.4
Inadequate time	1	0-1.4

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REPLIES OF THE LABORATORY PARTICIPANTS TO THE QUERIES
IN THE POSTCOURSE QUESTIONNAIRE
WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES,
Suva, 2-12 April 1978

	Strongly Positive 1	Slightly Positive 2	Neutral 3	Strongly Negative 4	Slightly Negative 5	No Answer	Mean
A. (a) Was the practical workshop too long?		2	10	2	1		3.2
Was it too short?			7	3	4	1	3.8
(b) Were there too many lectures?			8	5	2		3.5
Were there too few?		3	7	2	2	1	3.2
(c) Could you follow the lectures?	11	2	2				1.4
Were the lectures delivered too fast?		3	6	1	4	1	3.4
B. (a) Were the practicals on gonorrhoea relevant to your work?	14		1				1.1
(b) Were they too simple?	1	3	7	2	1	1	2.9
(c) Were they too difficult?		1	3	4	6	1	4.1
(d) Would they be useful to you in your future work?	13	1			1		1.3
C. (a) Were the practicals on syphilis serology relevant to your work?	9	3	1	1	1		1.8
(b) Were they too simple?		2	7	2	3	1	3.4
(c) Were they too difficult?			5	4	5	1	4.0
(d) Would they be useful to you in your future work?	12	2			1		1.4

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REPLIES (MEAN OR AVERAGE) OF THE LABORATORY PARTICIPANTS TO THE QUERIES IN THE POSTCOURSE QUESTIONNAIRE (MEANS RANKED IN DESCENDING ORDER)

Rank	Query	Rating Scale	
		Mean	Range
	A. Practical workshop		
1	Could you follow the lectures?	1.4	Strongly positive
2	Was it too long?	3.2	
3	Were there too few lectures?	3.2	Neutral
4	Were the lectures delivered too fast?	3.4	
5	Were there too many lectures?	3.6	
6	Was it too short?	3.8	Slightly negative
	B. Practicals on gonorrhoea		
1	Were they relevant to your work?	1.1	Strongly positive
2	Would they be useful to you in your future work?	1.3	
3	Were they too simple?	2.9	Neutral
4	Were they too difficult?	4.1	Slightly negative
	C. Practicals on Syphilis Serology		
1	Would they be useful to you in your future work?	1.4	Strongly positive
2	Were they relevant to your work?	1.8	Slightly positive
3	Were they too simple?	3.4	Neutral
4	Were they too difficult?	4.0	Slightly negative

Rating Scale:	Score	Range
Strongly positive	1	0 - 1.4
Slightly positive	2	1.5 - 2.4
Neutral	3	2.5 - 3.4
Slightly negative	4	3.5 - 4.4
Strongly negative	5	4.5 - 5.0

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REPLIES OF THE LABORATORY PARTICIPANTS TO THE QUERIES
IN THE POSTCOURSE QUESTIONNAIRE
WORKSHOP AND TRAINING COURSE ON SEXUALLY TRANSMITTED DISEASES,
Suva, 2-12 April 1979

D. (a). The following subjects should have been omitted:

1. I think the practical work on VDRL was too much; could have been shortened and TPHA more emphasized.
2. -
3. None so far, I understand that all the subjects that we had covered are very useful for the future upgrading of each individual laboratories, mostly in the Pacific Islands.
4. I feel there was nothing irrelevant.
5. -
6. -
7. -
8. -
9. Tests, such as TPHA test, which some laboratories cannot afford, should be omitted.
10. -
11. -
12. -
13. -
14. Weighing of 2 g of heamoglobin (1-1/2 hours);
Lecture on the making of a dropper releasing 60 drops per ml.
15. -

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D. (b). The following subjects should have been included:

1. FTA-ABS lecture, at least the principle in value and rationale and if possible, a demonstration of the technique.
2. -
3. All the other serological blood test; example - RA, Febrile Agg., etc..
4. One or two lectures on treatment and results obtained after treatment would have been interesting.
5. The (illegible) of the reactive serum control for VDRL should have been included.
6. -
7. -
8. A visit to a VD clinic to see the set up would be of help to many participants.
9. -
10. -
11. -
12. One or two lectures on treatment and response.
13. -
14. FTA-absorption test and MIC - Joint demonstrations with the epidemiologists. Joint meeting with the epidemiologists on the problems of case-finding and routine examinations.
15. I think that an MIC test could have been organized for the practical work on gonorrhoea.

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D. (c) General impression:

1. Excellent workshop; well presented; the lectures are very knowledgeable in their own field. I'm glad I came and I hope Guam will be invited to the next workshop.

2. The two week course was well done, couldn't be any better. A fine set-up and all in all, good instructors.

3. I wish that the WHO will put up more workshops like this for laboratory personnel, two or three times a year. Congratulations to all the staff who took part in this workshop. You have done a good job. Thank you again.

4. I feel there should have been more joint discussions and group discussions with different countries asked to give their views and everyone taking part. I personally feel that some participants kept silent throughout. Otherwise the workshop has been successful.

5. The course itself was quite an experience as it made participants to share the problems they have in their own countries and we hope there will be a kind of dialogue created by some means.

6. Satisfactory.

7. - Good idea to go back to basics to standardize and update methods.
   - Good practical information given on control of methods and materials.
   - Adequate information given to allow participants to evaluate methods and materials and choose the most appropriate one for their own situations.
   - Adequate time allowed for participants to have questions answered fully.
   - Joint sessions gave good clinical background and helped to emphasize that diagnosis of STD's is very much a team effort.
   - Sorry there was no Australian laboratory participant.

8. I have gained knowledge of laboratory procedures well. The last joint session was a bit too late, not much discussion. I think participants were tired. The joint session would have much discussion if it was placed mid course. Participants have learnt something already and have not been tired.

9. I was really impressed about the workshop but there was really nothing concluded about the standard method.

10. There has been a very friendly cooperation between the lecturers and the participants and I fell very happy to be one among those taking part in this WHO intercountry workshop on STD.

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D. (c) General impression: (cont'd)

11. I strongly feel that courses as such, if conducted at this frequency (whatever subject it is) and this manner would undoubtedly promote self-confidence to both the administrator (DR) and the lab worker. Far better than poorly organized scholarships and fellowships.

12. It was a successful seminar. We learned a lot of new ideas and techniques. Also the participants were cooperative.

13. This is the first time I participated in such a course; it helped me a lot. In any case I am very happy to learn something new.

14. The technical competence of Dr Sing has been underused. Very high level of the epidemiology part of the meeting; too low level of the laboratory part. There has been no real contact between laboratories and physicians concerning the practical conduct of laboratory tests required by physicians. A laboratory is not solely staffed with illiterate laboratory technicians who are not interested in epidemiological problems. While the epidemiologists were able to review the whole question, the laboratory part of the meeting remained far below its potentialities. The time wasted explaining the direction of rotations and the number of revolutions required for stirring as well as for coffee breaks might have been used otherwise..

15. I think that this workshop is positive since I have learned new techniques which I can demonstrate in the laboratory where I work. I have found the workshop rather long, for instance it took us 1-1/2 hours to weigh and dilute 2 grammes of medium (which is too long) and we performed VDRL tests during three consecutive days. We could have devoted that time to other topics. However, on the whole, the workshop has been very interesting.