



TWENTY-EIGHTH WORLD HEALTH ASSEMBLY

INDEXED

Technical Discussions

BACKGROUND DOCUMENT  
for reference and use at the  
TECHNICAL DISCUSSIONS

on

SOCIAL AND HEALTH ASPECTS OF SEXUALLY TRANSMITTED DISEASES:  
NEED FOR A BETTER APPROACH

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## INTRODUCTION

The subject chosen for the Technical Discussions at the Twenty-eighth Health Assembly deals with a group of diseases acquired during specific behaviour. The title chosen: Social and Health Aspects of Sexually Transmitted Diseases: Need for a Better Approach indicates the wider context in which the discussions ahead should be placed, including as it does the medical, sociological, cultural and environmental aspects of those diseases.

In selecting this theme the Executive Board, in its resolution EB52.R14, emphasized the concern created by the rising trends in the sexually transmitted diseases and their cost to the community, a concern also shared by governmental and by nongovernmental organizations, including the International Union Against the Venereal Diseases and the Treponematoses (IUVDT).

In conformity with previous practice, an outline document containing suggestions for discussion at country or agency level was sent out in November 1974 to Member States, Associate Members and a number of nongovernmental organizations in official relations with WHO. Comments were requested on 66 questions intended to help in the identification of the most urgent needs in applying modern management methods in a search for a better approach.

Replies have been received from a number of Member States, Associate Member States, nongovernmental organizations and from certain of the VDT Panel Members, who were also sent copies. All replies received before the end of March 1975 have been taken into account in Part II.

### PART I. Summary of the Outline Document

#### 1. DEFINITION OF SEXUALLY TRANSMITTED DISEASES

The venereal diseases as usually legally defined comprise syphilis, gonorrhoea and, in a number of countries, chancroid, lymphogranuloma venereum and granuloma inguinale. There are, however, many other conditions that have become increasingly recognized as usually or frequently sexually transmitted, such as non-gonococcal urethritis, trichomoniasis, candidiasis, condylomata acuminata, herpes simplex due to type II herpes virus, molluscum contagiosum, scabies and pediculosis pubis, while a number of organisms other than those involved in these conditions, e.g. mycoplasma and cytomegalovirus, can be identified in the sexual tract of both sexes.

#### 2. EXTENT OF THE PROBLEM

##### Statistics

The comparison of statistical data between countries is difficult owing to variations in the criteria for and standards of diagnosis and reporting, the facilities available, and the extent to which treatment is given by private practitioners, pharmacists, and others, including the patients themselves. Even in developed countries with many clinics providing figures based on acceptable diagnostic methods, the official statistics may indicate only a fraction of the total extent of these diseases.

##### Syphilis

While syphilis is generally much less of a problem than formerly, there have been disturbing recent rises in the prevalence of early infection in a number of countries in different parts of the world. In regions where yaws has been eradicated and new susceptibles have arisen, venereal syphilis is appearing as a new disease. A significant proportion of early infections are now observed among male homosexuals.

Congenital transmission is less commonly encountered in developed areas, but it occurs with a frequency that necessitates continued preventive measures. The number of late complications - gummata, cardiovascular and serious neurological disorders - has likewise fallen considerably.

## Gonorrhoea

Statistics show mounting gonorrhoea figures in all continents. The present lack of control is a paradox in view of the quick and efficient treatment easily available in most countries.

### Other sexually transmitted diseases

Chancroid remains a problem in some areas. Lymphogranuloma venereum is now less prevalent and granuloma inguinale has a patchy distribution. Mounting trends are noted for non-gonococcal urethritis.

### Morbidity

#### Syphilis and gonorrhoea

Syphilis, through its late complications, has been associated with significant morbidity and cost to the community, involving death, cardiac invalidism, mental deterioration, blindness and deafness. Gonorrhoea is a significant and widespread cause of sterility and chronic pelvic invalidism in the female, of urethral stricture in the male, and of acute arthritis and septicaemia (now being increasingly recognized) in both sexes.

### Other sexually transmitted diseases

Lymphogranuloma venereum can cause genital oedema, stricture and tissue loss; granuloma inguinale may metastasize to the bones and elsewhere and give rise to painful ulceration.

The sexually transmitted diseases are thus indeed of economic as well as of medical concern. Their cost could be reduced if the funds for their control were increased.

### Population at risk

All the diseases affect the sexually active, with the preponderance in the age-group 20-24 years in males and the age-group slightly below in females. More males are diagnosed than females, particularly in areas with few facilities.

### Reasons for rising trends

A multiplicity of interrelated factors are involved in the present lack of control observed in most areas. Without neglecting the significance of medical, organizational and resource problems, the crucial point appears to be that socioeconomic developments in most communities have proved to have an unfavourable effect on the epidemiological balance in relation to the undisclosed pool of asymptomatic infections leading to the increase in new infections. In some areas population mobility and urbanization are considered to be the major contributing factor; in others rapid social and cultural changes appear to have led to the breaking down of traditional modes of behaviour among the young and to considerable sexual licence.

Added to these is the emergence almost everywhere of a tendency towards a more permissive attitude concerning premarital sexual relations. The discussions might, it is to be hoped, help to elucidate the psychological motivation of this attitude.

The impact of the structural and cultural factors outlined has reduced the possibilities for the application of efficient contact tracing.

### High-risk groups

As a result of these developments, a number of groups at special risk of being infected have emerged. They can be broadly classified according to occupation or mode of life. More extensive sexual behaviour is often observed among those away from their family (migrant workers, travelling personnel); it sometimes arises from a feeling that they have been released from traditional norms in their own society (tourists, military personnel). In

others the breakdown of traditional standards or a quest for affection may be the motive. In most areas homosexuals comprise a specific risk group, partly because of their psychological background and partly, probably, because of the less permissive attitude towards homosexual behaviour; many homosexuals deliberately seek anonymous sexual contacts. Meanwhile, the importance of the traditional high-risk group, the prostitutes, appears to be declining in many countries.

### 3. METHODS OF CONTROL OF SEXUALLY TRANSMITTED DISEASES

#### Legislation

In some countries, if persons with sexually transmitted diseases other than syphilis, gonorrhoea, soft sore, lymphogranuloma venereum and granuloma inguinale attend a venereal disease clinic, they are not allowed to be treated. There is therefore a need in many areas to increase the number of conditions clinics are empowered to treat without cost to patients.

#### Antibiotic policy

An antibiotic policy is desirable to define the optimal treatment schedules for syphilis and gonorrhoea. In some cases this is achieved by regulation in government clinics. In others a compulsory approach would be unacceptable to physicians, although most would follow a recommended policy voluntarily.

#### Provision of basic facilities

The provision of adequate services for early diagnosis and treatment and as a base for contact tracing is the first step in venereal disease control. This necessarily entails an adequate budget.

#### Facilities for established clinics

The quality of the premises of venereal disease clinics varies considerably throughout the world. It is frequently below a recommendable standard even in developed countries.

#### Present needs

(1) In developing countries with no organized venereal disease services, the first need is to perform epidemiological and organizational surveys to produce more precise data on the incidence, geographical distribution, target groups, existing control facilities and education standards of public health personnel involved. Based on such studies one could establish at least one model clinic of sufficient standard directed by a well-trained physician, to act as a demonstration and training centre for medical personnel, and other health workers, including those already involved in this control in the existing health units.

(2) Elsewhere there is a widespread need for improved premises, improved staffing and general strengthening of established venereal disease clinics, including staffing for contact tracing, social work and health education.

(3) As stressed by the WHO Working Group on the Inter-country Spread of Venereal Diseases,<sup>1</sup> there is a need for providing and disseminating information about the clinics to groups at risk, in particular to tourists and migrants.

(4) When sexually transmitted diseases are treated outside established clinics there is a need to ensure that proper diagnostic and treatment methods are used, that those responsible are well informed on current methods of management, that help is available for contact tracing if necessary, and that cases are duly notified.

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<sup>1</sup> WHO Regional Office for Europe (1972) The inter-country spread of venereal diseases: Report on a working group, Copenhagen, EURO 1101.

(5) Although in most countries there is a physician responsible to the director of health for the maintenance of venereal disease services, in many this forms only part of his total duties and he may have no adviser who is or has been personally involved in the problems.

(6) There appears to be a need for the establishment of basic diagnostic units, usable by less medically trained persons in areas with limited medical facilities.

### Early diagnosis

#### Syphilis

The basic needs are that the darkfield diagnosis of sores should be available, that at least one properly controlled routine screening serum test is used, and that this could be confirmed by a test with a treponemal antigen on a general or reference basis.

#### Gonorrhoea

The basic need is for facilities for culture. Microscopy should be immediately available but it is a less reliable method.

Cultures should be obligatory, especially in the female and the passive homosexual male, and are very often necessary for the detection of asymptomatic infection in the male. If only one female site is examined, the cervix is the most productive. Specimens from the female, where possible, need to be taken from the urethra, cervix, rectum and, where indicated, mouth. Vaginal cultures alone are less satisfactory than cervical cultures but are of value in circumstances where the optimum methods are difficult to apply, but they give a reliable diagnosis in areas with limited medical facilities when combined with urethral and rectal specimens.

#### Other sexually transmitted diseases

If the necessary equipment is available in the clinic for the diagnosis of syphilis and gonorrhoea, tests may also be made for trichomoniasis, candidiasis, granuloma inguinale and herpes genitalis.

#### Present needs

Facilities providing rapid results (e.g. serum tests while you wait or within a day) are required, especially for seamen, tourists, those on the move, and those considered likely to be immediate defaulters.

For all serum tests there is a need for the standardization of techniques and reagents and for their control by a central national centre which itself acts as, or is linked to, a reference laboratory within or, for some developing countries, outside the country.

Culture performance requires regular supervision at a national level.

#### Early treatment

##### Syphilis

Penicillin continues to give excellent results in the early stages of syphilis provided that the correct doses of the right preparations are given; in some areas one or two injections only of repository penicillins are used.

Tetracycline or erythromycin is used for people allergic to penicillin but, from the available information, these two drugs, and particularly erythromycin, are somewhat less effective and require closer observation of the patient after the treatment has been administered.

### Gonorrhoea

There are considerable practical and epidemiological advantages in single-session treatment for gonorrhoea.

Pencillin treatment has been given a new lease of life by the addition of probenecid by mouth, and few cases of gonorrhoea fail to be cured by single injections of 5.0 mega units of benzylpenicillin or aqueous procaine penicillin administered along with probenecid. Such dosages will probably prevent incubating syphilis.

Other antibiotics (e.g. kanamycin and spectinomycin) have been shown to be effective by injection, while some of the new ampicillin or near-ampicillin compounds, given orally, are also effective in single doses. These other antibiotics and co-trimoxazole can also be used effectively in multiple doses. It is important that the regime used should either not mask incubating syphilis or should abort it completely. From the standpoint of cost and effectiveness penicillin remains the drug of choice.

### Reactions to therapy

Occasionally fatal allergic reactions to penicillin occur. In spite of modern developments no rapid, fully safe and accurate method of predicting penicillin sensitivity is as yet available.

### Present needs

A better alternative for the treatment of syphilis is required for persons thought to be allergic to penicillin.

There is widespread need for an antibiotic policy. This should not only discourage the unauthorized use of antibiotics but also ensure that an adequate dosage of penicillin is given based on sensitivity findings in the laboratory and on the treatment results in properly diagnosed cases of gonorrhoea. This indicates that the sensitivity patterns should be monitored periodically.

### Case finding

### Screening methods

The often asymptomatic nature of these diseases indicates that screening procedures are a valuable measure for a reduction of the pool of unknown silent infection in a community, because it is from this reservoir that the bulk of new infections arises.

### Syphilis

Screening for syphilis by serological tests is generally performed on expectant mothers (at least once, sometimes twice), blood donors, patients attending venereal disease clinics and their contacts and, in many countries, certain occupational groups (e.g. military personnel prior to discharge, hospital - especially cardiac and psychiatric - patients), prisoners, those in corrective institutions, before marriage and prior to immigration. Confirmatory tests with treponemal antigens are required.

Not only do such tests result in the discovery of unsuspected latent infections but they also provide an index of the prevalence of syphilis.

### Gonorrhoea

Screening for gonorrhoea is more difficult. Local tests have, however, proved of value for screening women receiving a pelvic examination in obstetric and gynaecological units, in family planning clinics and from general practitioners, and they are especially valuable for screening women in corrective institutions. A well organized laboratory service for gonococcal cultures is a prerequisite; in such a laboratory a single cervical culture is frequently

made for screening purposes. There is a need for pilot studies in all countries to define the groups to which this method can most profitably be applied. These studies will at the same time assess the extent of the problem and the degree of effort required.

In areas with high gonorrhoea morbidity, experience has shown that the application of continuous case-finding procedures through follow-up examinations of former gonorrhoea patients can produce a significant decrease in both the incidence and prevalence of gonorrhoea and other diseases.

Asymptomatic or near-asymptomatic infections in the male that do not prompt the patient to seek treatment and may be detectable only by culture are being more frequently recognized as a result of screening.

#### Other sexually transmitted diseases

Routine cancer screening frequently reveals evidence of other sexually transmitted diseases than syphilis or gonorrhoea, including trichomoniasis, candidiasis and herpes infection.

#### Contact tracing

Contact tracing of patients with known venereal disease is, if efficiently and rapidly performed, the most effective available method for the prevention of its spread. In general it is better performed in units handling many patients with sexually transmitted diseases than when the patients are scattered in smaller numbers amongst other medical departments or private practitioners. Smaller and more disseminated units might, on the other hand, increase the possibility of locating the contacts through their more intimate local knowledge of the inhabitants in the community.

In a number of areas where there is a particularly high prevalence and facilities and opportunities for follow-up are poor or few, epidemiological treatment is often routinely given to contacts so found.

#### Preventive procedures

The incidence of venereal diseases is subject to a delicate balance between infections caused by the asymptomatic pool and those arising therefrom. Thus, slight changes in socio-economic factors, such as in population mobility or urbanization, and small alterations in the number of new sexual exposures can be expected to affect venereal disease rates significantly. Conversely, a small improvement in preventive measures can be expected to achieve significant gains. Thus, the efficient application of individual-oriented and community oriented efforts for the prevention of sexually transmitted diseases should be able to reduce and even perhaps go far towards eliminating the problem.

#### Individual prophylaxis

Attention has been particularly focused on the mechanical barrier created by the condom. It is, however, argued that the existence of highly efficient contraceptive measures used in many countries hardly provides proper motivation for employing the condom, which has also been considered unacceptable by many users.

Chemical prophylaxis is likewise being re-examined. Vaginal preparations with anti-bacterial activity have been shown in vitro to be a potentially useful measure, but the results of human testing are awaited. The effect of the copper ion-liberating contraceptive coil (IUD), which might appear to be useful in the prevention of gonorrhoea, is under investigation. In view of the often asymptomatic nature of the venereal diseases, more extensive individual disease prevention by periodic check-ups would probably be of significant epidemiological importance, always supposing that the relevant target groups could be motivated to attend for examination.

Epidemiological treatment, which has been the mainstay of the WHO-assisted mass campaigns against the endemic treponematoses is, in many countries, given to recent contacts of persons with infectious syphilis without clinical or serological signs of disease, especially when the

opportunities for follow-up are few. It has been recommended by WHO where treponemal diseases constitute a major public health problem. It is also used for those exposed to gonorrhoea when the organism is not found at the initial visit, as an alternative to repeated examinations, which may not be practicable. Epidemiological group treatment for gonorrhoea has been applied in some countries but it has proved to be without lasting effect unless combined with venereological examination and contact tracing from the cases so found.

#### Community prophylaxis

Among community-oriented preventive measures, the various screening procedures mentioned are specifically directed towards the pool of asymptomatic infections and are, as such, of the utmost importance for control. In areas or groups with a high frequency of repeaters, examinations for reinfection might be made obligatory for preventive and epidemiological reasons, the impact of which could be expected to be similar to the experience mentioned (see page 7, lines 4-7).

Health education is also of significant importance in the prevention of the sexually transmitted diseases and in attempts to reduce the incidence of complications.

#### Research

##### Treponematoses

Some of the recent research developments in this field related to needs at a practical level are listed.

##### Diagnostic tests

There is a need for a simple serological test that is reactive in the incubation period and in so-called seronegative primary syphilis. There is a need, too, at all stages of the disease for a simple, more specific and more sensitive test - based on a treponemal antigen and capable of automation - than those at present available.

Further knowledge of immunoglobulin patterns and of monospecific immunofluorescent techniques has already led to the FTA IgM test, which is useful in assessing whether a seropositive infant of a seropositive mother has congenital syphilis or merely an antibody "spillover". The possibility of using this test to determine activity in the late and latent stages of disease has also been investigated.

There is a widespread need for a specific test distinguishing the antibodies of yaws from those of syphilis.

Treponemal forms have been discovered in the lymph nodes, cerebrospinal fluid and aqueous humour of syphilitic rabbits and of humans not treated early in the disease, even though extremely large doses of penicillin and other antisiphilitic drugs had been given later.

The greatest need still remains for the successful in vitro cultivation of virulent pathogenic treponemes. This would not only widen the scope of basic treponemal research but would bring better specific tests nearer and increase the possibility of an effective protective vaccine uncontaminated by rabbit protein.

There is a need for a simple and reliable test for penicillin allergy that does not itself run the risk of causing anaphylaxis in a penicillin-sensitive person, and also for a safe method of desensitization that will allow penicillin to be used in a known allergic patient.

##### Neisseria gonorrhoeae research

##### Diagnostic tests

There is a need for better and simpler tests for the rapid diagnosis of gonorrhoea. The use of paper strips impregnated with oxidase reagent has been investigated, but both false

positive and false negative results have been obtained. This is also true for the use of immunofluorescence of direct smears. Fluorescent Neisseria are frequently found in the genital secretions of both sexes for some time after the cultures have become negative and research is required to determine the significance of this finding.

There is a need for more thermostable transport media (or containers) for use in extreme tropical and arctic conditions, for even better selective media, and for an improved combined transport and selective medium that matches the best of established selective media.

As the gonococcus is the organism most commonly grown on selective media it can be readily identified, and direct immunofluorescent techniques are today commonly used on cultures as a quicker alternative to sugar fermentation tests.

The need nevertheless remains for simpler screening methods for the diagnosis of gonorrhoea, especially methods that can be employed without pelvic examination.

#### Preventive measures

New vaccines have been prepared using material from virulent organisms. They have been tested in man and have been shown to evoke detectable, even gonococcal antibodies, but the field trials have so far been disappointing.

However, a polysaccharide meningococcal vaccine has been given to 70 000 people in Egypt and Sudan during an epidemic of cerebrospinal meningitis and no cases have occurred in those vaccinated. Progress against the meningococcus provides a stimulus to research into the gonococcus.

Other important investigations required include: the reasons why some persons exposed to the same source contract the disease and others do not; the significance of local antibodies or of personal hygiene and the question whether local antibodies can be effectively stimulated by local means; the question whether a copper ion-liberating uterine device can prevent or minimize cervical gonorrhoea; and the possibility of using self-sampling techniques.

#### Other sexually transmitted diseases

The problems in this field include: the reasons why only a few males with non-gonococcal (or even gonococcal) urethritis develop Reiter's syndrome while the vast majority do not; the reason why granuloma inguinale has an unusual prevalence in some areas (e.g. Papua New Guinea and south India); and the absence so far of a relatively non-toxic drug that would eliminate herpes virus hominis, and the question whether an immunizing procedure could be effectively applied to this disorder.

#### Research in sexual behaviour

A number of studies have been made of the cultural and social characteristics of patients with sexually transmitted diseases and of sexual behaviour and attitudes. These have been helpful in delineating target groups and in understanding the psychosocial factors involved. Few studies have been concerned with the psychodynamics of the emotions during childhood and adolescence and their impact on stable sexual relationships. Recent study indicates that promiscuity often appears to be a consequence of unfulfilled emotional needs during childhood and adolescence.

More needs to be known about the health related behaviour of groups at risk, such as the acceptability of personal prophylaxis, and the reasons for delay in reporting for medical care and for lack of cooperation in treatment and contact tracing. In this respect, the current attitudes and practices of health personnel need closer scrutiny to appreciate fully their effect on patient behaviour.

There appears to be an urgent need for increased sociomedical or sociological research, not only to obtain further knowledge of the psychosocial characteristics that lead to extensive sexual behaviour but equally to achieve a more realistically based and therefore better approach towards the patients involved.

#### Health education in the control of sexually transmitted diseases

Health education aims at informing people and so helping them to take action to improve their own health and the health of the community. In sexually transmitted diseases control a number of basic actions are required with respect to their prevention, transmission and treatment. They concern the selection of the sexual partner, the adoption of individual prophylaxis, the seeking of prompt and sustained medical attention if infection is suspected and the persuasion of sexual contacts to do the same.

In most countries there are few opportunities for children to develop positive attitudes towards sexuality and learn what sexually transmitted diseases are and how they can be prevented. Many parents and teachers feel ill prepared to discuss sexually transmitted diseases in the context of human development and sexual relationships. Ignorance and misconceptions concerning sexually transmitted diseases among the public are still widespread and negative attitudes towards these diseases and their victims, which may be shared by the health professions and community leaders, are in part responsible for the insufficiency of resources for sexually transmitted diseases control.

Information and education of the public at large, the young, groups at risk, sexually transmitted diseases patients, parents, teachers, health workers responsible for sexually transmitted diseases control, and those who can provide the necessary resources for more adequate sexually transmitted diseases control measures are important weapons in improving the health and social cost that sexually transmitted diseases are currently causing to the community.

So far the health education approach has been insufficiently applied in most countries. It requires adequate resources, both budgetary and of personnel able to the educational work. It also needs to be an integral part of sexually transmitted diseases control programmes, as success in sexually transmitted diseases control ultimately depends on the active participation of the public and health workers in protecting the health of individuals and the community with respect to sexually transmitted diseases.

The report of the Meeting on Health Education in the Control of Sexually Transmitted Diseases describes these problems and discusses the areas of health education in sexually transmitted diseases control.<sup>1</sup> See also Part II of this document.

#### Possible better approaches

The worldwide picture of sexually transmitted diseases today is dominated by the rising trends in their incidence. Insufficient reporting prevents that full evaluation of the extent and significance of the problem on which the necessary public health measures for control should be based.

Following the introduction of efficient antibiotic regimens, the late complications of syphilis and gonorrhoea have to a great extent been prevented, though some areas with very limited budgetary and manpower resources have not been able to achieve such results. This aspect deserves greater attention; greater international collaboration is required to promote health in those areas.

Although the behavioural aspects are obviously of significant importance in the acquisition and spread of sexually transmitted diseases, they appear to be so intimately linked to the psychosocial environment of the individual and his adaptation to society that long-term preventive sociomedical and health education efforts are required to reduce the frequency of unstable sexual relationships.

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<sup>1</sup> WHO unpublished document INT/VDT/75.364.

In the search for immediate improvements in control, the focusing of attention on the often asymptomatic periods of infectiousness in the course of these diseases appears to be a rational approach. Consequently cost-effectiveness studies of the more extensive application of screening procedures in order to discover silent infections offer a most valuable epidemiological contribution. Health education methods motivating the target groups to attend for regular control examinations would be of equal importance. However, both these procedures imply the existence of resources, manpower and diagnostic facilities, and of an appreciable level of health education in the area. These solutions thus favour the more developed countries, stressing further the need for international action and cooperation.

It is to be hoped that continued research activities will ultimately result in efficient vaccines against the sexually transmitted diseases, including syphilis, gonorrhoea and herpes virus infections, and that more acceptable possibilities for individual prevention will arise. But possible future progress in this field must not hinder immediate grasping of the opportunities at present available for improving the control of sexually transmitted diseases and for the international cooperation through WHO and other agencies that is required. In all countries there is considerable scope for immediate and more effective use of existing resources.

But it is certain that the application of our knowledge and the full utilization of material and manpower will not be of real use without a multidisciplinary approach, not only of the doctor, sociologist and psychologist but also of the health educator. It is just as evident that, from the outset of the formulation of sexually transmitted diseases control programmes, these must be considered not as a separate entity, but as part of the communicable diseases, their only peculiarity perhaps being that they depend more on individual and collective behaviour than do certain other diseases.

These considerations imply the necessity of including sexually transmitted diseases control methods within the framework of general health services and not within the narrow boundaries of a few special disciplines.

The realization of such a multidisciplinary and integrated approach would certainly constitute a decisive advance.

PART II. Replies to Questionnaire

1-6 EXTENT OF THE PROBLEM

1. What statistics on the sexually transmitted diseases can you provide?

In some countries the available figures relate to syphilis, not necessarily by stages, and gonorrhoea only (e.g. Bulgaria, Cuba, Egypt, Thailand), and in many to syphilis, gonorrhoea and soft sore (e.g. Argentina, Bahamas, Belgium, Denmark, Dominican Republic, El Salvador, Finland, German Democratic Republic, Guatemala, Hungary, Malaysia, Peru, Poland, Romania, Singapore, Sweden, United Kingdom). In a number lymphogranuloma venereum (e.g. Argentina, Bahamas, Denmark, Dominican Republic, Finland, German Democratic Republic, Romania, Sudan, United Kingdom, United States of America) and granuloma inguinale (e.g. Bahamas, Cyprus, Denmark, India, United Kingdom, United States of America) are collected also. Those of non-gonococcal urethritis are recorded in some areas (e.g. Bahamas, New Zealand, Peru, United Kingdom). The longest list is collected in the United Kingdom, where quarterly returns are obtained from the clinics listing syphilis by stages, post- and pre-pubertal infections with gonorrhoea, ophthalmia neonatorum, chancroid, lymphogranuloma inguinale, non-specific genital infections, non-specific genital infection with arthritis, trichomoniasis, candidiasis, scabies, pubic lice, herpes simplex, genital warts, molluscum contagiosum, other treponemal disease, other conditions requiring treatment and other conditions not requiring treatment. Scabies is also recorded in some other countries (e.g. Denmark, German Democratic Republic). They may be collected geographically at shorter intervals. Breakdowns by age, sex and case rates according to diagnosis are available in some countries. Details of location where the infection occurred and of contact action taken may also be recorded and of occupational category.

In two countries answering (Czechoslovakia, Denmark) the data on the incidence of venereal disease is considered almost complete, but overall the quantity of statistics differs widely, as does the quality. They usually relate to government facilities only, often venereal disease clinics only, sometimes being restricted to inpatients only or to those attending family planning clinics. Standards of diagnosis also differ.

Even in countries with extensive reporting systems, the numerical notification of cases treated by private practitioners is not obligatory, although they may represent a relatively small proportion. As the vast bulk of cases are treated by such persons in many areas, there are no reliable statistics (Malaysia) or truly national statistics, although notification without giving names being introduced in one country in 1975 should improve matters.

2. How can these statistics be improved?

Statistics should provide timely estimates of the magnitude of disease problems and through data on trends provide a tool for evaluating the effect or need for control efforts (e.g. Denmark, Guatemala, United States of America). Adequate information should be given to medical practitioners, emphasizing the importance of case reporting.

It was generally considered that uniformity of statistics is required which should be achieved by international agreement and be available by stage and type of disease, age, sex, and case rates, so that the level of transmission can continually be gauged.

Suitable standardized forms and procedures are required for reporting and they should be simple and avoid unnecessary data and be used by all institutions. Adequate trained clerical staff must be provided and systems for data collection (i.e. by areas or regions) established. Dermato-venereological clinics should be obliged to give complete statistics of their cases. A central unit should analyse and tabulate the data which should be returned as soon as possible to regional and local levels by a national information system so as to awaken or maintain interest in the importance of statistics.

It was suggested that where feasible the scope of reporting should be extended, e.g. to include different types of gonorrhoea, such as mouth and throat and upper genital tract infections and systemic complications and the sexually transmitted diseases other than syphilis and gonorrhoea. It was also suggested that, to focus attention on the problem, post-gonococcal urethritis should not be grouped with non-gonococcal urethritis.

Statistics can be improved by encouraging those at present not reporting to do so<sup>1</sup> and by implementing reporting laws where they exist. Statistics are more complete for syphilis than for gonorrhoea in most countries. Laboratory reporting is obligatory in a few countries and surveys are being made of private laboratories and private practitioners in New Zealand to assess the extent of under-reporting in this field.

Before statistics can be considered reliable, improved facilities, especially diagnostic services, are needed in many areas and greater use needs to be made of them. Where the diagnosis is established on clinical grounds only, cases should be reported as "penile sores" or "urethral discharges" and not specifically as syphilis, chancroid or gonorrhoea, so as to obtain better uniformity when comparing figures between centres or between countries.

Ancillary measures include creating a greater awareness of these diseases amongst physicians; ensuring that the diseases are treated only by physicians; discouraging self treatment; and providing continuing surveys of high-risk groups and continuing information to health personnel. Mortality statistics would be improved if physicians certified the cases of death more accurately.

3. How can those at present not reporting be encouraged to do so?

A distinction has to be made between numerical reporting for statistical purposes and compulsory reporting by name, concerning which there are differences of opinion. There are few objections to the former but the latter is not everywhere acceptable although it is inherent where it is recommended that all physicians and laboratories be required to report positive findings to the regional or central authorities so as to initiate contact tracing. Confidential reporting by name was usually considered to be more efficient than statistical reporting.

Under-reporting often results from subclinical infections not detectable without laboratory examination, from persons with suspected disease not seeking advice - for which increased facilities and more health education are required - and from neglect to report by government units, or general practitioners in many areas although they may be required to do so.

Two opposite approaches were suggested. One was to discourage private practitioners from treating venereal disease and to introduce a totally nationalized health service in which all doctors would be government physicians and therefore all cases would be reported. The other was to encourage private practitioners, first to diagnose accurately, treat effectively and ensure that contacts are traced and treated if necessary, and then to report, having established a good relationship with the staff of the public health units and physicians. Improved basic undergraduate and postgraduate education is necessary to make private practitioners aware of the importance of these diseases and of contact tracing. The dissemination of information such as the most recently collected statistics which should be published in specific bulletins, and offering private practitioners free laboratory facilities, including the collection of specimens, would be helpful.

Practitioners are considered more likely to cooperate with reporting not giving names. Other proposals are to offer a modest reporting fee to private practitioners and better salaries.

Where there are many centres offering free treatment, the problem of treatment of the venereal diseases is much smaller, and clinic statistics give a good idea both of the actual incidence and of trends.

Reporting will always be defective in the absence of a unified health service and of satisfactory supervision over technical standards.

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<sup>1</sup> See question 3.

4. Which diseases other than syphilis and gonorrhoea should be reported?

Of the diseases other than syphilis and gonorrhoea traditionally reported statistically, chancroid (e.g. Argentina, Bahamas, Belgium, Bulgaria, Cuba, Cyprus, Czechoslovakia, Dominican Republic, El Salvador, Finland, German Democratic Republic, Hungary, India, Kuwait, Malaysia, Mexico, Peru, Poland, Romania, Singapore, United Kingdom) was regarded as one that should be reported, and so too were lymphogranuloma venereum (e.g. Argentina, Bulgaria, Cuba, Cyprus, Czechoslovakia, Denmark, Dominican Republic, El Salvador, German Democratic Republic, Guatemala, Hungary, India, Kuwait, Malaysia, Mexico, Peru, Romania, Singapore, United Kingdom) and granuloma inguinale (e.g. Argentina, Bahamas, Bulgaria, Cuba, Cyprus, Denmark, El Salvador, Guatemala, India, Kuwait, Malaysia, Mexico and United Kingdom). These should be attended to first, as their venereal transmission is considered more certain: others may be included when better diagnostic tests are available.

There was considerable support also for reporting non-gonococcal urethritis (e.g. Bahamas, Belgium, Cyprus, Czechoslovakia, Guatemala, Hungary, India, Kuwait, Malaysia, New Zealand, Peru, Singapore, United Kingdom, United States of America), although the diagnosis can be made only where laboratory facilities to exclude gonorrhoea are available, but much less support for the other sexually transmitted diseases, although statistics are required when any one is the subject of a specific control programme.

Trichomoniasis was recommended (e.g. Belgium, Bulgaria, Czechoslovakia, Finland, German Democratic Republic, New Zealand, Poland, Singapore, United Kingdom) or was under consideration as was genital herpes (e.g. Belgium, Finland, Guatemala, Malaysia, New Zealand, United Kingdom, United States of America) but only as laboratory facilities became established. Genital warts also received some support and, to a lesser extent still, molluscum contagiosum, pediculosis pubis, mycoplasmas and infection with the cytomegalovirus were recommended, as these are all capable of causing serious complications.

Rather than adding diseases to the reporting network, it was considered more important to provide improved diagnostic and treatment facilities for all the sexually transmitted diseases, to provide a base for further epidemiological studies.

5. What precise data on the medical consequences and cost of the sexually transmitted diseases are available?

The consequences of these diseases, which cause illness and disability, and even death, fall on the individual and his progeny and involve the State in high costs.

Estimations of these costs can to some degree be obtained from the mortality and morbidity figures for late syphilis and from hospitalization figures. The cost of maintaining and staffing dispensaries and of freely provided medicaments can be related to the reported cases, but the result is often faulty as much of the actual cost is often absorbed by private practitioners.

Costs could nevertheless be partially reduced by the use of nationally manufactured antibiotics. In Thailand, it is estimated that the per capita cost of treatment of sexually transmitted diseases is \$ 1, while for syphilis and gonorrhoea it is \$ 3 per case. In Mexico it is estimated that the cost of treatment and control of a syphilis case is US\$ 12, while the figure is \$ 8 for a gonorrhoea case.

However, little overall information is available. Apart from reference in one country to a pilot study of the social and health consequences of gonorrhoea, many who replied to this question stated that no precise data were available but the costs were likely to be high. Evidence is accumulating that genital herpes and cytomegalovirus infections are responsible for significant neonatal morbidity and mortality, but no precise data are available.

6. In which order should sexually transmitted diseases other than syphilis and gonorrhoea have priority in reporting and control?

Among those replying non-gonococcal urethritis was first choice in 10 countries replying because of its prevalence and its sometimes crippling complications and second choice in eight.

Chancroid was first choice in 10, second in four, third in two and fourth in two. Lymphogranuloma venereum was first choice in four, second in seven, third in three and fourth in two. Granuloma inguinale was second choice in two, third choice in two and fourth in two.

Trichomoniasis was first choice in five, second in one, and third in two.

Candidiasis was second choice in three and third in three and fifth in one.

Type II herpes infections, on account of its potential serious effects, was the first selection in one, second in two, third in two, and fourth in four.

Genital warts were the second selection in one and the third in one. Cytomegalovirus was the third choice in one and the fourth in two. Mycoplasma infection was the fourth choice in one. Scabies was the priority selection in one, while pediculosis pubis was third choice in one and molluscum contagiosum was third choice in another. The eventual inclusion of hepatitis B was envisaged by one country.

Some of these answers conflict with those to question three. However, it was considered that the decisions can be made only on cost/effectiveness, for which data are currently being sought.

7-14 REASONS FOR RISING TRENDS

7. Which of (a) socioeconomic and (b) cultural factors contributing to an increase in sexually transmitted diseases are most important in your area?

(a) Socioeconomic factors

Although many considered the socioeconomic aspects and some the behavioural and cultural aspects the more significant, all of the factors involved are generally considered important although there is insufficient information to assign an appropriate weight to each factor. The problems are basically similar in developing and developed countries.

Excluding medical factors, such as increased resistance to treatment, the socioeconomic factors which have provided greater opportunities for the sexes to meet include rapid development and increased affluence; increased co-education with more young people in universities; greater group mobility with vast increases in tourist and business travel which have led to greater international exchange of disease (Bulgaria); increasing urbanization and industrialization, with large floating populations in the cities, very rapidly achieved in some areas; the increased independence of young women owing to high wages in industry and commerce, increased leisure (India) and increased alcohol consumption; and large-scale movements of migrant workers involving many single men and those separated from their wives. The less privileged groups have a higher incidence of sexually transmitted diseases in some areas, but the so-called "middle classes" are now contributing a high proportion and no social level is exempt.

(b) Cultural factors

These too are complex. Associated cultural changes of attitude which have made all kinds of activities possible, increased exposure to sexual stimuli, and more tolerant attitudes to sexual behaviour, both heterosexual and homosexual, have resulted in increased premarital and extramarital intercourse and promiscuity. Free sex has become a norm in some groups, including multiple contacts.

New contraceptive techniques, the relaxation of abortion laws in some countries and the simplicity of venereal disease treatments have reduced the fears of disease and pregnancy, and the expansion of education has exposed numbers of teenagers to the influence of an urban environment away from the influence of parents and home and has removed the inhibitions on freer sexual expression. The young particularly are straying away from the traditional way of life and behavioural changes are occurring among them, motivated by contemporary thought.

Particularly affecting young people is earlier physical maturation, with an expectation of sexual gratification at an early age. It was felt that the younger female, in making herself freely available, has lost the control over the sexual situation she used to have and finds it impossible to persuade the male to take any responsibility for protecting her from venereal disease or pregnancy. Other factors affecting young people include group living, widespread "hippy" travel, and youth in military service.

Additional reasons given are a reluctance to discuss sex matters in public, lack of sex education, the stigma of venereal disease, resulting in self-medication, and the reluctance of patients to cooperate with the health authorities. On the other hand, the lessening of the stigma attached to venereal disease in many areas has led to increased attendances at the clinics.

8. What information is available concerning the incidence of sexually transmitted diseases amongst the high-risk groups in your country?

The available information varied widely from nil to full studies of high-risk groups (e.g. Czechoslovakia, Denmark, Hungary, Sweden, Thailand) including socioeconomic status. Studies involving the family, social and other status of high-risk groups, including repeaters, are more easily organized where notification is by name.

Age and sex studies (e.g. Bahamas, Cuba, Denmark, Netherlands, New Zealand, Peru, Singapore, Sweden, United Kingdom, United States of America) confirm that persons aged 15-30 years are most at risk, the ages being slightly lower for females than for males and slightly higher for primary and secondary syphilis than for gonorrhoea. Increases are now occurring in the 17-20 age group in some countries.

In some areas information is available on prisoners and delinquents, and on prostitutes, but in many no data are available as prostitution is illegal or is not a significant problem. Some data can also be obtained on the military, seafarers, university students, immigrants and occupational groups. In others building workers whose wives were working in other settlements, transport workers, hotel and bar personnel, tourists and school leavers were considered at special risk, although no data were supplied.

Some studies of homosexuals who have been reported on an increase have also been made (e.g. Netherlands, United Kingdom). Male homosexuals are at high risk, bisexuals probably so, but female homosexuals are at low risk.

It was suggested that the threshold of utilization of health care systems by high-risk groups was a factor deserving investigation.

9. To what extent can human sexual behaviour be influenced with a view to venereal disease prevention?

Although it was considered that indiscriminate sex contacts could be considerably reduced by persistent health education and antivenereal disease propaganda, attempts to alter established life styles were generally considered to have only limited success, even depressingly so. Venereal disease patients have often been shown to be drawn from an atypical social background and are unlikely to respond. It is difficult, particularly among groups of high socioeconomic level, to influence sexual behaviour.

However, it was suggested that an impact could be made on interrupting transmission by securing the earlier attendance of patients and their cooperation in contact tracing, by a greater use of personal prophylaxis and by participation in screening examinations. The major source of infections - repeaters with deviant behaviour - need an individual approach.

It was generally felt that well planned health education at school age was necessary and that home and traditional - including religious - upbringing was the most effective in determining attitudes and behaviour. Later pastoral care in the universities and the moral influence of the church and youth organizations often fail to influence individual or group behaviour.

There should be continuing education during adolescence to maintain awareness, and this should be extended to high-risk groups.

The information should cover methods of transmission of sexually transmitted diseases, complications and the effects on the newborn. It was also suggested that, as fear may influence human behaviour, stress should be placed on the complications of these diseases and the risks of pregnancy. Certainly sex and sexually transmitted disease education in schools will not improve the situation unless a deterrent stance is taken. Education should, however, not only involve prevention but be on a wider scale, aimed at the harmonious development of the personality. The moral aspects should be touched upon to make a balanced presentation but this should not be undertaken by medical personnel.

10. What is the effect of current attitudes towards sexually transmitted diseases on the control of these diseases?

Although religious and traditional attitudes continue to keep down the incidence of venereal disease in a number of countries (e.g. Egypt, India), current attitudes, expressed as moral prejudice among older people or as permissiveness among the young, are generally detrimental to control. In many countries, particularly those containing different cultures, there is a wide range of attitudes, from conservative and traditional to modern and permissive, and it is anticipated that young people will increasingly adopt the latter.

It was pointed out that negative attitudes, in which venereal diseases are regarded as moral and not medical problems, prevent the allocation of adequate resources to prevention and require changes in outlook among those in charge of control programmes.

The lingering stigma of venereal disease is a factor in delaying seeking diagnosis and treatment and participating in contact tracing, especially among homosexuals. A certain number of patients (mainly with gonorrhoea) turn to self-treatment to escape registration at the dispensaries, where great discretion is required by the medical staff concerned. The merging of venereal diseases with skin conditions was stated to have lifted the fear of patients of having to meet prejudices and disapproval in their own circle.

The present simple and freely available treatments in some countries have minimized the importance of the sexually transmitted diseases and reduced caution as did the fall in the morbidity figures in the years 1950-1960, and in some areas has encouraged self-treatment or the often inadequate treatment given by unauthorized persons. Indeed, patients attending the clinics have been shown to be amongst those best informed. Increased openness has also resulted in more patients attending with a suspicion of infection. But failure to emphasize the importance of the problem may result in the failure of patients to attend, to complete the follow-up, or to cooperate in contact tracing.

The general reaction of patients in one study can be summarized as cooperative. This shows the value of educational efforts, and contrasts with the attitude of rejection of the medical and paramedical personnel involved in the study and in the epidemiological investigation of the cases.

However, it was considered that full control, especially of gonorrhoea, is impossible in the present climate of permissiveness, in spite of almost 100% effective treatment.

11. Why is more venereal disease found among homosexuals in the larger urban centres than among heterosexuals? What is the situation in your country?

A high proportion of male homosexuals with sexually transmitted diseases, especially primary and secondary syphilis, are found in capital cities or large urban centres in a number of countries (e.g. Finland, Hungary, Netherlands, Sudan, Sweden, United Kingdom). Figures of 25-74% were provided for early syphilis in some areas but those for gonorrhoea were less, e.g. 10-26%.

In one area the problem was stated to be common at one time but is now less so, and in others there is no problem yet, it is not obvious, or no data are available. It was stated to have increased to some extent in others.

The reasons were considered complex. They include the tendency of homosexuals to congregate in large urban areas so as to preserve their anonymity, homosexuality being illegal in some areas, unwillingness to attend owing to the stigma and the tendency of homosexuals to form closed circles in which disease rapidly spreads and where contacts are difficult to trace, partly because many deliberately seek anonymous sexual contacts. In areas with high figures lessened fear and shame have resulted in better contact tracing and more revealed disease.

Other factors listed were high promiscuity with less lasting relationships; a more frequent group exchange instead of mating in pairs; pronounced travelling habits; the concentration of such persons in the entertainment industry in the cities; ignorance; and unawareness of the disease and difficulties of diagnosis.

12. How can the persons most affected by the various factors outlined be better characterized so that control methods can be applied?

Intensive epidemiological and sociological studies are required, especially among high-risk groups (e.g. Belgium, Czechoslovakia, Egypt, Guatemala, Mexico, Peru, Poland, Romania). They may be carried out in selected centres employing adequate diagnostic methods permitting calculation of the attack rates in infected and non-infected populations according to demographic and behavioural characteristics. They should cover the private sector and professional staff from different fields should cooperate.

A number of studies have already been made and others are being contemplated. Research amongst immigrants and homosexuals have clarified some of the issues. It was pointed out that such studies might produce negative information - for example, the routine serum testing of sailors for syphilis had not proved fruitful in Finland.

Repeaters<sup>1</sup> are those most affected by the factors outlined, but some repeaters are found among ordinary people and they should therefore be treated in the same clinic as others. Nevertheless it might be possible to classify patients according to their age groups and promiscuity (El Salvador) and to organize a follow-up of repeaters.

That a register be kept of groups at risk (e.g. homosexuals, lorry drivers, to include prostitutes and industrial and hotel workers) was suggested. Such a confidential register concerning syphilis has been in use in Denmark since 1920, where the State Serum Institute has contributed to a better coordination of contact tracing, a better follow-up and a more accurate registration.

In the Far East most of the venereal diseases are contracted from prostitutes and a modified scheme for limiting the incidence of infection in this group is being contemplated in one country.

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<sup>1</sup> See question 13.

13. What can be done to characterize potential "repeaters" in order to prevent future infections?

Recurrences are detected by post-treatment surveillance and reinfections could be prevented by the study of repeaters.

It was suggested that a "repeater" be defined as one who has had three infections in a year or been reinfected within the last three months. Any repeater is considered a potential danger, but the difficulty is to recognize him at his first visit when the physician's ability to judge behaviour and attitude may be the only hope of doing so. However, many perhaps the majority, of repeaters cannot be categorized.

A psychological assessment of behavioural patterns, school and work record, etc. and of promiscuity levels would be helpful in the definition of repeaters, as might the keeping of records or more accurate sexually transmitted disease figures so that a better follow-up can be assured, and the reporting of patients according to how many times they have already had gonorrhoea. In one country replying to this question, a patient with repeated notifications or proved frequent changes of partners is registered as "a person who frequently changes sexual partners" or as "a person strongly suspected of being ill", and he then has to report to health authorities for regular repeated weekly or monthly examinations.

Although little may be accomplished in inducing repeaters to alter their behaviour, an attempt should be made to educate them adequately, particularly in regard to the practical methods required (Mexico), prophylaxis, and the need for regular check-ups. They should receive the attention of social workers. Although group therapy was suggested by one country the point was also made that only personal health education is possible, otherwise confidence in the discretion of the dispensary is lost. In addition, epidemiological surveillance is required with a regular check of high-risk groups, using preventive treatment where necessary and health education.

14. Which community structures should be envisaged especially in order to minimize the adverse effects of the many factors outlined?

The most important basic structures were considered to be the institution of marriage, the family, school and community, village, town, or city. Economic structure and social well-being also contribute to a decrease in venereal disease, as does the removal of children from disturbed homes. The importance was stressed of careful social planning, especially in the development of an area, and of providing meaningful leisure time activities, including the provision of community centres with sporting facilities for teenagers and young adults.

A strong structure to promote health education in the schools and of the public is required, particularly among organizations of the young in educational institutions, teachers and professors and parents' associations. The educational level in homes for destitute children should be raised.

The health of the population is the responsibility of the State in some countries. Where the health structure is deficient it must be strengthened by appropriate legislation if necessary. A national centre is suggested for the surveillance of sexually transmitted diseases in one country to permit data on disease costs to be gathered and analysed, to evaluate and/or administer disease prevention and control programmes, and to determine priority research needs.

The infrastructure must be able to provide adequate facilities for the free diagnosis and treatment of cases in specialized or general clinics, with sufficient trained staff for contact tracing, effective notification of cases, the participation of private practitioners, and screening examinations including the periodic examination of high-risk groups. A strong structure for training health personnel in the sexually transmitted diseases is also necessary, including training for health educational aspects.

Industrial and seaport areas, where there are many men away from their families, should be the main target for the sexually transmitted disease control programmes. Once the high-risk groups have been identified, control activities should take place amongst organized groups in such strata as well as during clinic consultations and the treatment of contacts.

Closer relationships must be fostered between the services and the community and between the doctor and the patient.

#### 15-18 LEGISLATION AND REGULATION

15. In the light of modern knowledge concerning the numbers of sexually transmitted organisms, what diseases should or should not be legally defined as venereal?

No special legislation is required in one country but the conditions traditionally classified as "venereal" should be grouped under communicable diseases.

Agreement was general concerning syphilis and gonorrhoea and in many instances chancroid was included, as well as lymphogranuloma venereum, and granuloma inguinale.

Inclusion of all the sexually transmitted diseases was considered to offer few advantages and would create perhaps greater difficulties.

However, non-gonococcal urethritis was suggested by some, and mycoplasma and chlamydial infection. There was some support for trichomoniasis, candidiasis, herpes infections, the compulsory notification and screening of all of which would clarify many problems of epidemiology. Pinta and yaws were also suggested as were infections due to staphylococci and streptococci.

Inclusion and exclusion of these diseases for legal purposes would differ according to the specific law being considered (e.g. reporting, prenatal screening, visa examination, etc.).

16. What steps should be taken to discourage treatment of venereal diseases other than by duly authorized persons? Otherwise are there any acceptable informal methods of control or treatment aimed at - for instance - pharmacists?

Some countries wanted legally enforceable regulations to prohibit the treatment of venereal diseases by other than qualified medical practitioners or the provision of well informed, duly authorized and supervised health personnel and uniform regulations in all countries forbidding the sale of antibiotics except on medical prescription, even if such regulations are difficult to enforce particularly in countries with large populations.

In areas where free diagnostic and treatment facilities are available and the laws can be strictly enforced, there is no real or anticipated problem but chance treatment of venereal disease by doctors or self-medication cannot be excluded, prevented or prohibited. As a result of social insurance, cheapness of antibiotics, and bad habits of drug consumption, there is no way of controlling the "home drugstore".

However, greater difficulties are encountered in countries where the facilities are poor, especially in those where there may be practitioners of traditional medicine of many nationalities and cultures. Such practitioners might even be given the necessary minimum training for the recognition of sexually transmitted diseases. The suggestion was made that specialized doctors should be nominated to whom non-qualified persons must send their cases and whose duty it would be to report their cases within 24 hours.

It was not generally felt to be desirable that pharmacists should treat venereal disease but the number of clinics should be increased to provide free and confidential treatment under conditions of dignity and privacy. However, where there are no doctors pharmacists should be properly trained.

Health education of the public is required (Bulgaria, Guatemala) to ensure they seek advice only from qualified persons, and adequate information provided to direct young people to the centres was suggested. Cooperation of pharmacists in the programme can be best ensured during their training and by their professional societies and the code of ethics they set.

17. What additional regulations could be helpful in venereal disease control, e.g. on the use of antibiotics to combat antibiotic resistance?

Few countries suggested additional regulations, as those existing are difficult to enforce.

Basically, regulations should be aimed at restriction of the use of antibiotics with a precise diagnosis before treatment unless there is a danger from delay, and correct therapy, for which standards should be laid down. Regulations limiting the sale of antibiotics to sale on prescription only and forbidding treatment of venereal disease by unqualified persons were covered in question 16.

Adequate therapy was suggested by the use of standard schemes of diagnosis and treatment either by regulation or on a voluntary basis, by updating practitioners on their knowledge, using a government sponsored journal. A declaration that penicillin is the antibiotic of choice unless contraindicated, at least for as long as this drug is effective, was considered helpful and, as there are variations in the sensitivity of gonococci in a number of different areas, the use of only those antibiotics likely locally to be effective on local strains of gonococci and other organisms was also proposed. However, it was considered that restriction on the use of antibiotics would not be palatable to general practitioners nor would any regulation prevent them from using them.

Laws also helpful to venereal disease control efforts include those permitting the treatment of minors without notification of their parents or guardians, the open display and sale of condoms, the dissemination of information concerning the sexually transmitted diseases in schools, and homosexual practices between consenting adults.

Other less direct suggestions included the increased free availability of the laboratory services, reporting of cases to venereal disease clinics, notification by name, the ensuring of regular medical examination of certain occupational groups to cover venereal disease as well, and compulsory investigation and treatment of persons known or suspected of harbouring venereal infections.

18. What difficulties are there in applying regulations and what steps can be taken to apply them more effectively?

Regulations are difficult to apply in very large populations with different levels of education and different economic standards. The manpower necessary for supervision and for the judiciary to punish the guilty is beyond the means of some countries.

Although physicians were stated to observe regulations on venereal disease control without difficulty in one country neglect to report, interview and trace contacts, fostered by a discriminative attitude on the part of health personnel, has resulted in inadequate cooperation by patients in most others. Moreover, regulations applicable in some areas are not necessarily suitable for others while reporting requirements are widely unobserved in some countries.

The lack of sufficient facilities, of clinics and of experienced staff, including those required for contact tracing, is often a major obstacle. One country stated that the control of venereal disease has been improved by the abolition of private medical care for such diseases.

A main loophole was considered the use of antibiotics for self-medication and this will persist for as long as other than injectable antibiotics are given.

Greater cooperation is required between the sexually transmitted disease units and other health units (general services, obstetricians, laboratories, etc.), between the sexually transmitted disease units themselves to improve contact tracing, between the units and those involved in the education of the young and, in countries with private medicine, between the units and private practitioners. Half measures are frequently equivalent to no measures.

19-21 ORGANIZATION OF FACILITIES

19. How can venereal disease services best be planned in countries with no specialized service and limited medical facilities?

For the budget to be appropriate, information on the extent of the problem is first required. A preliminary survey should be made of any available statistical and laboratory data in government and private institutions and student health and military units, including those of private practitioners and of existing facilities, staff and potential, so as to provide some basis for planning such services.

A full-time specialist medical officer, trained in venereal disease control and public health is suggested to advise headquarters on the planning and organization of the venereal disease services, including the training of staff. An essential aid for both of these tasks may be the recruitment of temporary specialists from developed countries while local physicians are being trained.

The object will then be to improve the laboratory and clinical facilities to provide accurate diagnoses and at the same time to make the best use of existing possibilities, achieving coordination by integrating the programme with the public health teams existing and enlisting their full cooperation.

A central venereal disease reference laboratory, integrated with the local laboratory services, is desirable; using standardized techniques controlled by the centre, and the creation of small diagnostic units may be required.

A demonstration clinic under a trained specialist should be established in the biggest city in a top institution, preferably as an outpatient unit of a teaching hospital in which cases can be properly diagnosed, to which physicians within and outside the government service can refer cases, and which can also be used for training.

Travelling fellowships to countries with an integrated service are helpful in the training of such specialists. Ultimately, in the long run, an institute may be created.

The specialized centres may be situated in the hospitals alongside the dermatology departments, as part of public health centres, or as separate venereal disease centres in some areas, providing easy access to high-risk groups.

The centres should have adequate accommodation, equipment for diagnostic procedures and an adequate staff of physicians, nurses, health visitors for contact tracing, and social workers. They should have audiovisual facilities for educating the patients and diagnostic and treatment services should be free.

It was emphasized that private practitioners should be encouraged to treat patients efficiently and to participate in the programme; they should be free to utilize the diagnostic and treatment services organized. It is important that their interest should be aroused and this can be done through the foundation of medico-scientific societies.

In rural areas, lay health workers in the villages under the control of the district medical officer should be trained to diagnose by clinical and epidemiological methods and treat cases and contacts by rule of thumb. Later, as facilities improve, mobile teams from the towns can visit the local health units regularly.

It is important that, from the beginning of the organization and establishment of the programme for the control of sexually transmitted diseases, integration of programmes and services into the framework of general health services be envisaged. Such integration should take place not only at the centre but also in outlying areas.

20. Do the advantages of having established "special clinics" for sexually transmitted diseases outweigh any disadvantages (e.g. social stigma effect) they may have?

The answer was generally in the affirmative because the standard of diagnosis, treatment and epidemiology are at a high level. It was stressed that such services should be free and should include facilities for research and training. Specialized clinics are not available in countries with restricted resources. A regionalized health system based on hospitals and polyclinics was considered to have advantages over special clinics in developing countries, but when the clinics are properly established voluntary attendance can be assured without fear of social stigma.

Nevertheless, a stigma is attached to patients openly attending special venereal disease clinics and their integration within a larger medical complex, e.g. as part of a dermatology or urology clinic, was preferred by many countries, general acceptability depending on their integration with other clinics and standards of service. Providing the clinics are not separate, independent or conspicuous they carry no intrinsic disadvantage. The name chosen for the clinic (e.g. department of genito-urinary medicine) is likely to reduce the residual social stigma.

21. How can physicians and other medical personnel treating venereal diseases outside the established clinics be informed to make them contribute more effectively to the venereal disease control programme?

This was suggested through improved intradisciplinary cooperation involving joint meetings of dermato-venereologists with pathologists, obstetricians, gynaecologists, urologists and others to evolve a combined plan of action. Physicians working in special clinics must be able to demonstrate to less skilled workers that they can help them diagnose and treat these conditions and that they are interested in helping them solve problems presented by their patients (United States of America). The value of cooperation should be stressed by abundant information, by yearly venereal disease training courses, and by continuing education.

The information should be free, well presented and calculated to arouse interest such as with bulletins written as a newsletter. They should contain summaries of epidemiological trends and morbidity data, and details of facilities, the location of specialists, changing clinical features, techniques of diagnosis and treatment, antibiotic sensitivity patterns and recommendations for the most appropriate treatment, descriptions of sexually transmitted disease control methods and what they can achieve and encouragement of practitioners to undertake contact tracing. The professional medical press should also be used.

It was universally agreed that adequate attention must be paid to the sexually transmitted diseases during undergraduate and postgraduate education by means of regular refresher courses, round table meetings, seminars and lectures employing audiovisual aids. Much can be done through professional organizations and societies, for example, the Malaysian College of General Practitioners has formed a specialist group to arrange a correspondence course for physicians and their participation in therapeutic trials and in the health education of the public and of high-risk groups in relation to personal prophylaxis.

The services as a whole should be committed to helping health workers in other disciplines to perform their work in controlling these diseases as effectively as possible.

#### 22-23 EARLY DIAGNOSIS

22. How can the early diagnosis of syphilis and gonorrhoea be improved using existing techniques?

#### Facilities

Although in some countries there are adequate laboratory facilities (Sweden), in many the essential first steps are to establish and equip laboratories to perform the required tests, particularly for screening purposes, and to train personnel in their performance and physicians to use them properly. A more extensive cost/effectiveness related to screenings of persons who seek medical advice for other reasons than sexually transmitted diseases would be useful.

In developing areas, limitations in finance and personnel render the basic laboratory service difficult to organize and the concentration should initially be on the provision of equipment and technicians who could also be used for sputum examination in the tuberculosis programme.

There is a need for an efficient central reference laboratory for confirmatory testing and the exercising of quality control, standardizing procedures and conducting proficiency testing in the other laboratories - for which periodic checking is required - and providing a rapid laboratory service for referred specimens. Some regional laboratories may also be required. All laboratory services should be free of charge and kits should be provided for the collection of specimens.

### Methods

The basic facilities for rapid diagnosis within the clinic are essential and consist of the darkfield, a quick microfloculation test for syphilis and smear and culture for gonorrhoea.

The existing serological tests for syphilis are considered sufficiently reliable but greater use should be made of them. The rapid plasma reagin (RPR) card test, for example, can provide a result while the patient is in the clinic, enabling immediate treatment to be given if required.

In well equipped areas tests using treponemal antigens should be used more widely for screening, particularly of contacts, as both the FTA-ABS and TPHA tests become positive earlier in the disease than other tests.

For the diagnosis of gonorrhoea the specimens should be taken from the urethra and cervix not from the vagina. More reliable methods of culture are required and simplified cultural techniques using transport media could be of great assistance, especially if they can be used by institutions and general practitioners in an extension of the screening programme. It is an advantage if cultures are plated in the clinic. It was pointed out that at least three cultures are required before a negative report is given. On the other hand such approaches are considered beyond the present capabilities of many countries.

There is a need therefore for a simple and reliable serological test for gonorrhoea, and possibly for non-specific urethritis also: serum tests for gonorrhoea are currently being studied.

It is necessary to ensure that health workers are sufficiently educated in the diagnosis of sexually transmitted diseases. Health education of patients is required to encourage the use of the diagnostic facilities, regardless of whether they think they have symptoms or not.

23. How can these techniques best be developed for use in the private sector of medicine; in rural and in developing areas?

In developed areas the darkfield, a flocculation serum test (e.g. VDRL) and the FTA-ABS test or TPHA, at least in doubtful cases, are suggested for the diagnosis of syphilis. In rural areas and in developing areas a more simple test such as the RPR test will serve, and specimens can be sent as paper rondelles to a central laboratory for the FTA-ABS or other tests. In the least developed areas diagnosis has to depend on clinical examination.

For gonorrhoea in developed countries following clinical examination, microscopic examination should be made of material taken from the appropriate sites. Cultures also should always be performed in the female and in the male also, unless acute gonorrhoea has already been diagnosed by slide. Staff need to be properly trained in the collection of specimens. In rural areas with no laboratories reliance has to be placed on clinical examination and presumptive diagnosis. There is a need for public health centres in smaller towns to have laboratories equipped to do routine tests.

In the private sector the key is the laboratory and prefabricated transport and culture media, a better and more thermostable transport of specimens and simplified procedures are suggested. Access to government laboratories should be given to general practitioners and the tests plus the necessary bottles, etc., for specimen collection should be provided free of charge. Some countries at present make a small charge for this purpose.

In countries with a well developed service, it was not thought best to encourage diagnosis and treatment in the private sector, as the general standard of diagnosis may not be high, especially when the tests are done in private laboratories.

#### 24-25 EARLY TREATMENT

#### 24. How can the development of gonococcal resistance to penicillin best be combated?

Basically this is best done by the restriction of indiscriminate antibiotic usage in many countries. Antibiotics should be given on the basis of precise diagnosis and in an adequate fixed dosage about which the profession should be informed. Its administration should be supervised.

Many countries insisted that antibiotics should be available on prescription only and that unnecessary use, oral administration and antibiotic prophylaxis by general practitioners and others should be discouraged.

Adequate dosage may be determined by sensitivity testing for which continuous monitoring of strains is required in reference laboratories in various regions with periodic revision of schedules as necessary.

It is important nevertheless that all patients should receive an adequate curative dose and a cure rate of at least 95% should be aimed at. Large aggressive doses are needed, preferably in short courses involving one or at most two administrations, using short-acting preparations not long-acting penicillins, and with the use of added probenecid. Such schedules should be officially recommended and general practitioners should be officially informed about their use.

Treated patients should have adequate post-treatment examination to ensure that they are not carrying residual resistant organisms.

#### 25. Taking into account cost and other factors, what are the best alternatives for the treatment of gonorrhoea in (a) developing, and (b) developed countries?

In all countries penicillin in large doses is preferred, with added probenecid where necessary. In some countries with relatively fewer problems of resistance 2.4 mega units of procaine penicillin with 1.0 g probenecid or 1.0-2.0 g of ampicillin with probenecid is considered sufficient. Elsewhere high doses are required - 4.8 mega units of procaine penicillin, or 5.0 mega units of benzylpenicillin, or ampicillin by mouth 3.5 g, plus probenecid.

In both developing and developed countries, from the standpoint of cost/effectiveness and to ensure that the patient receives treatment under supervision, single-dose therapy is preferred in some countries, as an alternative to injectable penicillin. In some areas private practitioners do not use benzylpenicillin for fear of anaphylactic reactions and give ampicillin plus probenecid instead. Otherwise, the tetracyclines are the most freely available alternative, although co-trimoxazole was also suggested.

In developed countries, where both smears and cultures are required first, spectinomycin was considered the best alternative in failing cases and for those considered to be allergic to penicillin, while kanamycin, tetracycline, doxycycline, rifampicin, co-trimoxazole, garamycin and erythromycin were also recommended by some of those replying.

26. How can screening tests for syphilis be applied more effectively?

The present high incidence of sexually transmitted diseases in some countries has made case finding a priority. This must in the first instance be related to the ability of the pathological services to perform such tests in regard to quantity, quality, to cost, and to whether the object is to prevent complications or to interrupt transmission. More infectious cases of syphilis present spontaneously or as a result of contact tracing, than are obtained by screening.

That the first priority should go to antenatal patients and blood donors is widely accepted (e.g. Argentina, Bahamas, Cuba, Cyprus, Denmark, Hungary, Kuwait, Mexico, New Zealand, Tunisia, United Kingdom). Priority should go to those encountered in government and private institutions and by physicians, and to known syphilis contacts. It should gradually be extended, as capability or performance allows, to other groups, especially in areas where syphilis is a problem. Case finding might be mandatory or achieved by voluntary persuasion (Cyprus), and social or financial inducements might be considered.

Many of the priority groups are already tested in some countries. The tests might be extended to include: hospital inpatients and outpatients (e.g. Bahamas, Cuba, Dominican Republic, Egypt, El Salvador, Hungary, Poland, Tunisia); those attending family planning clinics; gynaecological, including abortion patients; those undergoing premarital testing and pre-employment testing; and immigrants, university and other students.

A further extension should be made to higher-risk groups receiving periodic examinations (e.g. El Salvador, German Democratic Republic, Netherlands, Poland, Singapore). These include: seafarers, although today they produce fewer cases than formerly; military recruits and discharges; industrial workers, including those in the transport industry and on building sites, imported labourers, waiters, food handlers and restaurant personnel.

For behavioural reasons, mention was made of other groups, in some of which screening tests could be enforced. They include: prisoners and delinquents; those indulging in indiscriminate relations including prostitutes; artistes working in hotels and night clubs; and homosexuals. The value of testing friends of members of high-risk groups ("cluster" testing) was also stressed. The high-risk groups should be selectively chosen according to the screening performance capacity and the yield obtained as a result of pilot testing; i.e. cost/effectiveness studies are required. In the United Kingdom serological screening is largely confined to antenatal patients and blood donors, as screening of large groups is expensive, overloads laboratories and provides a low yield.

On the technical side there was considered to be a need for more sensitive methods, and a method based on treponemal antigens (e.g. TPHA), as a screening procedure would more quickly resolve problems of false positivity, but at the expense of simplicity. It was stated that there was a reluctance in Asia to submit to venepuncture, and there is a need for a simple reliable method of testing fingertip blood at low cost. /

Contacts of known cases - the most profitable groups to screen - are not directly covered by this question. This is of the first importance as more likely to reveal early rather than late infections, and the training of more contact tracers is required.

27. How can better use be made of screening procedures for gonorrhoea?

The inadequacy of the laboratory services limits the feasibility of screening tests for gonorrhoea in most developing countries and the services require initial strengthening both in quantity and quality (El Salvador, Sudan). Populations at high risk should be defined and efforts concentrated upon these.

Routine screening by cervical culture of women attending antenatal, gynaecological, family planning and cytological clinics is the logical starting point (e.g. Bahamas, Bulgaria, Cuba, Cyprus, Czechoslovakia, Dominican Republic, German Democratic Republic, Egypt, El Salvador, Guatemala, Hungary, Kuwait, Peru, Poland, Romania, New Zealand, Thailand) in order to disclose asymptomatic infections (Mexico). This procedure can be extended to any medical clinic. Some additional training of obstetricians and gynaecologists will be required, but this could be organized early, even while the sexually transmitted disease services are developing.

For men, smear examination of patients with a urethral discharge is considered basic, preferably by culture also. This can be extended to become routine screening in urological departments and later in any medical clinic.

When the sexually transmitted disease services are established the general public aged 15-30 years should be encouraged to attend for routine screening. Or health education aimed at motivating periodic check-ups for asymptomatic infection should be given when relevant. But the emphasis should be on the high-risk groups.

It is probable that the higher the yield obtained by these procedures, the less satisfactory are the services. In countries with a good sexually transmitted disease service the yields are low and the efforts are best aimed at the highest-risk group of all, i.e. contacts obtained by contact tracing, for which good contact tracers are required.

Simplified culture kits for the gonococcus are being developed (PM). The possibility of a satisfactory serological test for screening purposes is awaited (Sweden).

Screening for gonorrhoea will also reveal other sexually transmitted diseases, e.g. trichomoniasis and candidiasis.

28. What additional case-finding techniques can be envisaged?

In developing countries investigation of contacts, and periodic surveys of high-risk groups with culturing for the gonococcus on selective media are considered applicable.

Contact tracing activities should be intensified. Contacts of patients with early infectious syphilis and gonorrhoea should be dealt with urgently by health workers; as staffing and time permit, other sexually transmitted diseases can be included in the contact tracing activities by handing out contact slips to patients with these conditions. The doctor should feel obliged to initiate contact tracing and there should be an epidemiological follow-up of cases.

A widespread need was indicated for more full-time trained workers for contact tracing, one at least of whom should be attached to all sexually transmitted disease teams, and the establishment of a good relationship with other health agencies was stressed. Proper training is essential and research into satisfactory training techniques is being undertaken in some areas.

While it was felt that social workers using voluntary methods had a better chance of persuading patients to disclose their partners - work for which careful health education is required - it was suggested also that participation in contact tracing should be legally binding on the patient. One country proposed that a central contact tracing organization be established in the capital city for the rapid location and apprehension of peculiarly promiscuous migrants with sufficient capacity to organize mobile ad hoc case-finding teams for localized epidemics, especially in the rural areas.

It was suggested that more attention should be paid to a restricted form of cluster testing involving the questioning of patients about their friends and associates as well as their sexual partners, by specially trained personnel and the prophylactic examination of the friends and associates.

Health education can be a powerful case-finding tool in persuading suspects to attend rather than that the services should wait for patients to find contacts and every possible means of continuous education should be employed.

29-30 PREVENTIVE MEASURES

29. To what extent is the local prophylaxis of venereal disease applicable to the prevention of these diseases?

Many patients attending venereal diseases clinics have little knowledge concerning either the etiology of the venereal diseases or the possibilities of prevention.

Local prophylaxis is considered valuable by some countries if acceptable and correctly used, and if patients are educated to use it. Although ideal in theory and helpful as far as prostitution is concerned, the feeling was nevertheless widespread that the influence of local prophylaxis is limited in practice (e.g. Bulgaria, Egypt, Kuwait; New Zealand, Singapore, Thailand, Tunisia, United States of America) and it is infrequently used in many countries. It is, however, one of the methods of control, albeit one of the weaker ones, that should be included in the total programme.

With the new contraceptive methods now available, the use of the condom is declining. It is not a very acceptable method to most patients, particularly with present lessened fears of venereal disease, and national campaigns to promote its use would probably also be unacceptable in many countries. However, the condom is preferred to local chemical prophylaxis by physicians, as the use of chemicals may mask disease.

It was also reported that C-film (cetylpyridinium bromide pellicle) had proved unacceptable.

Nevertheless, it was felt that in countries with well defined groups of prostitutes and others believed to be responsible for the vast majority of infections, the use of such measures could have some direct impact if the groups concerned could be motivated to use them. General practitioners in Malaysia believe that such motivation is possible in respect of a combined venereal disease prophylactic and contraceptive chemical preparation and a pilot research project is being conducted. With increasing urbanization and part-time prostitution, it would be difficult to reach all concerned and the ultimate success of the preparation would depend on the effectiveness of the health education programme which in all areas should stress its usefulness.

Pertinent to this question is how much the public is prepared or able to pay for mechanical or chemical prophylaxis and how far, if at all, governments are prepared to subsidize it.

30. How far can persons in target groups be motivated to seek periodic examination for asymptomatic venereal diseases?

This was regarded as a difficult question, but properly conducted health education was the most favoured method to achieve the objective. An adequate basic sex education could do so or education of both patients and public, drawing attention to the possible complications of untreated disease but with assurance of confidentiality. One reply stated that patients can be fairly easily motivated to attend every three to six months, especially if they are included in a follow-up planning and sent letters inviting them to attend. Success depends on the educational level of the target groups concerned and how far the public can be convinced of its value. The process can be helped by providing free diagnostic services by general practitioners for patients who do not wish to attend the clinics.

In any such health education programme, a balance must be struck that will depend on the yield and the diagnostic and treatment services available; these should be free of charge and easily accessible. Mass media programmes have considerable impact in bringing suspect patients in, but unless carefully presented they can result in a quite unnecessary temporary overload of sexually transmitted disease clinics with persons who have no real reason to attend but have been worried by remarks, sometimes ill-advised or inaccurate, in such programmes.

Others were of the opinion that the voluntary method has failed, and that although a certain amount of pressure could be exerted through medical schemes, compulsory screening might produce results and indeed might be the only possible way. One reply envisaged the possibility of requiring by law that doctors and social workers carry out repeated obligatory check-ups of persons with frequently changing partners or strongly suspected of being ill, but how far repeaters can be voluntarily motivated requires evaluation.

A prerequisite in any consideration of screening techniques is the availability of adequate laboratory and clinic facilities. Reservations were expressed about the feasibility of screening because of the large numbers involved and because the groups most involved frequently move from city to city. However, if the laboratory organization is sufficient, use can be made of clinics devoted to other purposes, such as student health clinics, industrial or agricultural labour clinics and military clinics.

31-35 RESEARCH

31. What are the priorities in treponematoses research? How can these be better promoted?  
(a) syphilis, (b) other treponematoses

Syphilis is regarded as having priority over the other treponematoses, although careful studies of the endemic treponematoses and their cross immunity with syphilis are indicated.

The highest priority was suggested for investigations leading to advances in immunizing procedures, particularly a vaccine and better serological tests, for both of which continued efforts to cultivate virulent T. pallidum are essential.

A need was expressed for simpler and more specific serum tests for syphilis than those available, including one that is cheap and capable of automation for mass screening and one that could be performed on fingertip blood and dried blood, and would distinguish specific from non-specific antibodies. Particularly, there is a need for a test to detect the disease in the incubation period; at present the FTA-ABS test is the first of available tests to become positive. Also required is a test that could distinguish antibodies to yaws and pinta from those of syphilis.

Continuing studies are required of the ultrastructure, evolution cycle and antigenic structure of T. pallidum, of host response in terms of cellular and humoral immunity and antigen-antibody reactions. A thorough immunological and ultrastructural study is indicated of the mechanisms that protect treponemes, enabling them to persist in spite of demonstrable antibodies, including the significance of latency and the ultrastructure of syphilitic lesions with and without treatment. Other studies proposed concern the sensitivity of treponemes to antibiotics, response to treatment and criteria of cure, including studies with one or two injections of penicillin and the development of a simple reliable test for penicillin sensitivity.

The important research requirements should be gradually integrated into the overall programme with the collaboration of laboratories specializing in the sexually transmitted diseases. Increased endowments for treponematoses research are required, with international and regional cooperation and intensified WHO assistance. On the other hand, the major problem in sexually transmitted disease control is the failure to apply existing methods, and research may merit a relatively low priority in the overall efforts of many countries lacking resources. National governments can stimulate research by contracts and grants within the existing facilities.

32. What new or relatively unexploited areas of treponematoses research might be profitably explored?

Additional suggestions to those covered above included studies of the incidence of congenital and acquired syphilis; antigen studies and attempts to specify the essential antigen fractions of the organisms responsible for the treponematoses; studies of the origin of natural treponemicidal antibodies in humans and the nature and origin of treponemicidal antibodies in non-receptive animal species; studies of antigen fractions in patients with carcinoma stated to be unspecifically positive to the Nelson test; and biological false-positive reactions as a whole.

Further proposals were investigations into latent cases with no history or primary or secondary lesions, studies on whether syphilis is becoming a milder disease or is being suppressed by incidental unrelated antibiotic treatment and studies of the sensitivity of treponemes to antibiotics other than penicillin.

33. What are the priorities in gonorrhoea research? How can these be better promoted?

The two highest priorities were for better rapid diagnostic methods and simpler, more sensitive screening tests to detect asymptomatic infections, especially in the female, including a simplified reliable test for smear diagnosis. Others were a simple, reliable, standardized method of culture to allow ready distinguishing of the gonococcus from related organisms; and more stable, cheap and effective transport and other media.

There is a widespread need for sensitive and specific serological screening tests not involving genital examination; this would be especially of value in the detection of carriers and for females with pelvic disease. Improvement of tests at present being developed may emerge from further studies of gonococcal antigens.

The ultimate aim is an effective (polysaccharide or lipopolysaccharide or other) vaccine. Continuing studies, not only of the antigenic structure of the gonococcus and strain identification but of cellular and humoral immunity in man and animals, may contribute to this aim. Other means, e.g. the stimulation of local immunity, should be investigated.

More thorough epidemiological studies are also required, including studies of the frequency of transmissibility of the disease between the sexes; of the relationship of gonorrhoea to sterility; of accompanying microflora in gonorrhoea; of the ultrastructure of the gonococcus under antibiotic influence; of effective treatment; and of epidemiological preventive measures. There is also a particular need for a local prophylactic not causing allergy or resistance to antibiotics, which could be combined with a contraceptive agent.

An international meeting is required to decide priorities and to select appropriate workers. However, as in the control of syphilis, the major problem is the failure to apply existing methods of control.

34. What new or relatively unexploited approaches to gonorrhoea research might be usefully followed?

Many of the suggestions made are covered under the previous question. Additional approaches include pathogenicity studies of gonococci; use of an animal model for the study of the immune response; a study of the type of immune response found in repeaters and in those with few or no symptoms; and local immunity studies to determine why some persons develop gonorrhoea after exposure and some do not.

Also suggested are a search for specific methods of immunofluorescence using absorbed sera; and studies of L. forms and of the mechanisms of resistance of the gonococcus to antibiotics.

35. What are the research priorities for sexually transmitted diseases other than syphilis and gonorrhoea?

Planned studies are suggested to determine the incidence and seriousness of these diseases and research into the development of simple tests to identify the responsible organisms.

Research on non-specific urethritis and chlamydia was given highest priority (e.g. Cuba, El Salvador, Finland, Hungary, Netherlands, New Zealand, Singapore, Thailand, United Kingdom, United States of America), including prevalence studies, prevention and its relationship to Reiter's syndrome. It is necessary to know why intercourse with infected females results in infection among only some of their male contacts and what the role is, if any, of mycoplasmas and other organisms.

Herpes infections followed as the next priority (e.g. Cuba, Cyprus, El Salvador, Guatemala, Netherlands, Singapore, United Kingdom) including their epidemiology and treatment (Finland), the possibility of a vaccine and the potential role of these infections in the causation of cervical and prostatic cancer.

Following these were: the evaluation of methods to interrupt the transmission of trichomoniasis (e.g. Bulgaria, Egypt, Netherlands, United States of America), especially in high-risk groups; the development of a treatment for candidiasis; and determination of the reason why granuloma inguinale has an unusual prevalence in some countries.

Other suggestions included research into the host-organism relationship, into the encouragement or suppression of growth when more than one sexually transmitted organism is present, into anaerobic infections in this group, into the significance of sexual transmission in relation to the virus of hepatitis B and into the development of hepatitis and cytomegalovirus vaccines. More sociological, psychological and background studies are required for all of these diseases.

36-61 HEALTH EDUCATION

36-38 The role of health education in the control of sexually transmitted diseases

36. What are the prevailing views at the national and local levels on the role of health education in sexually transmitted disease control?

Health education is generally recognized by all countries to be an important tool in sexually transmitted disease control with respect to the prevention and treatment of these diseases, except where sexually transmitted diseases are not yet recognized as a serious problem or where religious views prohibit discussion of problems related to sex. In several countries its importance is emphasized both at the national and local levels (e.g. Bulgaria, Czechoslovakia, Hungary, India, Malaysia, Mexico, Poland, United States of America) and among medical and health workers. Local interest may be lukewarm or there may be small but vocal minorities who view sexually transmitted diseases as a sin or a self-inflicted evil.

The separation of venereal disease education from sex education is important in some countries. The purpose of health education is to combat the widespread lack of information concerning sexually transmitted diseases, and the sexually transmitted disease services available, to help people to make their decisions to participate in the control programme and perhaps to take steps to avoid or protect themselves from infection. The emphasis on sexually transmitted disease education in many countries reflects an awareness that medical measures alone to control sexually transmitted diseases have proved unsatisfactory, and that without health education sexually transmitted disease control is greatly restricted, as the success of control programmes ultimately depends on the participation of both the general public and health workers and on cooperation with their objectives.

37. What are the high priority areas for such education?

Different countries select different priorities in sexually transmitted disease education, depending upon the epidemiological importance of the problem, the cultural background, existing health services, and available resources for sexually transmitted disease education.

Specific education designed for existing high-risk groups is considered a major priority in most countries and several also include sex and sexually transmitted disease education programmes for the young (e.g. Belgium, Bulgaria, Finland, Kuwait, Mexico, Netherlands, New Zealand). In some countries school health education covering sex and sexually transmitted diseases is the major priority.

Sexually transmitted disease education of high-risk groups should focus on encouraging them to use preventive measures and motivating them to seek prompt and sustained medical attention, as well as to refer sexual contacts for treatment. Doubts were expressed whether efforts to modify extensive sexual behaviour should be actively pursued in view of the difficulty in changing it through education. Sexually transmitted disease education programmes may be more profitably applied in the area of secondary prevention (e.g. providing specific information about exposure, methods of prevention, signs and symptoms, or where to go for help if disease is suspected).

For a number of countries health education has an essential role in combating the ignorance and misconceptions of the public and informing them about sexually transmitted diseases and sexually transmitted disease services, in changing the attitudes of the public, community leaders and health personnel so that the sexually transmitted diseases are not regarded differently from any other health problem, and in providing training and education for medical and health workers concerning sexually transmitted diseases.

38. Which educational activities are currently being conducted? Are they integrated into national and local control programmes? If not, how can such integration be achieved? What are the practical difficulties involved in achieving integration?

The educational activities being conducted are highly variable between countries in amount and in kind ranging from no sexually transmitted disease education at all or incidental activities, to more organized activities for the public through the mass media, for school-children, for high-risk groups, or for sexually transmitted disease patients (e.g. Czechoslovakia, Hungary, Mexico, Poland, Romania, United Kingdom, United States of America). In several countries more intensive sexually transmitted disease education activities may be forthcoming, as specific plans are under study or have been proposed.

Some of the practical difficulties involved in conducting educational programmes about sexually transmitted diseases relate to: resistance from religious groups who regard sexually transmitted diseases as a sin or a self-inflicted evil or sexuality as sacred and secret; limited access to the media; unprepared teachers and resistant parents; the lukewarm interest of local health officers; the lack of interest and of time among the staff of sexually transmitted disease services; insufficient resources; the absence of a central body responsible for the various sexually transmitted disease education activities; and, for example in India, the existence of many languages, the illiteracy of sections of the population and difficulties in reaching a large and scattered population with few cities and towns.

In some countries educational activities are already integrated into national and local control programmes. The level of integration depends in part on the structure of existing health services and the available health personnel but also on the existence of an official or voluntary national body providing guidelines, technical assistance, supervision or training. Where no integration and central responsibility exists (e.g. Belgium, Cyprus, Egypt, Finland, Kuwait, Malaysia, Netherlands, New Zealand, Singapore, Tunisia) the need for them is usually felt and in a few countries national committees are studying or proposing the creation of such a central body which may be a voluntary agency, an institute, or a unit of the Ministry of Health.

#### 39-42 Requirements for health education in sexually transmitted disease control

39. What areas in behavioural and social research should have special priority? What resources are available or might be enlisted to conduct research or studies in those areas?

Effective sexually transmitted disease education depends in part on the availability and utilization of findings related to the behavioural, social and educational components of sexually transmitted disease control.

Several research areas are of potential importance in improving the effectiveness of sexually transmitted disease education, but they differ from country to country according to the urgency of the problem and the resources available, financial and personnel. An area for research that needs to be elucidated is the impact of sociocultural views and customs on the acceptance of sexually transmitted disease control, in relation, for example, to refusal to seek care or to participate in contact tracing. There is a general interest, with a view to revealing potential areas for change, in a more detailed investigation of the psychosocial characteristics of particular groups at risk and their contacts (including repeaters, homosexuals and immigrant labour), and their patterns of sexual behaviour. Research on types of patients attending venereal disease clinics is felt to be sufficiently explored in some countries but will be actively pursued in others. More needs to be known about the development of sexual attitudes and practices among the young, in particular among adolescents, and of the critical age levels for health education.

Other research areas relate to identifying factors favouring sexually transmitted diseases among high-risk groups (e.g. thresholds for the recognition of signs and symptoms of sexually transmitted diseases and for the utilization of health care services after recognition of symptoms) and behavioural patterns amenable to change that can be expected to reduce the risk (e.g. the use of preventive measures, the seeking of early and sustained medical attention, and cooperation with contact tracing). Finally, there is a need to study the receptivity of target groups to educational programmes and to ascertain their effect.

As many countries lack the resources to conduct studies concerning the behavioural, social and educational aspects of the sexually transmitted disease problem, it was suggested that intergovernmental and nongovernmental health organizations could give practical assistance by providing funds and exchanging information on studies of particular groups in countries.

Where possible, the personnel of sexually transmitted disease and other health services should cooperate in conducting studies, enlisting the assistance of social scientists and personnel from other agencies. Students (medical, nursing, social services, social welfare) may be involved as well as the teaching staff of universities. Various private organizations, social service agencies and trusts may provide financial support. Central and local governments, when interested, may provide grants, but it was also suggested that priority should be given to studies within the possibilities of the facilities of the sexually transmitted disease services and personnel, instead of to large-scale sociological studies.

40. What steps in the planning and implementation of present education programmes have proved critical in achieving programme effectiveness?

In countries with experience in sexually transmitted disease education programmes it is felt that there is no universal prescription for assuring the success of health education activities in sexually transmitted disease control. Basic principles include: sound planning, such as delineating the target groups; defining specific educational objectives; assessing existing barriers and appraising existing and potential resources; developing an overall plan of operations with specific attention to the means of reaching target groups; and evaluating the results.

The involvement of selected target groups and the participation of community groups and voluntary agencies in the planning and implementation of sexually transmitted disease education is considered useful. If possible, assistance should be obtained from specialists in health education and those responsible for the educational work should be adequately prepared. Before embarking on a community-wide sexually transmitted disease education programme adequate clinical services should be available.

41. Are there organized educational units at national and/or local levels for the sexually transmitted diseases? Who is responsible for (1) planning (2) coordinating and (3) evaluating sexually transmitted disease education at national and/or local levels?

Organized health education units at the national and local level fulfil an important function in the planning and implementation of education activities within the sexually transmitted disease control programmes.

Many countries do not have such organized educational units but some are planning to establish such units. In many instances, the responsibility for health education for sexually transmitted diseases is a part of the general health service organization, employing personnel involved in communicable diseases in general. In a number of countries specific health education units for sexually transmitted diseases exist as part of the government health service or in the form of health education institutes, bureaux or counsellors, which, mostly in cooperation with other agencies, may be responsible for the coordination of sexually transmitted disease education at national and local level, the provision of guidelines and technical assistance (e.g. production of educational material, evaluation of educational programmes); the training of health educators or the initiation and coordination of sexually transmitted disease education by voluntary and official agencies.

42. Has any evaluation of the effectiveness of sexually transmitted disease health education programmes been undertaken? If so, describe results

Few countries have conducted evaluation studies concerning the effectiveness of sexually transmitted disease education programmes. These studies are mostly limited in scope, focusing on special groups (e.g. Bulgaria, Czechoslovakia, Mexico, Portugal, Romania, United Kingdom, United States of America), are sometimes carried out by interested gynaecologists and dermatovenereologists, and are seldom a systematic procedure and part of sexually transmitted disease education programmes. They may be part of the evaluation of the overall sexually transmitted disease programme.

In order to be able to evaluate programmes successfully it is suggested that tangible objectives, that are measurable over a short period of time, should be selected, for instance increased knowledge of sexually transmitted diseases, an improved rate of contact tracing and a shorter delay between the onset of symptoms and the seeking of medical attention.

43-61 . AREAS FOR HEALTH EDUCATION IN SEXUALLY TRANSMITTED DISEASE CONTROL

43. Have any surveys of public knowledge of the sexually transmitted diseases been carried out? What were the findings?

A limited number of studies have been made of the knowledge and attitudes towards sexually transmitted diseases and their control among high-risk groups in local areas or schools (e.g. Bulgaria, German Democratic Republic, Hungary, India, Poland, Portugal, Sudan, Sweden, United Kingdom, Romania, United States of America). In general, they show that these groups are ill-informed about signs and symptoms, preventive measures, transmission, and when and where to seek health care for sexually transmitted diseases.

44 and 46. Has any special effort been made to reach, inform and elicit support from influential groups and individuals? Which of these persons are considered the most helpful?

The level of awareness of the attitudes of the public towards the sexually transmitted diseases varies in different countries and is a major impediment to the application of effective control measures. In a number of countries there have been substantial efforts to inform the public, political leaders, health administrators and community representatives about the extent and importance of the problem and some have reported a more open attitude of the community towards sexually transmitted disease control and education as a result.

Other countries are contemplating and developing programmes to combat ignorance, apathy and resistance to information about the sexually transmitted diseases but in some no systematic efforts in this area have been made.

Organizations, groups and individuals whose support is considered critical differ according to the countries, but in general the importance is emphasized of voluntary social and health organizations, private foundations and trusts, the Red Cross societies, parent associations, women's councils, youth groups, medical professional societies and individual sexually transmitted disease specialists, the teaching profession, representatives of industry and business, religious bodies, and the mass media (press, radio, television).

Appeals have been made to industrial firms and charitable trusts for the establishment of a chair of genito-urinary medicine; in one country cooperation was obtained from voluntary community service organizations in financing local venereal disease campaigns, and from private foundations in assisting financially in the postgraduate training of doctors, in the appointment of a lecturer each year, in attendance at international symposia and in visits from overseas venereologists. Various sectors of the community have been involved in establishing venereal disease action councils, speaker's bureaux and volunteer youth-operated "hot lines". Mass media personnel have been interested in the subject of sexually transmitted diseases through the provision of a yearly financial reward for the best publications about them in one country. Special periodicals on sexually transmitted diseases have been distributed to physicians, teachers, social scientists and theologians, and articles and information leaflets, posters and broadcasts in several languages have been used to foster community support.

45. Have (1) control and (2) educational methods concerning the sexually transmitted diseases ever been opposed by community members? And with what results? What are the reasons for their opposition? What can be done to change the attitudes of these groups and individuals?

In a number of countries there is lack of public interest in the sexually transmitted diseases and their control; and in others there is resistance from particular groups to the implementation of control measures - resistance that is expressed in different ways and for different reasons. Patients may be considered as receiving a just punishment for an immoral act while some groups fear that providing specific information about prevention and control will act as a stimulus to promiscuous sexual behaviour and premarital sexual intercourse among the young.

Information on the sexually transmitted diseases may be unacceptable to some, particularly when sexuality is sacred, secret and taboo. Opposition to sexually transmitted disease control and education may be related to ignorance of the parents and in some schools it is believed that if sex and sexually transmitted disease education is not given at home it would be improper for the school to introduce the subject. Sometimes resistance is linked with a depreciation of secondary preventive efforts, as some individuals insist that health education should concentrate on trying to achieve a change in sexual habits so as to reduce promiscuous behaviour.

Resistance is shown by the difficulties that arise in engaging the media to discuss the subject or in the public display of posters, for example, in factories or post offices or to advertise sexually transmitted disease clinics. Considerable resistance has been encountered in some countries as regards sex and sexually transmitted disease education in schools by parents, school administrators and teachers and religious or voluntary groups in the community.

46. How has community support been activated?

47-51 Educational programmes for groups at risk

47. What are the important target groups for sexually transmitted disease education?

All countries identify young people in general as the primary target group for sexually transmitted disease education, but needs, approaches and possibilities for sexually transmitted disease education vary according to whether the young people are in an educational system (schools, colleges, universities), in factories, or on military service, part of free-living communities, or high-school leavers.

48. What information is needed as a basis for planning tailored educational programmes for these groups?

Sexually transmitted disease education programmes should be tailored to each target group, taking into account the reasons that lead to their high-risk behaviour, and the cultural and socioeconomic conditions influencing it, as well as the accessibility and acceptability of existing services for diagnosis and treatment and the receptivity of each group to specific educational and motivational methods and techniques. These factors vary widely among different target groups and among countries. Relevant information about target groups includes: religious, cultural and social customs related to sex and sexually transmitted diseases, beliefs about, knowledge of, and attitudes towards sexually transmitted diseases, motivation to seek diagnosis and treatment, the age and educational level of groups, home background, the amount of time spent away from the family for work, the city or village origin, the work situation and work habits, and opportunities to obtain care. In addition to the factors that place particular groups at high risk, information needs to be obtained on which factors are most susceptible to alteration as well as when and how specific groups at risk can best be reached, their susceptibility to selected educational methods, and the views of key persons who are influential in the groups.

As most countries have insufficient resources to collect information concerning high-risk groups, it is suggested that WHO could assist in collecting information on specific ethnic and cultural groups and make it available for study to countries with similar groups.

49. What are the educational aims for these groups?

Although the objectives of sexually transmitted disease education programmes need to be adjusted to each target group, most countries emphasize that such education should basically aim at (a) providing essential information about the sexually transmitted diseases, the signs and symptoms and mode of transmission, the risks involved for the health of the individual and that of others, contacts, the unborn, the possibility that asymptomatic infection may occur, the fact that sexually transmitted disease infection rapidly responds to adequate treatment and that the sexually transmitted diseases are not sins against morality but infectious diseases; (b) encouraging and explaining personal prophylaxis; (c) indicating where to go for treatment when suspicious or actual signs of infection occur; and how to proceed and what to expect - specific information about the location and procedures of venereal disease clinics and other

relevant sexually transmitted disease services; (d) stressing the importance of contact tracing and promoting cooperation in the naming of contacts; and (e) making individuals aware of how they can personally contribute to sexually transmitted disease control as well as of their social responsibility towards the health of others.

50 and 51 What are the uses and limitations of mass information, group discussions, face-to-face meetings, and community organization approaches? What are the barriers in implementing these methods?

For sexually transmitted disease education of high-risk groups it was suggested that all the educational methods can be used to some degree, but the selection of specific methods will depend on the educational level of the group, local resources, whether the problem is one of lack of information or of attitudes towards the sexually transmitted diseases, public acceptability of methods, language and culture, and work and living conditions of specific mobile groups, i.e., where and how they can be reached.

Mass information may be useful for educated groups, if the problem is one of lack of information. It can be applied on a large scale but does not provide opportunities for clearing away misconceptions or doubts as a result of the information. Some countries feel that mass information should be used for providing general information to the public but that it is ineffective in the education of high-risk groups.

Group discussions can be used in the context of specific target groups such as students and the military. However, it was pointed out that some groups may not wish to participate in group discussions, or community groups may raise objections.

Face-to-face discussions and counselling are considered most indicated for patients and their contacts in some countries, and they can be usefully reinforced by clearly expressed written and visual material.

The changing attitudes of community groups require community organization approaches, but cost may be a limiting factor.

52-56 Education programmes for young people

52. What are the existing official policies, legislative or other, and community attitudes in relation to the inclusion of sex, the sexually transmitted diseases or family life education in the curricula at different levels of the educational system?

There is a wide variation between and even within countries in respect to existing official policy about sex and sexually transmitted disease education in schools. In some countries a national policy provides an opportunity for sex and sexually transmitted disease education at various levels (e.g. Argentina, Bulgaria, Czechoslovakia, Denmark, El Salvador, German Democratic Republic, Hungary, Mexico, Poland, Sweden) although its implementation at the local level may be uneven. In others there is no official policy. National bodies can strongly recommend the need for inclusion of sex and sexually transmitted disease education in school curricula.

Several countries are developing plans through national committees or study groups to introduce the subject within the school system. In some instances, sex and sexually transmitted disease education is provided on an incidental and limited scale, mainly on the demand of parents and schools and by interested health personnel.

There has been a positive change in community attitudes towards the sex and sexually transmitted disease education of schoolchildren in some countries, and more parents and schools now request such courses.

53. Which are the steps to be taken and the procedures to follow for promoting the inclusion of such education in educational institutions?

A first step, suggested by several countries, for promoting the inclusion of sex and sexually transmitted disease education in school curricula, is the persuasion of high-level groups (educational, political, religious, parent and other associations) of the extent of the sexually transmitted disease problem, its importance and the need for educating the young as regards sexuality and the sexually transmitted diseases (e.g. Argentina, Bahamas, Dominican Republic, El Salvador, Guatemala, India, New Zealand, Singapore, Thailand, Tunisia, United Kingdom, United States of America).

This may result in the formation of joint school health education committees (e.g. by the Ministries of Health and Education) with the participation of physicians and parent and community representatives to set national guidelines, to provide advice to local schools on goals and procedures for implementation, to compose curriculum guidelines and texts, sometimes distributed to schools free of charge, to initiate pilot trials in a selected number of schools and to evaluate their effectiveness before implementing teaching programmes on a large scale, to organize or assist in teacher in-service and basic training and to promote collaboration between national and local agencies.

Existing local initiatives may serve to stimulate national action to include sex and sexually transmitted disease education in the school system, e.g. sex and sexually transmitted disease education courses, organized by school physicians during extra-curricular hours or by medical officers, school counsellors; or speakers from other services; or courses organized at the request of parents.

54. What are the characteristics of an adequate curriculum for such education?

It was generally felt that the teaching of sex and sexually transmitted diseases in school curricula should be comprehensive, with a moral as well as a biological content, emphasizing personal responsibility and integrity, and the epidemiology of the sexually transmitted diseases, including the associated health risks.

Many countries consider the integration of the subject of sex and sexually transmitted diseases into the total curriculum essential, to be included, in particular, in the context of family life education and to aim at the development of the person as a whole.

Sex and sexually transmitted disease education should start at an early age and continue throughout the school years, be adapted to the age and maturation level, and be tailored to the cultural and social level of the children. The presentation of the subject needs to be objective and factual, avoiding the arousal of misconceptions and excessive fear, and teachers responsible for sex and sexually transmitted disease education should therefore feel comfortable with the subject and have accurate facts at their disposal. Student participation in such courses is useful, and concise, practical and illustrated approaches improve the impact of teaching.

55. Who is responsible for giving such education? What is the role of parents, teachers, school health personnel and others? Are they interested in and prepared for their role?

Ideally, it was emphasized that parents are primarily responsible for the sex education of their children, including sexually transmitted diseases, but in many instances they feel inadequate or uneasy in discussing the subject and need assistance through, e.g. parent/teacher associations, meetings on the subject or brief courses run by schools.

Given the existing deficiencies of sex and sexually transmitted disease education by parents in many countries, the school is considered the next most appropriate place. There is a general need for a more adequate training of teachers responsible for sex and sexually transmitted disease education but willingness to accept responsibility in this area, however, varies greatly.

56. What opportunities exist for education of the young about the sexually transmitted diseases outside the school system? What is the role of youth and other social organizations in this respect?

There are a number of areas where a high proportion of adolescents receive limited schooling or where the proportion of early school leavers is high. These groups of young people are often at high risk of acquiring sexually transmitted disease infection.

The potential role of different youth organizations is widely recognized but insufficiently utilized. The effectiveness of sex and sexually transmitted disease education through youth groups may depend on the quality of the local youth organization, or on whether sufficient educators are available. Assistance by and collaboration with existing health services and personnel is required.

In addition to youth groups, a variety of community organizations were cited, such as the League of Red Cross societies, trade unions, women's associations, recreational and sports clubs, and church youth groups, which offer opportunities to include sex and sexually transmitted disease education in their action programmes. During military service, medical army officers can provide health education concerning the sexually transmitted diseases.

Apart from providing sexually transmitted disease education within the context of local groups and associations, the young outside the school may be informed about sexually transmitted diseases through school friends or through their peers who may acquire information as a result of being patients at a sexually transmitted disease clinic.

57-61 Education of sexually transmitted disease patients

57. How can effective education as part of the management of sexually transmitted disease patients be ensured by the medical and auxiliary staff?

Successful education of sexually transmitted disease patients depends on a number of essential conditions. There should be the possibility of recruiting a sufficient number of competent staff and a careful selection of those with the attitude and skill to deal with the delicate problem of sexually transmitted diseases should be made. Existing facilities should be adequate, permitting the staff to respond to patients sympathetically. The staff should have time within its work schedule for such education and should receive incentives for good performance.

Most countries emphasize the need for the staff to be adequately trained as regards the education of patients and in a number of countries provision for such training already exists in various forms, for instance, as part of the basic training of medical and paramedical personnel or through continuing education, seminars, refresher courses, regular staff meetings. A more balanced medical education is considered highly desirable, providing a social as well as a biological approach to patient management through the introduction of, for example, lectures in the social sciences and refresher courses for dermato-venereologists, and there is a great need to prepare health workers (social workers, health visitors, etc.) to carry out their educational work during patient interviews and contact tracing.

It is suggested that the training of staff be aimed at (a) the development among staff members of an objective and positive approach towards sexually transmitted disease patients so that these are treated with dignity and respect; (b) the acquisition of skills in communicating effectively with patients of varying social, cultural and educational backgrounds; to obtain information about sexual contacts, and to give practical and useful advice concerning personal prophylaxis, etc., so that the staff is able to understand the reason for the diversity of sexual behaviour; (c) the possession of adequate factual knowledge about the sexually transmitted diseases; and (d) the promotion of staff interest and motivation to consider patient education worth while and to conduct such education effectively during the patient's visit to the clinic.

58. What are the most important constraints in the clinic for the staff to conduct patient education? How can these be overcome?

Most countries said that lack of time on the part of the staff, related to a shortage of staff and an increasing patient load, is a major constraint in carrying out the education of patients. Some pointed to the difficulty of recruiting suitable qualified staff. Medical care takes up the greater part of the time of physicians, and auxiliary staff often have multifarious duties, so that there is too little time for education. Sometimes shortage of other health and medical personnel exists at the regional level. Effective patient education may also be hampered by negative attitudes of the staff towards sexually transmitted diseases and patients. Medical and health workers may tend to exaggerate or moralize, to superimpose their moral values on patients' life styles, to be mainly concerned with the patient's biological problems, or to appreciate insufficiently the differences in the psychosocial and cultural characteristics of the patients.

Other constraints are the reluctance of patients to discuss their problem and their contacts, or to accept education because of the social stigma attached to sexually transmitted diseases, and their dislike of intrusion into their private affairs.

Several measures are proposed to improve some of the conditions relating to effective education of patients. A major effort is required to change negative public attitudes with respect to sexually transmitted diseases and convince legislators, politicians and health officials to provide more adequate resources for clinic services. Through studying clinic workloads, the patient flow may be reorganized and the available space reallocated; while the establishment of special clinics in big cities would help to deal with patient overload. Work regulations including specific time for the education of the staff have been found helpful, and medical curricula with orientation towards the social sciences are proposed, to ensure that the medical staff views patient education more readily as its responsibility and as an integral part of medical work.

59. Is it advisable that a specific person be in charge of the patients' education or should all members of the staff play a part in the educational process?

While many countries consider that all staff should have a part in patient education, several point to the useful role that nurses, social workers or those responsible for contact tracing can play. The counselling of patients by health workers or (medical) social workers is important during the clinic visit and in contact tracing.

All the staff should know how to educate and should be able to do so, but, when resources permit, it was generally considered advisable to have one or more specific persons whose major function and responsibility are to conduct and coordinate educational activities and ensure their effectiveness. Some countries find it advisable for education to be conducted by a specific person trained to this effect rather than by all the staff, or only by those who possess the talent and tact for health education. Others suggest that doctors, because of their prestige for patients, should be responsible for patient education. Local conditions of staffing and the importance of the clinic may determine who provides patient education, or all the staff may be responsible for the general education of patients while physicians or, possibly, nurses or educators are responsible for the education of individual patients.

60. What should patients know and be encouraged to do with respect to the prevention and treatment of the sexually transmitted diseases?

It was emphasized that an important part of patient education consists in providing factual and understandable information about the sexually transmitted diseases, how they are contracted and transmitted and the patient's responsibility in the spread of infection, as well as the role of asymptomatic carriers. The relationship between sexually transmitted diseases and multiple sexual contacts needs to be explored and a more careful selection of sexual partners encouraged, while the importance of sexual restraint and the avoidance of sexual contact with promiscuous persons should be stressed.

The health risks through sexually transmitted diseases that patients themselves, their contacts and their families may incur should be discussed, and the importance was stressed of devoting sufficient time to explaining the effectiveness of personal prophylaxis, emphasizing the use of the condom as a reasonable preventative. When symptoms are seen or infections suspected, patients should be encouraged to seek medical care promptly in clinics or by private physicians. Self-diagnosis and self-treatment should be discouraged, as well as treatment by unqualified persons.

The importance of complete treatment needs emphasis; hence patients should be motivated to cooperate and assured that there is certainty of cure.

Cooperation with treatment includes cooperation with contact tracing. Most countries consider it is essential to encourage patients to refer exposed sexual partners for medical care. Patients should be made aware of their responsibility for their sexual contacts, including their spouses. Some view this responsibility not only in terms of referring their sexual contacts for medical attention but also of passing on to them knowledge on sexually transmitted diseases.

61. What are the most opportune moments for providing education to patients?

It was generally agreed that the best opportunities for effective patient education occur at the first medical visit during the interview of the patient with the physician or nurse, and while the patient is being interviewed by the social worker, nurse or health worker for contact information. While there are several opportunities for health education during a visit to a clinic, setting aside a specific time for health education within the clinic routine is helpful (e.g. in the United States of America). After the first visit, subsequent interviews may also be used for patient education.

The use of waiting periods for patient education is convenient for both patient and staff providing privacy is respected, but the pamphlets, leaflets, illustrations and self-instruction manuals generally used in this context are inferior to individual instruction. Making these materials available to patients can usefully serve to back up individual counselling and education efforts of the staff.

62-66 TRAINING ASPECTS

62. What are the training requirements in the sexually transmitted diseases in your country for (a) physicians, (b) other health workers, (c) nurses, (d) social workers, (e) laboratory technicians? Are these adequate? If not, what steps should be taken to improve the situation?

(a) Physicians

Of those replying, one country had no medical school, in others the education of physicians is integrated in the general medical training, while in many there are no specific requirements, not only where venereology is not a medical specialty, but also where it is.

The basic training for all physicians, including those later to become general practitioners, varied from little or inadequate with insufficient emphasis on the sexually transmitted diseases to one or two lectures and 30 hours clinical attachment with dermatology and leprosy; the same time plus dermatology in addition; three to four weeks depending upon the centre and four months.

Two countries stated this was sufficient and another that there have been extension and improvement in recent years. Nevertheless interest has waned and there is a lack of education in epidemiology and methods of control.

Later, for those taking up the specialty, there is in-service training for three years, five years or seven years, in conjunction with other specialties.

Further education has been organized through medical publications, by local, district and regional multidisciplinary services, by medical societies, and by postgraduate courses. This is obligatory in some countries.

The subject broadly comes under the category of internal medicine in most countries and the taking of a higher degree by those specializing and taking up a responsible post is to be encouraged or insisted upon if possible. A three-month international postgraduate course has been organized in one country with the opportunity of taking a diploma.

(b) Other health workers

These play an important role in the dispensaries of developed countries and are often the sole persons available to manage the sexually transmitted diseases and many other diseases in developing countries. Although the sexually transmitted diseases are included in the curriculum of some countries, in many there are no stated special requirements and the training is in-service while engaged in sexually transmitted disease work, but undertaken by physicians. In some areas, special courses and short seminars are available.

The training was generally considered to be too short and inadequate, both in content and in the numbers trained, but plans to improve the situation were envisaged or had recently been put in operation in some countries.

(c) Nurses

The training of nurses in the sexually transmitted diseases was integrated into the basic curriculum in most countries and there were no standard requirements. This training was, with two exceptions, considered inadequate.

For those engaged in the subject, in-service training was usual and refresher courses and conferences were available. In some countries seminars and courses are organized. Although these impart technical skills they were considered insufficient from the sociological and psychological aspect and in inculcating understanding and ability to influence the behaviour of patients (Hungary).

In one country where the training was considered to be generally adequate a six-month course approved by the Board of Clinical Nursing Studies was available.

(d) Sexually transmitted disease social workers

There was generally stated to be no standard training in sexually transmitted diseases for social workers, apart from basic educational requirements and in-service training for those engaged in sexually transmitted disease work. Short courses for epidemiological workers are arranged in some areas. While continuing education and attendance at conferences and discussions were provided for in others.

(e) Laboratory technicians

Training was considered inadequate in a number of countries, adequate in others, but less adequate in private laboratories.

Training in the sexually transmitted diseases was integrated in general training in some countries, for example, during a three-year course in one country, and included the clinical aspects of the diseases, experience in microscopy, and serology. Periodic courses are arranged in some countries with developing programmes. A highly organized programme with federal consultation and training provided, which was monitored by federal and state proficiency testing programmes, was described (United States of America). Continued education through medico-scientific conferences, lectures, etc. is also available in some countries but periodic recall of laboratory technicians to the central laboratory is considered essential.

Suggested improvements

These included the inclusion or expansion of training in the sexually transmitted diseases in the undergraduate and postgraduate curricula of physicians, nurses, paramedical and other health workers, with greater emphasis on control methods and case finding.

In countries with no specialist in the sexually transmitted diseases, the establishment of a unit with such a specialist to be responsible for the planning of training was considered to be the first step.

There is a worldwide shortage of physicians and other health workers well trained in the subject, and an urgent need for financial and other incentives for their training. Fellowships to countries with an integrated service would be helpful.

Young graduates and registrars should be stimulated to take up venereal disease work. Senior medical students have been offered clinical assistantships to encourage this.

63. What values, beliefs and traditions of health and other personnel underlie their current perception and behaviour with regard to the sexually transmitted diseases?

It might be said that present medical and other health workers are in a transition period with respect of values in relation to the sexually transmitted diseases, since the care of these diseases by special staff is being replaced by that given by properly trained personnel, e.g. nurses of the regular services, who are better informed than previously.

Nevertheless, the beliefs, prejudices and moral attitudes of family, society and religion and a traditional conservative outlook often prevents the open discussion of sex, equates venereal disease with a vicious way of life and regards the sufferer as a social curse. This attitude is also reflected by health personnel of all categories, some of whom continue to display a moralizing attitude. The young health workers are more at ease than the older, who may find rapport difficult or embarrassing, particularly when dealing with those indulging in deviant sexual behaviour. Promiscuity was stated in one country to be a modern infatuation among a certain part of the youth.

In some countries a liberal but ethical approach based on humanitarian values has increasingly evolved in recent years as a result of increased knowledge of the sexually transmitted diseases.

64. What kinds of attitudes and behaviour in other health personnel regarding sexual problems are indispensable in encouraging people to adopt preventive and curative measures?

It is important that health personnel of all categories should have the ability to make easy contact with others and show a sympathetic and friendly approach, displaying tact, discretion and understanding, and a willingness to help, with a due respect for personal dignity, so as to inspire trust in the patient that his own confidences will be respected and to achieve his cooperation.

The attitude should be tolerant, but positive, with no attempt at a moral judgement, as for other diseases, and an explanation being given of how they can be quickly cured and prevented. The interview should be reassuring and educative and the possible complications if the disease is not treated should be explained. However, the view was expressed that the moral content should be couched only in terms of responsibility to the partner and to society. It was also suggested that the belief that cleanliness is a religious habit could be utilized.

65. What are some of the important reasons, such as previous training and the policies of the services that account for the present attitudes and behaviour of health and other personnel?

While some replies suggested that health personnel are usually well motivated, the traditional beliefs of the community as a whole nevertheless also affect particularly older health personnel, and the policies adopted.

The venereal diseases have been kept out of sight for so long that there is often no cadre in high places that fully understands the problem in many countries, so that low priority is given to sexually transmitted disease control, not only as regards the central budget but also locally as regards equipping and staffing the clinics; indeed, the negative approach has influenced every aspect of the matter. Nevertheless, in a number of areas, parasitic diseases, fevers and deficiency diseases may merit priority.

Ignorance and lack of training exist concerning both the extent of the problem and the management of the sexually transmitted diseases. There has been a failure in many medical schools to educate and provide contact with actual patients. Correct training produces correct attitudes, and this should have both social and medical objectives. A free integrated service is a great advantage in staff/patient relationships and in cooperation (United Kingdom).

Budgets for sexually transmitted disease control are considered too small and there are shortages of all grades of personnel in some countries, while consultant dermato-venereologists often do not have the same status as those in other fields and sexually transmitted disease workers have inadequate remuneration, status and promotion. This situation should be rectified so as to encourage recruitment.

Nevertheless, attitudes have shifted in recent years, prompted by a rising incidence of the sexually transmitted diseases and their complications in many countries.

66. What approaches, actions and resources are needed for introducing changes in the knowledge, attitudes and skills of health and other personnel? Who should be responsible for the planning, implementation and evaluation of these methods?

A broadly based education for all personnel was suggested by the provision of supplementary curricula and continuing education should engender an increased feeling of cooperation with patients. Postgraduate courses for physicians and refresher courses for other medical workers could do much to change attitudes and regular medical meetings, both local and regional, are necessary.

More WHO or other internationally aided visiting experts were suggested and more inter-country travel of physicians and other staff, particularly to the main sexually transmitted disease centres in countries with an integrated service.

A greater use should be made of behavioural scientists and psychologists so that human behaviour is better understood, and more training to social workers and contact tracers in sociology and epidemiology was suggested. Epidemiological research and research into the attitudes, beliefs and customs of high-risk groups are required (Malaysia) as a basis. Health personnel and administrative staff need to have more contact with teachers, religious leaders, legal authorities and "hidden" leaders, with the aim on both sides of promoting greater understanding of the point of view of the patient.

Both the medical profession and the government should be responsible for the planning and implementation measures, particularly of facilities in the various teaching schools. There was wide agreement that the broad responsibility of the programme should be centralized at the ministry or department of health, or of preventive and social medicine (Tunisia), or the directorate of professional education, in conjunction with the ministry of education. Governments should take into account the advice of the chief or consultant venereologist or of the institute of dermato-venereology or of medico-scientific societies. This central responsibility should be shared with the regional health authorities.

Implementation of the programme and the more detailed planning and evaluation are considered the responsibility of the physician and involve the medical schools and dermato-venereologists, in conjunction with the central administration, and including also the private sector.

The approach to control of sexually transmitted diseases must be multidisciplinary, and the means of achieving the programme objectives must be integrated into the general health and health education services.

However, final responsibility is not just that of the Ministries of Health and the sexually transmitted disease service but rests with society as a whole.