



Orienting

VENEREAL DISEASES

Introduction

The 'venereal' diseases of syphilis and gonorrhoea, whilst deserving close attention, do not constitute one of the major health problems of Britain today. In 1972, in England, about one man in every 10,000 and one woman in every 30,000 consulted a venereal disease clinic with syphilis. For gonorrhoea about one man in 600 and one woman in 1,200 consulted clinics in the course of the year. Treatment usually presents no serious problems in this country, although some commentators have been concerned by the rising trend in gonococcal infections. Figures 1 and 2 illustrate the changes that have taken place in yearly notifications of early syphilis and gonorrhoea in Britain and other nations since 1950.

Throughout the majority of the western industrialised countries cases of early syphilis dropped rapidly from their immediate post-war peak until about the mid-1950s. This rapid decline was probably connected with the widespread use of penicillin for a wide range of other infections. A significant number of cases of early syphilis would have received curative medicines as a result of coincidental treatment for some other illness during the long incubation period between infection and development of contagious lesions. From the mid-1950s the tetracyclines took over from penicillin in the treatment of many infections. Tetracycline is not as effective against syphilis and notifications tended to rise again, eventually reaching a plateau, which in some countries is higher and in others is lower than the rates prevailing in 1950.

In the case of gonorrhoea the incubation period is only a matter of days and cure by chance chemotherapy is unlikely. Incidence rates remained relatively stable throughout the 1950s but then rose rapidly throughout the 1960s until by 1970 the incidence of notified cases of gonorrhoea in most western industrialised countries was between two and four times the level prevailing in 1950.

In Britain the pattern is shown in more detail in Figures 3a and 3b. (These figures are shown on a logarithmic scale in order to give a visual impression of any changes in trends.) Recorded cases of syphilis are well below their 1950 level for both sexes. Taking new cases of 'early syphilis' alone, they dropped from 0.15 per 1,000 population in 1951 to 0.035 per 1,000 in 1972 (0.06 per 1,000 men and 0.013 per 1,000 women).

The recorded incidence of gonorrhoea has increased by about two and a half times among men, from 0.65 per 1,000 men in 1951 to 1.67 per 1,000 of the total population in England in 1972. Among women it has

increased about six times from 0.14 per 1,000 in 1951 to 0.87 per 1,000 in 1972. Gonorrhoea is most common among young adults. In the 20-24 age group in 1972, the incidence reached seven per 1,000 and four per 1,000 for males and females respectively. For both sexes the age of maximum risk in Britain appears to be between 18 and 24.

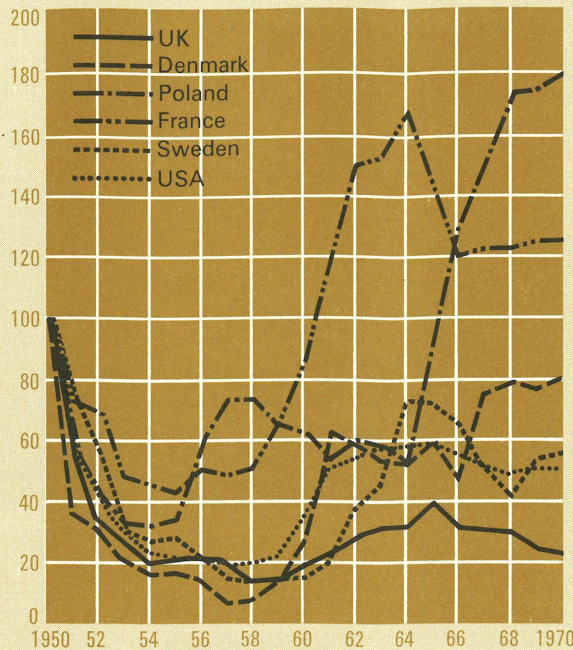
Although these figures should not give rise to complacency the use of the term epidemic to describe the situation is unjustified. Thus the Director of the WHO Regional Office for Europe, speaking during a recent WHO conference on the inter-country spread of venereal diseases in Europe (WHO 1971) was overstating his case when he argued that venereal diseases, particularly gonorrhoea, had now become 'a national and international epidemic, no longer affecting only major towns but extending into isolated regions, even in Arctic communities'.

Undoubtedly, gonorrhoea is less confined to cities and towns than it used to be and when it first appears in a hitherto isolated area its spread can follow an epidemic pattern. However, the use of the term epidemic at the national or international level represents an unwarranted extrapolation from the particular to the general.

In most of the countries in Figures 1 and 2 the available incidence figures are unreliable. Because of differences in facilities for treatment, and thus differences in notification, absolute levels of incidence as indicated by notified cases are not always comparable from country to country. And apart from the non-comparability of the recording of the cases which come to the notice of health services there may also be varying levels of undiscovered and untreated venereal diseases. For example, a joint French-Swedish WHO project mentioned at the conference on the inter-country spread of venereal diseases (WHO 1971) found a significant amount of gonorrhoea and syphilis (additional to that which would otherwise have come to the notice of health authorities) through intensified surveillance of all communicable diseases, venereal or otherwise, by screening, laboratory reporting and encouraging physicians to divulge all cases.

It is probably under-reporting that explains the atypical gonorrhoea incidence figures from France in Figure 2. Countries where reporting seems to be good, on the other hand, and where notified cases can probably be taken as a fairly good approximation to true incidence include Sweden, Denmark and the United Kingdom. Figures 1 and 2 suggest that UK incidence rates for

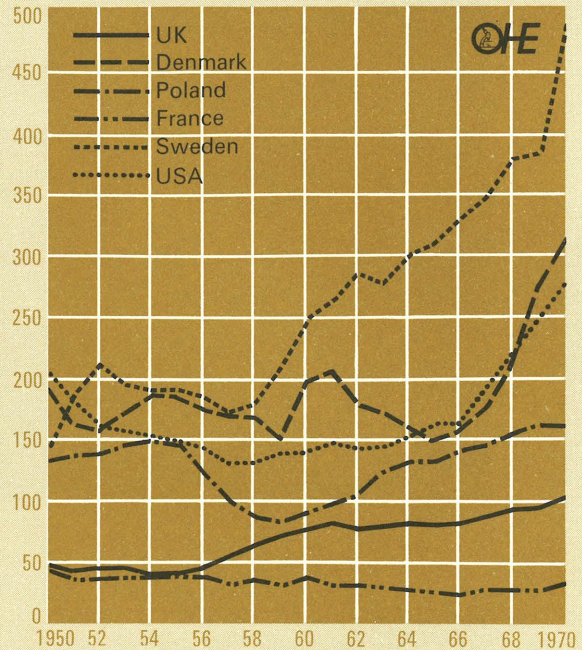
Figure 1 Notified cases of early syphilis 1950–70. Variation in the annual rate per 100,000 population by comparison with 1950 (which is taken as 100 for all countries).



Source WHO 1972

Note Factors affecting the incidence of venereal diseases include international tourism and labour migration, changing patterns of prostitution and homosexuality and the decreased isolation of rural areas from urban ones (which in recent years may have particularly affected relatively less developed European countries such as Poland). The recording of incidence may also be affected by political changes regarding the acceptability of recognising venereal disease within certain societies and by organisational aspects of treatment such as the extent of private medical care.

Figure 2 Notified cases of gonorrhoea, 1950–70. Incidence rates per 100,000 population.



syphilis and gonorrhoea compare favourably with those for other countries.¹

In his report on the state of the public health (HMSO 1972) the Chief Medical Officer of the DHSS attributed these favourable comparisons mainly to the relative efficiency of public treatment services in this country together with its contact tracing efforts.

Venereal disease services in England – the changing face of venereology

In England there are more than 200 VD clinics. The cost of the service may be estimated at approximately £5 million per annum in 1973 terms.

In 1972 about 317,000 cases passed through the clinics, representing 8.7 cases per 1,000 men, and 5.1 per 1,000 women in the population.² As Table 1 shows, only a minority of the cases seen are diagnosed as either syphilis or gonorrhoea, the two conditions which are specifically associated with the term 'venereal disease' in the sense that they are almost always transmitted sexually and are dangerous if left untreated.

1 Such a contention would be supported by the fact that there is probably less likely to be significant under-reporting of gonorrhoea and syphilis in the UK than in any other country. Thus a survey in the Boroughs of Lambeth and Wandsworth by the Health Education Council found that 95 per cent of GPs send the majority of male patients suspected of having gonorrhoea to a clinic. A follow up of the doctors over two months found no new case of gonorrhoea that had not also come to the notice of a clinic, suggesting that where an efficient clinic service exists there are few cases which escape them. Surveys of GP consultations (e.g. HMSO 1958) show, furthermore, that few patients go to their general practitioner in the first instance. The vast majority go straight to a VD clinic.

2 These rates represent cases rather than persons. One person may be represented in the rates a number of times depending on how many individual conditions he or she brought to clinics in the given year.

The character of workload in VD clinics has significantly changed since 1951. In that year 15 per cent of cases, excluding those for which no treatment was required, were syphilis and 31 per cent were gonorrhoea. By 1972 the proportions had dropped to 1.25 per cent and 22 per cent respectively, despite the steady increase in the incidence of gonorrhoea.

An increasing proportion of the work of VD clinics, therefore, is being devoted to the diagnosis and treatment of diseases other than syphilis and gonorrhoea. As Table 1 shows, cases of candidiasis among women and 'non-specific genital infection' among men now outnumber cases of gonorrhoea treated at VD clinics.

Official sources in Britain no longer use the term 'venereal diseases', but the term 'sexually transmitted diseases' instead. Such a change might appear to be indicative of a quite laudable attempt to reflect the wider ambit of present day VD clinics and may perhaps remove a degree of the stigma associated with the designation 'venereal disease'.

However, it may be argued that it is not the description which is of fundamental importance but rather the wisdom of grouping together such disparate conditions as are represented in Table 1. The only feature that they all have in common is that they are all treated in special clinics. It is not true that they are always transmitted sexually and in any case if all conditions that could be transmitted during sexual activity were included then the common cold might well be found at the top of a list of sexually transmitted diseases. There would be as little logic in grouping together every such sexually transmitted disease for treatment as there would be in grouping together all water-borne diseases or all airborne diseases.

The rationale behind the treatment of 'venereal' or 'sexually transmitted' diseases in special clinics revolves primarily around the need for contact tracing and the need for specialising in this aspect of patient management. Yet not all the conditions treated by the special clinics

Table 1 Cases seen by VD clinics in England in 1972 as a rate per 1,000 population. Comparison with rates in England and Wales in 1951

	1951		1972	
	Males	Females	Males	Females
Syphilis (including congenital syphilis)	0.20	0.17	0.10	0.03
Gonorrhoea (post pubertal)	0.66	0.14	1.56	0.77
Chancroid	0.02	—	—	—
Non-specific genital infection	0.47	NS	2.80	0.61
Trichomoniasis	NS	NS	0.07	0.73
Candidiasis	NS	NS	0.19	1.07
Scabies	NS	NS	0.10	0.02
Pubic Lice	NS	NS	0.13	0.05
Herpes genitalis	NS	NS	0.14	0.05
Warts	NS	NS	0.46	0.23
*Other conditions requiring treatment in a centre	0.51	0.37	1.07	0.40
Other conditions not requiring treatment in a centre	1.18	0.54	2.09	1.10
Total	3.00	1.20	8.70	5.10

Source On the state of public health. Annual report of the Chief Medical Officer of the DHSS for 1972 (HMSO 1973).

NS – not specified: included in 'other conditions requiring treatment in a centre'.

* In 1972 these were mostly minor non-necessarily sexually transmitted conditions requiring simple local treatment.

justify the same amount of contact tracing effort.

For some, such as early syphilis, the tracing and subsequent treatment contacts are very productive in public health terms. For gonorrhoea contact tracing is comparatively less worthwhile, case for case, because morbidity associated with undetected infections is less common and not so severe.³ Nevertheless, for a relatively rich country like Britain it is clearly high enough on the list of health service priorities to justify its continuance.

In the case of such conditions as candidiasis, genital warts and pubic lice, which have been finding their way more and more often into the VD clinics, active contact tracing is likely to prove a waste of time. Candidiasis, for example, is a very common condition among women which is not necessarily transmitted by sexual contact. Even highly successful tracing of contacts, therefore, would not reduce the pool of infection in the same way as could successful tracing of contacts of persons infected by, say, syphilis. Furthermore, one of the results of treating such a condition as a 'venereal' disease is to concentrate attention on interrupting the process of sexual transmission. As a result of this the more important consequences for the individuals concerned may be ignored altogether. In the case of candidiasis the major problem is often the emotional distress and marital disharmony resulting from painful intercourse. Sensitivity to this aspect of the condition may sometimes be lacking.

Similarly, the management of non-gonococcal urethritis or 'non-specific genital infection' as one of the 'venereal' diseases seems inappropriate. It is now the commonest category of condition among men seen at VD clinics and since 1971 has appeared in the official statistics as a condition also suffered by women. The clinical picture is similar both in respect of the mode of transmission and the symptoms to that of gonorrhoea

³ The major morbid consequences of untreated gonorrhoea are salpingitis amongst women and epididymitis amongst men. These may both lead to sterility. Less common complications include arthritis and endocarditis. Blindness among newborn children of infected mothers used to be another major complication. However, this has vanished with the prophylactic use of silver nitrate drops and subsequently developed medicines.

but there are very rarely any serious complications. Nevertheless, the condition is often treated and traced with the same energy as gonorrhoea, even though very little may be gained except a clinic-induced neurosis.

There is danger, therefore, in extending the methods of dealing with the 'venereal' diseases of gonorrhoea and syphilis to other conditions which are increasingly treated in VD clinics. This is not to argue that clinics should not extend the range of work they perform. On the contrary, strong arguments can be put forward that venereology is too narrow a speciality. But there would appear to be more merit in developing a much more broadly based speciality of genito-urinary medicine, with venereology as just one aspect among others, rather than allowing the preconceptions of venereology to be applied inappropriately to a range of conditions seen by what will remain, essentially, VD clinics.

Staffing of VD clinics

While the number of attendances at VD clinics has increased rapidly, especially over the period from the mid-1960s to the early 1970s, the number of medical staff in the venereal diseases speciality has remained relatively static. Thus between 1963 and 1971 the workload of clinics, as measured by the number of cases found to require treatment, rose by 120 per cent. In the same time period the number of (whole time equivalent) hospital doctors working in the speciality most of whom are consultant grade, rose only by 18 per cent, significantly less than the 32 per cent increase in hospital medical staff in all specialities.

This large increase in 'productivity' has not taken place without a great deal of overcrowding and long waiting times within some of the clinics. Awareness of such poor conditions led to a survey of facilities being carried out by the DHSS in 1971 (HMSO 1973). This found that some rebuilding and upgrading was planned, especially in the London area where the demand for medical services is by far the highest and whose catchment area is the largest. Since the publication of the survey a number of new purpose-built clinics have been opened while amongst the 16 clinics reported in the survey as being 'inadequate but with no plans for improvement', pressure from the DHSS has since resulted in the promise of some action by the authorities concerned (AHAS and RHAS). However, despite the rebuilding and upgrading planned, the resources available throughout the country are as yet inadequate to cope with the increased workload without inconvenience to patients and staff. Furthermore, the 1973 cuts in government spending have led to the postponement of a considerable amount of hospital capital expenditure, including expenditure on VD clinics.

The issues of poor facilities and under-staffing are in themselves closely related. They are both reflections of and mechanisms underlying the perpetuation of the low status of venereology. Any improvements, therefore, in the quality and quantity of services provided by this sector of the NHS are likely to be brought about by simultaneous attention to both these areas.

Research by the DHSS Hospital Medical Staffing Section (Health Trends 1972a) into career prospects in venereology suggested that the prospects for a consultant career were particularly good at the time. It was pointed out that a young graduate with the right qualifications could reasonably hope to become a consultant before the age of 30 with only three or four years of experience in the area.⁴ By comparison, in other specialities, where the supply of trainees far exceeds the demand for consultants, it is common for experienced doctors in their late 30s to still be in the training grades.

This notable ease of advancement in the venereal disease speciality is an indicator of the low esteem in which this branch of hospital medicine is still held. An

⁴ In reality, however, it is unusual for a doctor to become a consultant venereologist at that age because few doctors specialise in venereology at the outset of their career.

analysis of consultant recruitment in various areas of specialisation (Health Trends 1972b) in the period 1969–71 showed, for example, that only one out of the seven new consultant venerologists appointed gave venereal diseases as their first choice of speciality. In most other areas it is usual for the great majority of consultant posts to be filled by doctors who have made that speciality their first choice. Further confirmation of the unpopularity of venereal diseases is given by the very low number of applications per vacant post. Although these figures must be treated with caution there were found to be only 1.7 applications in the period for each consultant post in venereal diseases compared with, for example, 3.1 applications per post in haematology and 6.7 applications per post in diseases of the chest. Venereal diseases is also the speciality with the highest proportion of overseas graduates in consultant posts.

Yet despite the somewhat discouraging past of venereology a few relatively straightforward administrative and organisational changes could rapidly alter the situation of the speciality as a 'last choice' career. It may be argued that an expansion of its sphere of activity to include elements of general medicine and of non-surgical gynaecology and urology (that is to broaden venereology into overall genito-urinary medicine) would raise its esteem in the minds of doctors seeking a speciality.

Such changes would merely involve overt acceptance of a trend which has been emerging over the past two decades. No major upheavals in the definition of other specialities need occur. A change in name coupled with an expanded and more varied workload, which might perhaps include some of the problems of infertility, could be expected to draw a greater proportion of hospital doctors into the speciality, more of them than at present opting for it as their first choice.

Parallel to this, however, a further development would appear to be necessary in order to alter the 'back door' image of the speciality and ensure an adequate supply of medical staff. This would be the physical transfer of hospital clinics away from the isolated positions they tend to occupy at present. It is to be hoped that the future rebuilding and upgrading of clinics is going to lead to renamed clinics being brought into the same physical location as other out-patient departments. Finally, it is also to be hoped that the dominant emphasis on control of transmission, which has characterised the treatment of syphilis and gonorrhoea, will give way in broadly based departments of genito-urinary medicine to the more familiar medical concern with alleviating patients' distress. The means of carrying out such a rationalisation should now exist within the reorganised NHS administrative structure.

Research

The foreseeable future is unlikely to bring any radical developments in the clinical treatment of syphilis and gonorrhoea. Penicillin continues to give excellent results in the treatment of syphilis although the dosage of penicillin for the cure of gonorrhoea has had to be increased by 10–15 times throughout the years it has been available. There are no strains which are invulnerable to very high dosages. The resistance of gonococci varies but it is furthest advanced in the Far East and Africa and least advanced in northern Europe. Besides this there is by now a large range of possible alternative antibiotics.

However, if non-specific genital infection is included as one of the 'venereal' diseases there is considerable room for improved therapy. Treatment at the moment is empirical and of doubtful efficacy. Research on the causative agent or agents (such as, possibly, certain mycoplasma) is supported by the DHSS although in view of the relatively non-serious nature of the physical symptoms and complications it cannot be expected that such work, if successful, would herald a beneficial step forward in health care in any way comparable with that which was achieved by effective treatment against syphilis and gonorrhoea.

In Britain, therefore, where effective treatment for gonorrhoea and syphilis is relatively efficiently provided, the venereal disease services are close to the limit of the degree of control of these conditions they could expect to achieve in the community by clinical treatment alone. If the incidence of gonorrhoea and syphilis is to be contained or reduced then research effort must go into areas other than the refinement of clinical treatment techniques.

One possible approach to control in the future is the development of immunising agents against syphilis and gonorrhoea. Some success has been achieved using penicillin-killed or gamma-irradiated *treponema pallidum*⁵ to immunise against syphilis in rabbits. Experimental gonorrhoea vaccines which may prove to have some degree of success have also been prepared but none has yet been successfully tested on human beings. Natural immunity to the disease is very poor, many patients being reinfected at frequent intervals over long periods of time. Any vaccine, therefore, will have to achieve an immune state that natural infection does not.

A less distant possibility than immunising agents may be the development of more effective diagnostic and screening tests. Specific blood tests for syphilis⁶ have been in existence for some time but there is no similarly satisfactory diagnostic test that could be used in a screening programme for gonorrhoea. Such a test would be highly desirable since the smear and culture tests available at present are skilled and time consuming procedures requiring genital examinations.

Yet even this would probably only be of limited value in control of gonorrhoea in Britain. A general screening programme of the whole population at risk would be very expensive in terms of the number of positive diagnoses per 1,000 persons tested who would not have found their way to clinics anyway. It is known that few persons are receiving treatment outside NHS clinics and on the assumption that the vast majority of males with symptoms come forward for NHS treatment it seems that really effective contact tracing from clinic patients should be a more practicable method of reaching infected women than unselective screening of the population at risk. According to the Chief Medical Officer of the DHSS (HMSO 1972) pilot studies seem to confirm that screening of women via smear and culture tests in gynaecological out-patient departments, ante-natal clinics and family planning clinics would uncover only a relatively small number of extra cases in this country.

Thus rather than concentrating on research into the improvement of the diagnosis or medical treatment of the venereal diseases it might be more worthwhile to embark on epidemiological and sociological studies of the patterns of infection and of factors affecting the success or otherwise of contact tracing. Such investigations will probably be most productive if aimed at understanding the behaviour of 'at risk' social groups and developing approaches to health education which would be acceptable within the context of such groups' values, beliefs and fears. Research in this area has already been conducted by the Health Education Council and its official publication is awaited with considerable interest.

Finally, a statistical association appears to exist between venereal diseases and carcinoma of the cervix, or alternatively between carcinoma of the cervix and other factors which may be correlated with the incidence of venereal diseases, factors such as multiple marriages, pre-marital and/or extra-marital sexual activity, or early age of first intercourse. The epidemiological evidence is not clear cut but there has been the suggestion that a herpes virus may be the specific infective agent that increases the probability of cervical cancer after the passage of many years (Cancer Research 1973). Further epidemiological research may provide a clear-cut solution

5 The causative agent in syphilis.

6 During the period of incubation blood tests may fail to show syphilis. Thus retesting at least three months after possible exposure to the infection is desirable.

Figure 3(a) Sexually transmitted diseases seen at venereal disease clinics. England and Wales 1951-68, England 1968-72, rate per 100,000 population.

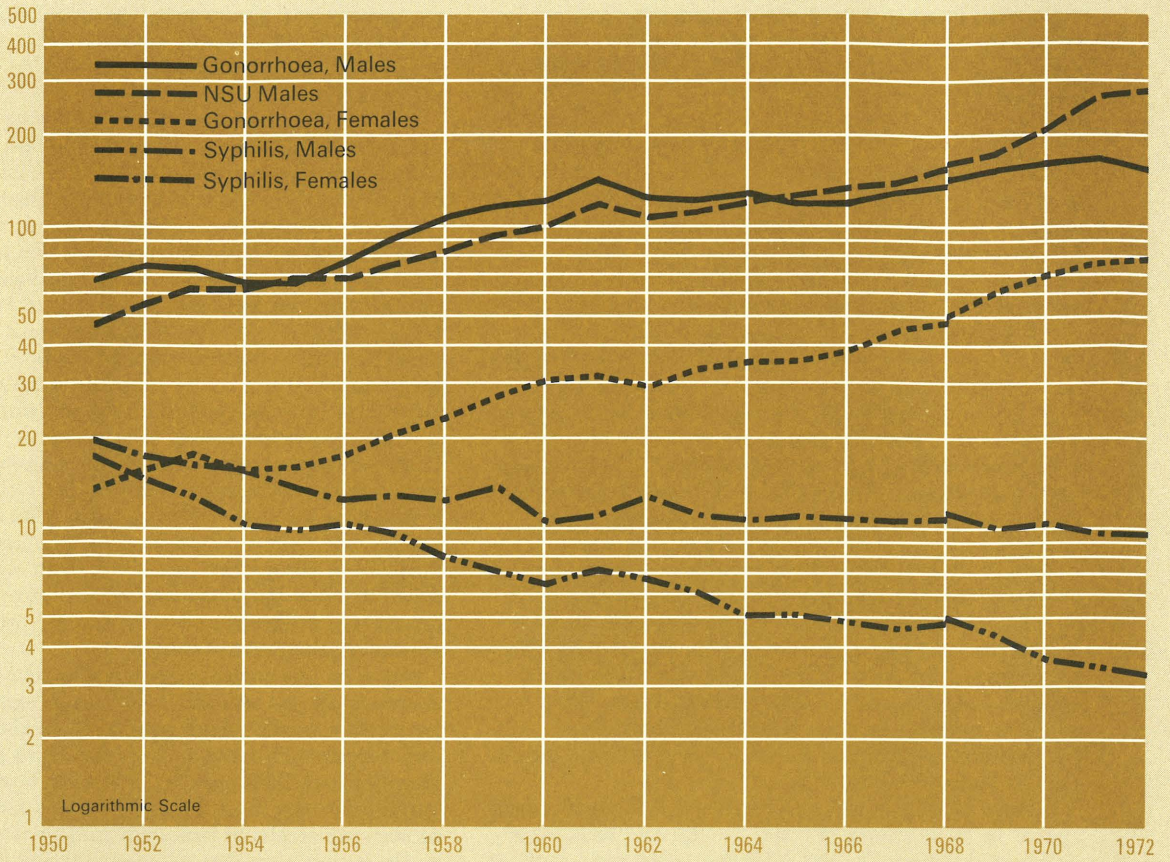
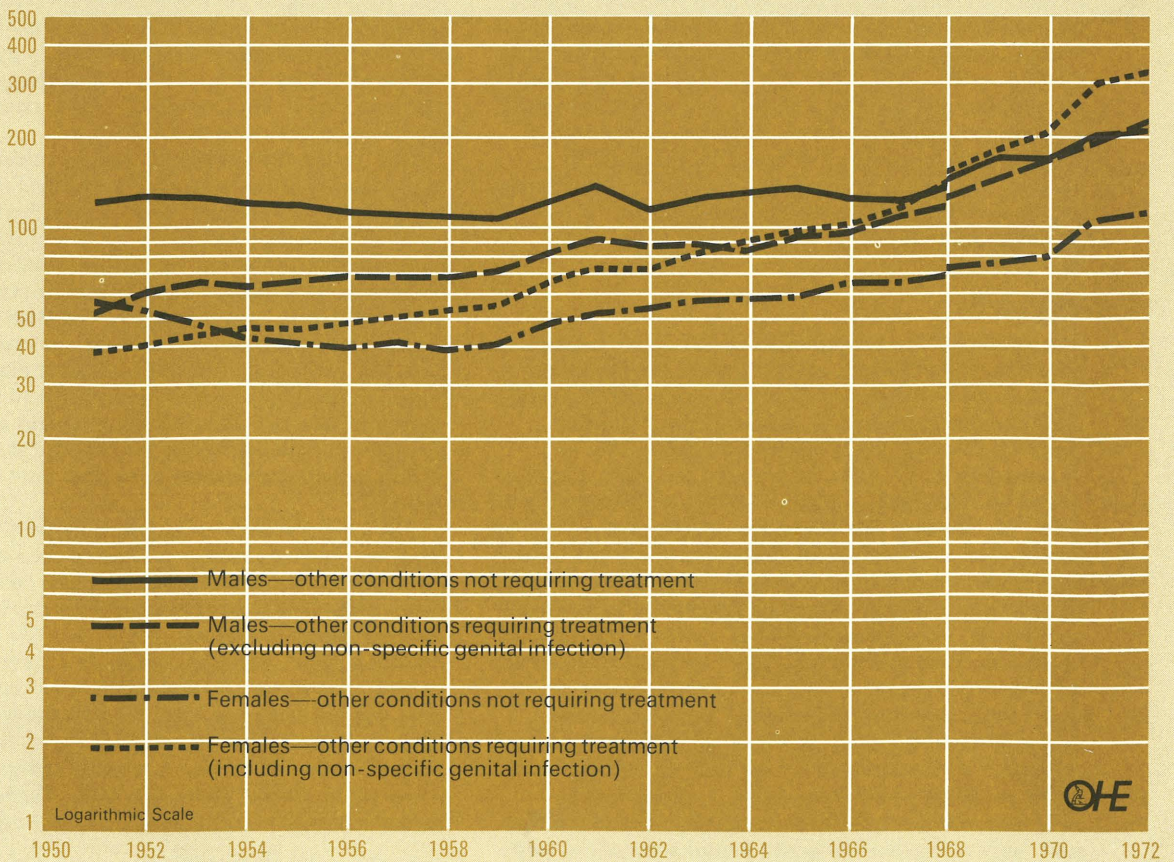


Figure 3(b) Sexually transmitted diseases seen at venereal disease clinics. England and Wales 1951-68, England 1968-72, rate per 100,000 population.



and perhaps open the possibility of control of cervical cancer.

Future control of venereal diseases

In the absence of an effective and acceptable immunisation programme, any significant reduction in the incidence of gonorrhoea and syphilis is likely to depend on either a radical change in sexual behaviour or on treatment of infected persons at an early stage through more effective contact tracing and/or health education designed to increase individual awareness of this aspect of personal hygiene and health and to encourage willing participation in efforts designed to stop the transmission of venereal disease.

Attempts to control sexual behaviour, preventing promiscuity and so limiting the chances of infection spreading, are frequently not compatible with the latter approach. Furthermore, they are unlikely to be successful and may today be thought absurd by those to whom they are directed. This area is so complex that it is possible that would-be educators who try to change the population's sexual behaviour may even influence it in a manner which is the reverse of that which they intend.

Earlier treatment resulting from better contact co-operation therefore represents the potentially more fruitful option in controlling the spread of syphilis and gonorrhoea. At present it appears that the major barrier to progress in this field is still the stigma which attaches to venereal disease and its treatment. Despite the 'permissive' society many individuals who contract syphilis or gonorrhoea prefer to hide it from their acquaintances and perhaps avoid informing them if at all possible. To an extent the present mode of treatment in special clinics, located apart from other out-patients' clinics, may help to perpetuate this situation and make people less prepared to co-operate in contact tracing. It is probable that some people who suspect that they may have gonorrhoea will prefer to stay away from a VD clinic but might find acceptable a visit to a 'department of genito-urinary medicine' dealing with a much wider band of sexually and non-sexually transmitted conditions.⁷

In the past, when syphilis was a significant killer and when gonorrhoea was responsible for a considerable amount of chronic disease, especially amongst women, and blindness among new born infants, strict admonitions against promiscuity together with sexual taboos may perhaps have served a useful function in limiting sexually transmitted disease. Since the advent of penicillin, however, cure of gonorrhoea and syphilis in its early stages has become virtually assured in Britain. To that extent, the need to control promiscuity in order to

⁷ The relocation of renamed clinics dealing with many aspects of genito-urinary medicine should not only facilitate contact tracing but should also serve to reduce the emotional distress among people with venereal infections as well as among those whose condition is, strictly, not a venereal disease but who are convinced that they have 'VD' by being treated in a VD clinic.

Office of Health Economics

The Office of Health Economics was founded in 1962 by the Association of the British Pharmaceutical Industry. Its terms of reference are:

To undertake research on the economic aspects of medical care.

To investigate other health and social problems.

To collect data from other countries.

To publish results, data and conclusions relevant to the above.

The Office of Health Economics welcomes financial support and discussions on research problems with any persons or bodies interested in its work.

prevent morbid consequences has been reduced. Modern contraceptives such as the 'pill' or the 'loop' have also removed some of the inhibitions relating to sexual contact although they offer no protection against venereal disease.

Because of the reduction in risks regarding serious physical morbidity from both syphilis and gonorrhoea the emotional distress of people who have contracted such proscribed conditions has become, in relative terms, a factor of increased importance. Health education in the 1970s therefore has the difficult job of alleviating the stigma, guilt, fear and emotional distress of venereal disease at the same time as alerting the population at risk to its remaining dangers.

Alarmist approaches to the control of gonorrhoea and syphilis may generate anxieties which are not only themselves the cause of psychological morbidity but which may also lead individuals to fail to accept medical advice or co-operate with contact tracing and hence help the spread of disease. Thus probably the most fruitful approach to health education in this area will be one which aims to inform unemotionally and objectively, which avoids any implicit or explicit moral postures and which seeks to treat the prevention of venereal diseases as just one aspect of everyday personal hygiene. To a considerable extent this is the approach that is already taken by NHS venereal disease clinics and it is to be hoped that this can be further developed within the more desirable context of departments of 'genito-urinary medicine' or some other restructured speciality covering a wider range of logically related conditions than does venereology at present.

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