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The **October** General Meeting was held in the Chamber of Mines Building, Johannesburg, on Thursday, 20th October, 1938, at 8 p.m., **Dr. L. E. Miller** (President) in the Chair.

OBITUARY.

The Chairman said he wished to record our deep and very sincere regret at the death of **Dr. C. J. Scott** who, as a member of the Executive Committee for many years and President in 1930, had rendered valuable services to the Association.

Dr. Orenstein, in seconding the motion, moved that a letter of condolence be sent to Mrs. Scott and her family.

A vote of condolence was passed in silence, all the members standing.

There were present 22 members, 6 visitors, and the Secretary.

The Chairman welcomed the visitors (including Dr. Jos. Daneel, Superintendent of the Rietfontein Hospital, and several Medical Officers of Health of the Reef towns, who had attended the meeting by invitation) and hoped that they would join in the discussions.

The following paper was read:—

SYPHILIS—A MAJOR CAUSE OF ILL-HEALTH IN NATIVE LABOURERS; AND SUGGESTIONS FOR MASS TREATMENT.

By **S. V. Humphries,** M.A., M.R.C.S., L.R.C.P.

As a junior member I very much appreciate the privilege of being allowed to re-introduce this subject which is, I think, as important as any that has ever been considered by this Association. I want to thank Dr. Goldsmith for reading through parts of my paper and for helping me with the framing of the resolutions; Dr. Orenstein for providing access to his reference library; and Dr. Anning and Dr. Gale for providing literature for reference.

There are four main items with which I have to deal in considering this subject of Bantu syphilis:

1. The incidence of syphilis among Natives in South Africa in general and on the mines in particular.
2. The serious effects the disease is having on them and the urgent need for adequate treatment.
3. The nature of the measures so far taken to combat the disease in South Africa, and
4. How the incidence of syphilis can be reduced.

1. **Incidence.** Figures were quoted at a previous meeting[1] to show the incidence on the mines. The most valuable of these were the ones supplied by Dr. Girdwood to the S.A.I.M.R.[2] in 1927. The W.R. was performed on specimens of blood taken from 1,200 boys who had been passed for service and were about to be sent to various mines. Of the total number it was found that 14·6 per cent. were positive, the highest percentage of positives being among Basutoland (29·4 per cent.) and Transvaal (29·5 per cent.) Basutos. The Wassermann results from Modder Deep, Van Dyk, Geduld and East Geduld mines were also given,[1] where the number of positives varied from 17.6 per cent. at Van Dyk to 40.5 per cent. at East Geduld.

For the sake of interest, I have looked up the number of positives at Van Dyk and Modder Deep since those figures were given. Out of a total number of 119 taken at Modder Deep from January, 1937, to the present date, 28 or 23·5 per cent. were positive; and at Van Dyk, out of a total number of 329 taken since February, 1937, 94 or 28·6 per cent. were positive. A W.R. is carried out as a routine at Modder Deep and Van Dyk Hospitals on all severe fractures, eye injuries, contused knees, and several other types of cases in which it is thought that the

presence of syphilis may prejudice a patient's chances of recovery.

The figures I have quoted give us a clear idea of the incidence of syphilis among mine Natives. Its incidence amongst Natives of the Union as a whole is less easily assessed, as the prevalence of the disease varies a great deal in different districts. The Natives whose blood was collected for examination at the W.N.L.A.[2] were derived from all parts of the Union as well as from the Native protectorates and P.E.A.

The following were the percentage of positives in the different tribes:—

East Coast Natives	7·0%
Pondos	8·5%
Transvaal Basutos	29·5%
Xosas	2·0%
British Basutos	29·4%
Bechuanas	22·0%

A large proportion of these Natives were probably derived from rural areas where syphilis is seldom as prevalent as in towns. Another interesting fact is that there has been an increase in the number of positive Wassermanns in the specimens of blood submitted to the Institute of recent years. Of the total number of specimens submitted to the Institute in 1927, a positive result was obtained in 26·6 per cent.,[2] while in 1937 a positive result was obtained in 33·1 per cent.[3] This may not, of course, be due to an increase in the incidence of Native syphilis, as there are other possible factors which might cause an increase in the percentage of positive results, but a finding such as this in a country in which so large a proportion of the population consists of Natives, strongly suggests that there *is* an increase in Native syphilis.

It must be conceded that a certain proportion of the Natives from Tropical Africa and from the East Coast in whom the blood show a positive W.R. are suffering not from syphilis but from yaws. It is very unlikely that many Basutoland Natives, in whom the percentage of positive Wassermanns is appallingly high, are suffering from yaws, as, to quote from Dr. Scott's paper,[4] "Yaws is essentially a disease of warm climates." In another place he says, "The disease does not spread in cold climates or at high elevations in the Tropics." In any case, when considering this problem, it matters very little whether yaws is prevalent in the Union or not. Yaws requires treatment just as much as syphilis, and it would not matter if some cases of yaws were treated under the impression that they were syphilis as the treatment is the same.

The Bantu people appear to be peculiarly susceptible to the invasions of the spirochaetes and the gonococcus as evidenced by the fact that in the Namwala district of N. Rhodesia[5] it is estimated that 80 per cent. of the population are infected with some form of V.D., while in the Barotse Province it is believed that 90 per cent. are infected.[6]

Now, as regards this "third disease which stands half-way between yaws and syphilis," of which Dr. Meyerstein has found evidence in Bechuanaland and N-E Zululand,[7] it probably resembles "Bejel" or non-venereal syphilis, described by Dr. Hudson[8] of the American Mission Clinic in the semi-nomad Bedouin. He says it is non-venereal and acquired in childhood like an exanthem. It fails to respond in typical fashion to anti-syphilitic medication. The discovery of this new disease in South Africa is no contra-indication to treating syphilis more intensively. If anything, it is an indication that closer attention should be paid to syphilis and diseases resembling it, as this non-venereal disease may spread among Natives even more rapidly than syphilis itself.

I should very much like to know whether any mine medical officer has come across this disease, as I have never met any form of syphilis that fails to respond to injections of N.A.B. and bismuth.

Dr. Gale, the Asst. M.O.H. at Benoni, aptly summarises the position with regard to urban syphilis in his paper which is to appear shortly in the Journal: "The actual number of syphilitics, early and late, among Natives living in most South African towns—as revealed, for instance, by the use of the Wassermann test in sample surveys or in ante-natal clinics—is undoubtedly appallingly high. The late cases represent the accumulated legacy of the past thirty years of inactivity, of tinkering, and of quack treatment. Although most of the syphilis is "latent," there can be no doubt that it is the basis of much ill-health among Natives—hindering, for instance, recovery from other diseases—the sum total of which must represent a considerable economic loss quite apart from its threat to the next generation."[9]

2. Effects of Syphilis on the Natives. Parran,[10] the Surgeon General of the United States Public Health Service, comparing syphilis with other diseases, concludes that, untreated, it does more damage than any to the greatest number of individuals, and that quantitatively, in all its forms, it probably lays a heavier burden than any other disease upon the community. Half the

infections, he points out, occur in the age group between 20 and 30. Like tuberculosis, it strikes at the most vigorous and productive age: that of the wage-earner and the young mother. There is more of it among men, at the rate of 6 to every 4 women infected—a fact of particular importance to the gold mining industry.

McDaniel, in America,[10] studying a series of 6,911 citizens, 1,311 of whom had syphilis, found that, taking all forms of the disease, both early and late, 40 per cent. of the syphilitics were unable to do a full day's work. His cases included an appreciable percentage of negroes. Among those not infected with syphilis, many other diseases were found, including tuberculosis, cancer, rheumatism, heart disease, pellagra and a dozen others, and in them the number unable to do a full day's work was only 20 per cent.

Harrison, in a personal communication,[11] commenting on the peculiarities of syphilis in negroes as compared with whites, says, " The chief point which has struck me in my studies of the literature is the proneness of the negro to develop vascular syphilis. Thus J. E. Moore, in his 'The Modern Treatment of Syphilis' (1930), Baltimore, says, ' in late syphilis, the negro is particularly prone to the development of bone or cardio-vascular lesions (twice to four times as often as the white), and much less likely to develop central nervous system syphilis, especially tabes and paresis, than the white. These are factors of importance in estimating the patient's reaction to his infection.' Stokes's ' Modern Clinical Syphilology,' 1934, Philadelphia, says, ' in 6,420 cases in Baltimore, Turner found 13·9 per cent. of males and 6·7 per cent. of females to have cardio-vascular disease: one-and-a-half to two times as many negroes as whites have cardio-vascular disease. Paullin, in 660 cases of heart disease in negroes found 39·3 per cent. to be syphilitic.' These accord with my own studies of such literature on the subject as I have found in V.D. information and Journ. of American Medical Association."

At the previous meeting,[1] mention was made of certain pathological conditions which are accentuated by the presence of syphilis, notably eye conditions, ordinary traumatic wounds and fractures. Besides these there are, as you will agree, a very large number of clinical conditions for which syphilis is wholly responsible—diseases affecting almost every organ and tissue in the body. Some forms of syphilis are far commoner in Natives than they are in Europeans. Syphilis of the lungs, for instance, is described in textbooks on European diseases as very rare, but you will remember that in a paper read before this Association, Dr. Sartorius revealed the fact that pulmonary syphilis in Natives is by no means uncommon. He described 16 cases which he had seen over a period of two years which were mainly drawn from the same mine.

May I remind you of some of the facts that Dr. Sartorius[12] disclosed at that meeting.

Quoting from the literature, he showed that syphilis and tuberculosis work well together, and that syphilis as an active disease has a decidedly unfavourable effect on the course of pulmonary tuberculosis. Beneficial effects were obtained by treating the syphilitic element without any untoward effect on the tuberculous. It was pointed out that Natives with syphilis who are possibly going to get tubercle later will probably be benefited by some measure of anti-specific treatment. Among the general signs observed in Dr. Sartorius's series of cases, it was noticed that some cases continued to lose weight steadily until anti-specific treatment was given. Every case, when put on to this treatment, gained weight; and in every case the gain in weight and the improvement in the general condition was marked. Another point noticed was the persistence of physical signs in the chest until anti-syphilitic treatment was given. But when this was instituted, improvement occurred.

Two cases with signs of consolidation were sent for X-ray at the W.N.L.A. and came back labelled " ? T.B." After treatment, they were sent in again, and came back with the report " Increased shadows."

Even cases with pleural effusion cleared up under anti-syphilitic treatment.

Surely these results are clear enough proof that syphilis is accentuating lung conditions in Natives. It would obviously be wrong to continue neglecting a disease which is suspected to be an accentuating factor in the course of pulmonary tuberculosis—the condition that is at present costing the gold mining industry thousands of pounds in compensation every year.

Yet tuberculosis is only one of the diseases accentuated by syphilis. How many others are there that we know nothing about? In what other undetected ways are Native labourers being incapacitated by syphilis? These will, I think, become apparent only after we have started to institute really effective treatment. I venture to suggest that our sickness rate will show a marked decrease. Even the number of mine accidents may be expected to decrease as Native labourers, undebilitated by syphilis, will become less easily tired and, with their special senses

more acute, will be more quickly able to get out of the way of danger.

3. **Nature of the measures so far taken to combat the disease in South Africa.** Advances have been made recently in the campaign against venereal diseases not only in the Union of South Africa[13] but in many other parts of Africa as well, such as Uganda,[14] Kenya[15] and Zanzibar.[16]

Unfortunately, the Annual Report of the Department of Public Health for the Union[13] does not give much valuable information regarding the actual number of cases being treated for venereal diseases. There is a table in this report headed "Venereal Diseases. Cases Treated and Attendances." This table does not record the total number of patients that have attended for treatment throughout the year, nor the total number of attendances by patients. It mixes the two up inextricably, so that no intelligible idea can be obtained by any enquiring individual about how much is being done for Native, or, for that matter, for European, or any other syphilis.

Under Section 54 of the Public Health Act,[17] every person suffering from any venereal disease must attend for treatment and continue to submit to treatment until cured or free from such disease in a communicable form. It is the presence of those last four words, "In a communicable form," that allows so much scope for laxity in carrying out the law. Exactly what forms of syphilis, apart from treated syphilis, can anyone say emphatically are not communicable?

Syphilis is dealt with by the Government purely from a palliative point of view. Its object is to prevent further infection by treating the disease in its communicable form. This obviously means that the Government's policy is to treat open lesions of the skin and mucous membranes, and perhaps a few other syphilitic lesions recognisable on ordinary clinical examination that the medical examiner thinks are transmissible. I think you will agree that a very small percentage of patients whose W.R. is positive have lesions that are sufficiently evident to be recognised on ordinary clinical examination. A still smaller number of these would have lesions that are openly communicable. It therefore follows that by treating only patients with obviously communicable lesions, the vast majority of syphilitics are not treated at all.

The question now arises: How many of these untreated, latent cases of syphilis are actually capable of transmitting the infection to others? This is a point upon which it is necessary to be absolutely clear.

Let us first consider the effects of syphilis on pregnancy. We know that syphilis in women, however "latent" it may be, unless treated, is liable to cause repeated miscarriages. The liability to miscarriages diminishes with the interval since infection. The sequence in six consecutive pregnancies, says Letheby Tidy,[18] is:

1st pregnancy: early abortion;

2nd pregnancy: miscarriage in the later months;

3rd pregnancy: syphilitic infant; death in a few days;

4th pregnancy: healthy at birth; death in a few weeks. (Typical congenital syphilis);

5th pregnancy: malnutrition only; possibly interstitial keratitis later; and it is not until we reach the

6th pregnancy that a healthy child is born.

The proof that an infected father with latent syphilis is capable of transmitting the infection to the child is not so clearly established, though it is, I think, agreed that there is a strong possibility of this happening. In Denmark,[19] where treatment for V.D. is compulsory, a certificate of freedom from V.D. is required for marriage, and if either party at the time of consummation was suffering from V.D. in a communicable form, a judicial separation or divorce may be obtained. It seems strangely ironic that in a country like Denmark, where new infections with syphilis are at the rate of 1·6 per 10,000 of the population per annum, such extremely strict precautions should be regarded as necessary, whereas in South Africa, where, among Natives, the number of new infections is inestimable, we are almost happily content to let syphilis take care of itself.

In certain progressive townships here, syphilis is being treated intensively, with the object of achieving permanent cures, and I think this is the only reasonable attitude to take up.

Referring to Native syphilis, Harrison,[11] says, "I certainly advocate treatment of patients with a positive W.R., but no clinical signs, as an insurance especially against cardio-vascular syphilis and syphilis of the supporting and nutritional structures of the central nervous system.

"With regard to the general question of the worth-whileness of tackling the treatment of syphilis in the negro, I would say decidedly 'Yes.' In discussing this question, people seem always to think too much of neuro-syphilis and too little of cardio-vascular syphilis. Although I would always prescribe a minimum of forty injections of each type of compound, As. and Bi.

respectively, to any early case of syphilis, I believe that, if every case of syphilis could have three months' steady treatment with adequate doses of As and Bi remedies from the commencement, we should have a very low incidence of the late effects of syphilis in the community."

4. **How the Incidence of Syphilis can be Reduced.** It is impossible to deal with this subject from the point of view of the gold mining industry alone. To reduce the disease appreciably, we have to regard it as a national problem of the first magnitude—every bit as important as the problem of national defence, on which the Government has just decided to spend six million pounds.

A comparison can be drawn between the problem we have to face here in treating syphilis and the problem they are confronted with in the United States. In both countries there are negro populations, and in both the negro populations have in the past been neglected. The main difference is that here the proportion of negro to white is far greater than in America, which makes the problem of dealing with syphilis here more difficult. What Parran[10] says about the United States applies in some measure here: "For the country as a whole we have carried on a guerilla warfare against syphilis, with spirited skirmishes and valiant forays in some of the states which show casualties to their credit. There has never been a co-ordinated drive against it by all the states. . . . It is for this reason, I believe, that there is no evidence to be found of a general decline in the attack-rate of syphilis for the country as a whole." In South Africa it is absolutely essential that there should be a co-ordinated drive, and this should include treatment of the Natives in the British Protectorates as well as those in the towns and rural areas of the Union. It is equally essential that there should be some co-operative treatment-card or similar system to enable Natives who travel about to continue their treatment from where they left off. Unless intensive treatment is undertaken in all parts of South Africa, Natives who have been cured in one locality, for example on the mines, will again contract the disease when they proceed to another locality, as, for instance, when they go home.

The actual amount of treatment that could be undertaken on the mines is debatable. It would, naturally, vary with the members of different Native tribes. As a rule, the stay of Xosas on the mines is short. Shangaans, on the other hand, usually remain with us for ten months or longer, and the same applies to tropical boys. I suggest that it would always be worth while treating syphilis with the object of eventually obtaining a negative W.R. But even in cases in which there is little hope of achieving this result, it is worth while treating the disease just the same. It is now agreed by most syphilologists that treatment with arsenobenzene plus bismuth is preferable to treatment with arsenobenzene alone.

As syphilis is a national problem, the Government should provide free drugs, but even if they refuse to do this for the treatment of mine Natives, this should be no contra-indication to our undertaking more energetic treatment. The cost of antisyphilitic drugs is by no means prohibitory, and there is a large choice of drugs open to us for intravenous, intramuscular and oral administration.

The actual number of syphilities we should attempt to treat on the mines is also debatable. Assuming that 10 per cent. of mine Natives have positive Wassermanns, then it follows that about 32,000 mine boys are in need of treatment. To discover these 32,000 at once, it would be necessary to perform a W.R. on the whole 320,000 I *do not suggest that we should do this.* I suggest that we should regard as our **ultimate goal** the treatment of every infected Native, but that at present we should tackle the problem gradually, by treating all boys whose syphilis we discover in the course of our ordinary duties.

Let us suppose that the mine medical officer sees a boy at short-weights, or in hospital with a contused knee, and that he notices symptoms suggestive of syphilis. What I suggest is that he should treat the case if the W.R. is positive as thoroughly as he can under the circumstances, with the object of obtaining eventually a negative W.R.

There should be closer co-operation between mine medical officers and the medical officers of the W.N.L.A. to whom a large number of treated cases are sent when they arrive from Rietfontein, as well as with M.O.H's. and the officials of the Native Affairs Department.

Many Medical Officers of Health are doing their best to treat infected Native women in the locations, and will, no doubt, later, also treat the women on the outlying farms who are frequently responsible for harbouring infection. By arrangement with the M.O.Hs. it might be possible for health assistants to be sent out to the mines to investigate the sources of freshly-infected Natives. At present there is little effective co-operation between the various medical organisations that treat syphilis. The treatment in this country is carried out by District Surgeons,

M.O.Hs., mines, mission-stations and hospitals, but a Native passing from one treatment-centre to another is not given a card to give information about how much treatment he has received or the result of his Wassermann Test.

The result of this lack of system is that if an infected Native leaves one locality for another, desiring to continue treatment, another W.R. has to be taken at the centre to which he goes. This wastes the time of the medical officer taking the Wassermann, the pathologist, and the patient. Even after the result of the Wassermann has been obtained, the medical man treating him has only the hazy idea that the patient can give him of how much treatment has already been given. I have sometimes given boys notes to District Surgeons nearest their homes, with details about their Wassermanns and so on, but I have done this only in cases in which the idea has occurred to me to do so, and there must be hundreds of boys that have been treated earlier on in their contracts and have gone home without a note. This experience must be common to most mine medical officers.

If it became an established routine for every syphilitic Native to be given a card, then cases would not be missed out, and every Native who wanted to continue treatment could do so from where he left off.

On the mines, we can make antisyphilitic treatment more or less compulsory, but in the municipalities and rural areas this is impracticable. It would, however, be a great help to M.O.Hs. and District Surgeons if some system were established in which they became informed of any syphilitic Natives entering their areas. This could be attained in the case of Natives leaving the mines by co-operation with the Native Affairs Department. Infected boys leaving the mines could have their passes marked in a way that I shall describe presently.

At present, boys who leave the mines for home need only retain their passes until they get home, whereas those who leave a mine and subsequently obtain work on another mine are sometimes issued with new passes. In either case a boy does not generally retain his pass for very long after his discharge from a mine, so that the mere noting on a boy's pass of information about his W.R. or other particulars would not by itself be a guide for further treatment.

The method I suggest is as follows:

Every Native who has V.D., whether syphilis, gonorrhoea, or chancroid, and requires further treatment, should be issued with a treatment card giving all necessary information about him. Whenever the Native was given an injection, this would be "chalked up" on his card. It would be impressed upon him that he was being given the card for his own good to enable him to get further treatment for his condition which was not yet cured. He would be told that he must on no account lose his card, as otherwise he would give his next doctor a great deal of trouble which would delay his treatment. For Natives who intended going home at the ends of their contracts the card would be placed in an envelope addressed to the district surgeon of his district, and given to the boy. Whether he actually got further treatment after that would depend largely upon himself. But, in addition to this, every boy suffering from V.D. would have his pass marked with some symbol distinguishable only by pass officers, compound managers and other necessary officials. Different symbols would be used depending on whether he was suffering from syphilis, gonorrhoea or chancroid. If the boy went home, he would probably lose his pass and the symbol would never serve any useful purpose; but if he went to a pass office in search of further employment, either on another mine or in some municipality, the symbol on his pass would be copied on to his new pass. It would inform the doctor who examined him at the pass office that he had a venereal disease, and he would request to see his card, if the boy was going to work in that municipality, so that arrangements could be made for him to attend for treatment. If the boy went to another mine, the compound manager would see the symbol on the new pass and inform the mine medical officer that the boy in question had a venereal disease. The M.M.O. or superintendent would then ask the boy to show his treatment card which would give full particulars.

Such treatment cards as I have described should be issued to all Natives suffering from V.D. in every part of South Africa. They should be issued to both males and females, and mothers should be given cards for their children. This system, provided clinics were available in every part of South Africa, would enable every detected V.D. case to obtain treatment if the patient desired it. If the patient refused to do anything more about it, as doubtless many would, then the Native would at any rate have been given a fair chance.

In all centres where V.D. was treated, and where cards were issued, there should be Native attendants to explain all that was necessary about V.D. to the Native patients, and to emphasise the value of the treatment cards. Once the Native people grasped the idea of the treatment card system they would be willing to pro-

duce them when asked for them and would take care not to lose them.

If the system I have outlined were adopted, many of the difficulties mentioned at our last meeting[1] about treating syphilis more intensively would vanish. The fact that it would not be possible to achieve cures in the short periods of time that many Natives spend working on the mines would not matter, as the treatment would be continued if the patients desired it after they got home, or wherever they went. Later on, when V.D. clinics have been established more generally throughout the country, it will probably be necessary for the Native Commissioners to be informed by the Native Affairs Department about boys who have gone home still suffering from syphilis, so that they can be traced through their chiefs, and brought up to a treatment centre. It is no use attempting to do that until treatment centres have been established within reasonable reach of most Natives.

It may be argued, as it was by Dr. Orenstein at our last meeting[1] on syphilis, that if Natives were given cards for follow-up treatment, they would not trouble to attend for such treatment. I do not believe that this is so. In the annual report of the Department of Public Health[18] there is a statement which suggests that many Natives, if given cards, would attend for treatment. The report states:

"The actual numerical increase recorded in attendances is but one aspect of the increasing efficiency of the clinic system. Another is given in the account submitted by medical officers and district surgeons from several representative areas that the erstwhile antipathy of the Native is disappearing. Where previously there existed a deep-rooted suspicion and distrust of European medical methods, there is now appearing a desire for scientific treatment." The report goes on to comment that a larger proportion of cases are submitting willingly to the complete course of treatment.

The propaganda methods suggested by Dr. Peall[20] at our last meeting for imparting health knowledge to mine Natives will, when they come into force, aid considerably in enlightening boys about the value of V.D. treatment, and the propaganda work that is being initiated by the Transvaal branch of the S.A. Red Cross will also be of great value.

The important question was raised by Dr. Orenstein at our last meeting on syphilis[1] of whether the gold mining industry would get value for money if it treated syphilis more intensively. I have proved to you by quotations from various authorities that syphilis reduces an individual's capacity to perform a full day's work, that in negroes it is particularly prone to attack the cardio-vascular system, that it has a decidedly unfavourable effect on the course of pulmonary tuberculosis, and that unless it is properly treated it is often handed on to the next generation. We know also that it produces unfavourable effects on the healing of traumatic wounds, fractures and eye injuries; and I have pointed out that it probably accentuates the severity of many other diseases. Though I have no doubt whatever that if we treated syphilis properly we should be repaid many times over, I cannot prove it. A thing like this cannot be proved until the experiment has been made. What we must do, I feel, is to persuade the Government to do its share in reducing the incidence of the disease, start a treatment card system, and treat the disease more effectively ourselves.

I, therefore, move the following resolutions:

Resolutions.

1. That this Association views with grave concern the extreme prevalence of syphilis among Natives. It is of the opinion that the disease is a serious menace to the health of Native labourers, and that, if adequate treatment is not instituted, it will become a still greater menace. It, therefore, resolves to inform the Chamber of Mines of its opinion and to ask the Chamber of Mines to impress upon the Government the need for immediate effective steps for the reduction of the incidence of the disease.

2. It resolves to institute a treatment-card system on the mines which will serve as a guide to treatment for Natives passing from one mine to another and for those who are going home and will return to the mines later.

3. In view of the enormous loss to the industry from the effects of venereal diseases, which are contracted outside the mines, this Association resolves to ask the Chamber of Mines to arrange for free antisyphilitic remedies to be provided by the Government.

4. It is agreed, after obtaining the consent of the Chamber of Mines, to appoint a small sub-committee to discuss with the appropriate Government officials the question of marking the passes of Natives suffering from venereal disease with certain symbols.

(See amended resolutions as passed at November meeting, page 134.)

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19. Anti-venereal Measures in Scandinavia, *B.M.J.*, 11th June, 1938.
20. *Proceedings of Transvaal Mine Medical Officers' Association*, Sept., 1938.

Dr. Goldsmith said: I was President of this Association in February, 1937, when a meeting was held on Preventative Medicine and Hygiene. Dr. Humphries then read a short paper on the advisability of more extensive treatment of syphilis in mine Natives—also when the discussion on this subject was continued at the meeting in the following month. But after a good deal of talk it was agreed that the matter be further discussed at some future meeting of this Society. It was shelved *sine die*, in fact. It is fitting, therefore, that I should re-open this discussion again.

I must say at first, Mr. President, that I consider we are fortunate in having in our Association a member who is not content to let such an important subject as the mass treatment of syphilis rest *sine die*, and who rightly persists in drawing our attention to the ravages of this disease, and believes that our Association can do more than it has done in the past in the way of treatment and prevention.

There can be no question that we all agree with Dr. Humphries that syphilis is rampant throughout South Africa, and that it undermines the health of the Natives in very many ways, and also affects the future population throughout the whole country. The more we study the figures we have at our disposal the more we realise the colossal extent of the disease, and that a national campaign, properly organised by the Government, is needed to fight it. The more this disease is looked for the more it is found. Let me give you an example of this: The figures we have just received of the morbidity and mortality of diseases in the Gold Mines and Collieries for August show that on the gold mines there were 205 patients with the final diagnosis of syphilis among some 320,000 boys, whereas on the collieries for the same month there were 3 such patients amongst 17,345 boys. If the proportions of syphilis in the collieries had been the same as on the gold mines there should have been 18 cases of syphilis diagnosed instead of 3. I think we can say that the gold mine Natives, on the whole, are of better physique than the colliery Native, and it is because we are able to give more supervision to the health of the mine Native and have easier means of getting our Wassermanns done that we discover more syphilis than on the coal mines. 1,043 Wassermanns were sent in the past 3½ years from two hospitals of the Union Corporation and 401 were positive—or 37 per cent.

Dr. Humphries has brought up so many and important aspects of a campaign against syphilis that I must confine my remarks to one only of the resolutions he has moved.

The question of marking passes of infected Natives with some symbol to show they have a venereal disease can only be discussed when we have a good knowledge of Native pass regulations and passes. In order to make what I have to say clear, I have brought with me three passes and a tax receipt.

Every Native who comes into the Transvaal or O.F.S. to a proclaimed area for the purpose of seeking work must be provided with a travelling pass or permit to seek work. In Cape Colony and Natal passes are not required, a

Native carries his tax receipt, but a boy leaving Natal must have a pass, and women are not required to have passes anywhere.

Tax Receipt.

When a Native leaves home he goes to the magistrate's office in his district to get a travelling pass or permit to seek work. To obtain this he shows his tax receipt. Here is a Native tax receipt and document of identification. On this is his tax identity number; this number sticks to a Native for life. It is divided up into three by two strokes, and here it is, 176/2/146. If it is lost the Native, by giving his chief's name and his father's name to the pass officer in the magistrate's office of the area, can always be traced and the same number is given to him again. He is then given a Travelling Pass or permit to seek work.

Travelling Pass.

This Travelling Pass I have here comes from the office of a magistrate in the Transkei. It is for the purpose of seeking work on the mines within 300 days, but it also has the Native's tax registration number, district and area. The holder of this pass got work on the mines within 30 days. He was sent to a pass office, where he obtained (or the mine obtained for him) his ordinary pass or service contract, as it should be called. Here is one, and on this is copied from his travelling pass the same numbers of the area, district and his identity number. This contract is made out in triplicate —(1) employer, (2) Native, (3) filed.

Private Boy's Pass.

The pass or service contract for boys working for private people is printed in red instead of black, but it also has the tax identity number, etc., as on the "black" service contract.

If a Native loses his pass in a proclaimed area he is detained for six days until his tax identity numbers are obtained from the district he comes from before he is given a permit to seek work or a service contract. Every Native thus has always on his pass or tax receipt a number by which he can be traced, and which is put on his permit to seek work pass before he can move to obtain work. We have, therefore, at hand all the machinery necessary to identify the Natives we want. What would be easier than to put a symbol at the end of tax identity number to show that a Native is suffering from a venereal disease —a different symbol for different venereal diseases.

But I regret to say there seems to be great difficulties against putting symbols denoting disease on boys' passes or tax receipts. To alter a pass so that it shows a reflection on a boy's character is not allowed. I found that some of the compound managers on the East Rand a few years ago had the service contracts of bad or suspicious characters written out in red ink. This practice was soon stopped by Native Affairs as being unauthorised—as casting a reflection on a Native's character.

I had an interview with a leading official of the Native Affairs Department, and asked his opinion on the possibility of marking passes and tax receipts with a symbol (secret symbol only known to the medical profession) to show a boy had V.D. He very kindly went into the whole question with me, he said it could not be allowed under the present regulations governing passes, and before any pass could be marked with symbols showing a Native had V.D. a new Government regulation would have to be passed and proclaimed. It would not be long before Natives found out what the symbols meant, and that would prevent their employment in many cases.

New regulations must be passed before symbols could be used—this is a great pity, as the Government have right at their hand the simplest way possible of showing that any Native has V.D.

Also under Section 10, Proc. 150/1934—(Passes) Tvl. and O.F.S.—No pass shall be issued to any Native apparently suffering from an infectious disease except for the purpose of enabling him to obtain medical attention or to proceed to a hospital or other institution for medical treatment.

However, I should like to show that it was not so unreasonable as it seems because we have a precedent to go on, and it is this, that Natives who have been in gaol are given a special number on their passes and a description of their finger prints is also given.

If the Government does this so as to be able to control and trace a Native who has been in gaol, would it not be possible under altered regulations to allow other figures or symbols indicating V.Ds. to be put on passes?

Dr. Goldsmith then read from the Native (Urban Areas) Act for Proclaimed Areas No. 203 of 1924—as amended—chapter II. "Regulations for Medical Examination," Section 19 to 24, which give unlimited powers to the registering officer to cause any Native to be examined by the medical officer when entering, employed, or residing in a proclaimed area, but unfortunately these powers were rarely exercised, which was a very great pity.

Dr. Williams said: I desire to congratulate Dr. Humphries on a most thoughtful and thought-provoking piece of work, which is remarkable, not only for the convincing mass of facts and figures, but also for the wide and visionary outlook on a problem which is of immense importance to the country as well as to the industry. As Mine Medical Officers with a great number of Natives under our care, our considered opinion ought to carry some weight, and our figures on the incidence of syphilis amongst mine Native labourers may lend force to the urgency of our plea for something to be done. The spectres of Tuberculosis, Syphilis and Malnutrition that are ever with the Native people cannot be abjured by ignoring them, nor can we afford to speculate as to whether there will be any material gain for us if we set out to urge an immediate attack. But the drive against syphilis will be a National one. Those of you who heard, or read, Dr. Peall's paper on the projected activity of the National Council of Social Hygiene will know that the Government intends to move in the matter. Our resolutions, which I think it is our patent duty to send, in some shape or form, to the Chamber, will serve to stress the necessity for immediate action and indicate our willingness to serve in any capacity the Government thinks fit.

I would like to quote my own figures on syphilis for I feel that this is the best way of supporting Dr. Humphries' contentions. During the last two years, we have had an average complement of 1,000 Tropical Natives. All cases coming to hospital for any cause whatsoever have had their bloods taken for examination for relapsing fever and for the Wassermann test. Of 901 cases, not apparent syphilis, 37, *i.e.*, 12·3 per cent. were positive; of the 37 cases, 31 were ++, 4 were+, and 2 were+−. Tribal incidence, 21 T.N.R. and 16 B.N.P.

Excluding the cases above, from September, 1937, to September, 1938, 183 obvious venereal cases were treated. Of these, 105 were syphilis in either the primary or secondary stages, with strong ++ Wassermann reactions, 18 were mixed infections (syphilis and gonorrhoea) and 60 were gonorrhoea, chiefly in the acute stages or with gonococcal epididymitis.

In addition to both groups above, 248 bloods were taken in cases other than apparent syphilis. *e.g.*, delayed healing of wounds, routinely in fracture cases, unresolved pneumonias, eye cases, etc., of these, 57 were positive, *i.e.*, a percentage of 23 per cent. of which 43 were ++, 9 were + and 5 +−. Tribal distribution does not help much except to show that Basutos and C.C. boys provided most of our cases and to show that all nations either have or do contract the disease with equal facility. Taking 84 random cases with ++ Wassermanns, 30 per cent. were C.C. Natives, 29 per cent. Basutos, 14 per cent. Zulus, 13 per cent. Transvaal Basutos, 11 per cent. E.C's. and 3 per cent Swazis.

Grouping all sets of figures together, 672 cases were tested for syphilis by the Wassermann test and 217 were positive, a percentage of 32 per cent. These figures are somewhat terrifying. It is difficult to estimate what percentage of the Native people have been or were infected, but other speakers will doubtless have statistics, and a common estimate may be arrived at. But the position is appalling.

Like Dr. Humphries, I think that such suggestions that the Wassermann test is unreliable and that there is probably a disease midway between yaws and syphilis, are too well known to be more than a quibble. Such facts in no way influence the problem in the light of present knowledge of syphilis. But the problem is the "follow up" of cases. I must admit that I thought that the marking of passports with symbols, or the issue of health passes might be practicable, but listening to Dr. Goldsmith's exposition of passport regulations I am prepared to believe that little or nothing can be done along those lines. I would like to suggest that Dr. Humphries abandons his resolution on the necessity of marking passports, merely indicating to the Chamber our view of the gravity of the position and our willingness to serve on any sub-committee of the National Council of Social Hygiene, whose duty it will be to evolve the plan of attack.

Dr. Dreosti said he first wished to congratulate Dr. Humphries on his excellent paper and the extremely valuable data collected. The criticisms he wished to make did not concern the paper but the resolutions put before them.

He objected to the phrase "that this Association views with grave concern the prevalence of syphilis amongst Natives." As far as he could gather from the data presented approximately 14 per cent. of mine Natives show a positive Wassermann reaction and this must include a fair percentage of positive reactions due to yaws and not syphilis.

At a recent meeting of the Medical Association a speaker estimated that 40 per cent. of our European male population is infected with venereal disease, and of this at least 11 per cent. is due to syphilis. The problem of venereal disease was, therefore, not one of mine Natives to be solved by mine medical officers, but a national problem.

It seemed that the only possible solution was the education of both Europeans and Natives to the dangers and infectivity of the disease, in the hope that sufferers would come forward voluntarily, particularly during the infective stage, for medical treatment or isolation where necessary. Failing this, the only alternative appeared to be compulsory notification as done at present for other infectious diseases; early treatment or isolation under the supervision of the Public Health Department or Local Authorities.

He failed to see the object of the fourth resolution which proposed marking the passes with symbols and so labelling Natives who have a positive Wassermann reaction. Apart from the many obvious objections, the following appears to be another possible objection.

Knowing that the working capacity is considerably reduced, would we engage these "labelled" Natives? Is it not natural that we would demand that these Natives be cured before engagement? This appeared to him to be grossly unfair to the Native and, further, if such a procedure of labelling persons was considered desirable, why confine it to the Native employees only?

In conclusion, he felt that mine medical officers could not hope to reduce the incidence of venereal disease in mine Natives as long as foci of infection were allowed to exist outside the compounds and in the Native territories.

Dr. F. C. S. Hinsbeeck (Medical Officer of Health, Roodepoort-Maraisburg) said that he could assure the meeting that all Medical Officers of Health were very keenly interested in syphilis, and that their poor attendance could only be ascribed to unavoidable circumstances. Certain Medical Officers of Health had been asked to draw up a memorandum (Dr. Gale, who was present, being one of the doctors concerned), and he expressed the hope that they would be afforded the opportunity of expressing their views on this subject at the meeting of the T.M.M.O.A. to be held in November. Dr. Humphries' paper was an admirable one, and he was not able to controvert any of the statements made therein. There was no doubt that the efficacy of the card system, which the Medical Officer of Health, Pretoria, had put forward some time ago, should be given a fair trial. This was not really an innovation, as seamen suffering from syphilis are supplied with a treatment card so that the treatment could be followed up at other ports of call.

The Native, according to his experience, was only too anxious to have anti-syphilis treatment, and he felt sure that they would soon learn to appreciate the value of the card system. They certainly had great faith in salvarsan treatment, which they consider acts like magic.

Dr. L. R. Saayman (Asst. M.O.H., Germiston) said he had collected a few figures in the limited time at his disposal from their curative centre at Germiston.

Since March, 1938, blood samples for the Wassermann Test were taken from 1,050 cases of men, women, children and babies. These samples were taken at random and not from selected cases in the Germiston Location. The whole group showed 44·4 per cent. as positive Wassermann. To get a better idea, he had taken the blood of every expectant mother at the Ante-natal Clinic and they gave a positive Wassermann reaction in 40·5 per cent. Actually 227 blood samples had been taken. They had a duplicate card system; one card being given to the patient and one being retained for record purposes.

The follow-up system had also been introduced. Qualified female Native nurses or male orderlies were instructed to explain to the sufferer and his relations, the dangers of neglecting treatment and of infecting others. Thus if the wife had syphilis, the nurse could usually persuade the husband to come along for examination and, if necessary, for treatment.

Dr. Peall said it was agreed amongst Mine Medical Officers that the question of venereal disease amongst mine Natives was one of National importance.

He thanked Dr. Humphries for again bringing the matter up and congratulated him on the excellent manner in which he had set forth the various aspects of the subject in his paper.

As members had been requested to quote statistics from the various mine Native hospitals he gave the following figures from Randfontein. Since February, 1937, 2,500 bloods had been examined for the Wassermann reaction with these results:—

499=20%, gave a ++ strongly positive reaction.

70=2·8%, gave a + reaction.

93=3·7%, gave a ± doubtful reaction.

These figures were very comparable to the figures already quoted by other members present.

During the last three months, in connection with an experiment being carried out in treat-

ing pneumonia cases with M & B 693, the bloods of all pneumonia cases had been examined for the Wassermann Reaction. This series of cases again showed 20 per cent. with a ++ strongly positive Wassermanns, but he was struck with the fact that although the blood gave a ++ reaction the progress of the disease was not always seriously interfered with and, therefore, was forced to draw the conclusion that a ++ reaction did not always have the same significance.

He was pleased to hear Dr. Dreosti raise the question of venereal disease amongst Europeans.

He had always taken exception to the suggestion frequently made that venereal disease amongst Europeans was the result of infection from Natives. He did not say that infection from Native to European did not occasionally occur, but this was not the usual method in which infection was disseminated amongst Europeans.

With regard to the resolutions—the fourth one was rather drastic. The subject was admittedly a very important one, but there was no necessity for the public to be stampeded. Many Europeans had Natives working in the house or garden who had no active disease but gave a ++ strongly positive blood. If this was indicated on a boy's pass he would most certainly be refused employment. One could not force upon the Natives conditions of supervision which Europeans would be unprepared to accept for themselves.

The Medical Officer of Health, the Mine Medical Officer and the Public Health Department should agree upon some method of keeping in touch with patients—both European and Native—requiring treatment.

He felt that the eradication of venereal disease would be greatly assisted by the education of both Europeans and Natives in these matters.

Dr. Orenstein stated that the Government required no stimulus for the recognition of the importance of syphilis, but while recognising its importance the Government is also faced with many difficulties in the way of carrying through a campaign. Some of these difficulties are dealt with in a pamphlet recently issued by Dr. Gale, and he hoped that copies of this pamphlet would be made available to members of the Association.

The legal position requires no alteration. The provisions of the Public Health Act impose compulsion on those who refuse treatment, but no experienced Public Health Official would advocate compulsion as a general measure.

He did not think that cards would serve any useful purpose, except in urban areas. Natives from the territories, even if willing to make use of the cards and intelligent enough to know what to do about it, would find it impossible, in the vast majority of cases, to obtain treatment. It was no earthly use to urge introduction of a measure which one knew *a priori* to be unworkable. Both the Chamber and the Government were unquestionably aware that syphilis plays a serious rôle in public health, but exaggeration of the case should be avoided.

Dr. Orenstein could not see how any sub-committee which the Association might appoint could make any useful suggestions as to how the problem should be tackled in a practical manner. The Association should content itself by presenting to the Government the true state of affairs and pointing out the need for attacking the problem, without making any suggestions as to how it should be done.

In his opinion, therefore, all the resolutions, except the first one, should fall away.

Dr. Orenstein was definitely opposed to the marking of passes indicating that the bearer suffers from syphilis, even though it might be possible to obtain legal sanction for this, which he seriously doubted. He was opposed to such a measure not only on principle, as applying to one section of the population only, but also on administrative and public health grounds. The whole success of the treatment of venereal diseases lies in obtaining the confidence of the patient and careful respect for the confidential information which the doctor possesses. Destroy this safeguard and the problem of treatment becomes infinitely more difficult.

Dr. J. Daneel (Medical Superintendent, Rietfontein Hospital), in thanking Dr. Humphries for his very informative paper, said it was an excellent thing for the subject to be brought to the notice of Mine Medical Officers.

As students, we had been taught to classify syphilis as primary, secondary and tertiary, but from the public health point of view they regard syphilis as infective and non-infective. Also that the primary and secondary stages are very infective, but not the tertiary stage.

Active treatment in the infective period would, to a large extent, prevent the spread of the disease, and treatment in the non-infective stages is mainly instituted as a therapeutic measure for the patient's own benefit.

They knew that complications occur from treatment of syphilis, and also realised the

enormous ramifications of the disease in the hospitals and asylums. It was a very grave problem.

It had been also quoted by Dr. Humphries that 40 per cent. of citizens, including an appreciable percentage of negroes in the U.S.A. were unable to do a good day's work. The more he saw of syphilis, the more he realized that a man could not do a full day's work in the tertiary stage, such a man being prematurely aged.

The interpretation of the Wassermann reaction needs a considerable amount of care. He maintained that there was only one thing possible which gave a repeated strongly positive reaction of the blood (W.R. ++), and that was syphilis. In leprosy, small pox, malaria and other febrile diseases, a temporary positive reaction (W.R. +) may sometimes be obtained, but never a persistently strongly positive (W.R. ++) reaction.

It is known that in tertiary stages, Wassermann reaction might be ++, +, ± or negative, It was also known that there was a laboratory error.

In his work, before saying any person is suffering from syphilis, he must get three consecutive strongly positive Wassermann reactions; taken at reasonable intervals. If the blood shows any of the other reactions and there still remains a suspicion of the existence of syphilis, a series of provocative injections should be instituted before the blood is examined again.

In the treatment of syphilis, it was extraordinary the lack of confidence and knowledge on the part of the medical man as to the efficient course to follow. He had always maintained that if any patient is accepted for the treatment of syphilis, the practitioner's conscience must ultimately be satisfied that the treatment has been thorough, good and sufficient. From our present knowledge we know that we do not treat symptoms, nor the Wassermann reaction, but the disease itself. The latter must be regarded as a guide.

As far as the Native is concerned, when he sees his sores and lesions disappear he is satisfied that he is cured, and one has to tell him that his blood is not clean. If one puts medicine right into his blood, he will always come and ask for more injections. He had felt very strongly on this point—when Natives are sent to his hospital, he felt very guilty when they had to be kept there only for a short time and just to render them non-contagious. Such Natives will marry, infect their children and fill the hospitals and asylums in later years.

More easily available clinics should be established, and every Native presenting himself for treatment should be issued with a card indicating the disease, the amount of treatment, and the date of last treatment. On presentation of the card at any clinic he could obtain his appropriate treatment. One felt very strongly that there was no follow-up treatment at all at present.

One had also to take into consideration that, as a whole, there is no reason why anyone under treatment should not continue with his work.

The modern treatment is severe, and not all constitutions can stand it. There is a temporary loss of efficiency during the treatment.

Syphilis has a far greater incidence in urban than in rural areas, the detribalized Natives being exposed to far more temptation and risk of contracting disease. In Pretoria, out of 1,000 bloods, 32 per cent. were found to be strongly positive. The incidence of urban Natives is round about 40 per cent., and rural 10 per cent. to 15 per cent.

He was grateful for the opportunity which had been afforded him of hearing the various impressions at this meeting.

The Chairman, in adding his congratulations to those of the other speakers who had joined in the debate, said that Dr. Humphries' paper had evoked more than the usual amount of discussion. The subject was one which affected M.M.O's. tremendously in view of the great damage which syphilis was responsible for, or, to put it bluntly, the number of shifts lost to the Mining Industry directly and indirectly.

Members had had an opportunity of ventilating their ideas, and had to pass or reject the resolutions which had been submitted. He moved that the resolutions be held over until the November meeting.

Dr. Orenstein seconded, and also congratulated Dr. Humphries on his paper. It gave him great pleasure to note that a M.M.O. had taken up the subject from the wide point of view of the Natives of the country, and not merely the antheap of mine labour.

The meeting terminated at 5 p.m.

The **November** General Meeting was held in the Chamber of Mines Building, Johannesburg, on Thursday, 17th November, 1938, at 3 p.m., Dr. L. E. Miller (President) in the chair.

There were present 21 members, 4 visitors and the Secretary.

The Minutes of Meetings held 18th August and 15th September (1938) were taken as read and confirmed.

The **Chairman** welcomed the Medical Officers of Health present who had attended the meeting by invitation, and hoped they would again join in the discussions.

He called on **Dr. S. V. Humphries** to reply to the discussion at the October meeting on his paper "**Syphilis—A major cause of ill-health in Native labourers, and suggestions for mass treatment.**"

Dr. Humphries read the following resolutions, amended in the light of the previous and present discussions (and carried at the conclusion of the present meeting):—

AMENDED RESOLUTIONS.

1. That this Association views with grave concern the extreme prevalence of syphilis among Natives. It is of the opinion that the disease is a serious menace to the health of Native labourers, and that, if adequate treatment is not instituted, it will become a still *greater* menace. *It therefore resolves to inform* the Chamber of Mines of its opinion and to ask the Chamber to impress upon the Government the need for immediate effective steps for the reduction of the incidence of the disease.

2. That this Association strongly endorses the recommendation made by the Society of Medical Officers of Health, and passed by the Federal Council of the South African Medical Association, which reads as follows:—

> **"The Society recommends to the Secretary for Public Health that a suitable travelling card be drawn up for the use of V.D. patients."**

3. *In view of the enormous loss to* the country as a whole from the effects of venereal diseases, this Assosciation resolves to ask the Chamber of Mines to consider the question of arranging for the Government to supply free anti-syphilitic remedies for use on the mines.

Dr. Humphries said:

It gives me great pleasure to reopen the discussion on Bantu syphilis which was started last month. As there are several Medical Officers of Health present who have come here especially to give us the benefit of their experience on a subject with so wide a public health aspect, I shall confine my remarks to clarifying certain points and emphasising others that have a bearing on the amended resolutions you have before you.

As you will observe, I have amended resolutions 2 and 3, and have cut out my original resolution 4, in which it was proposed to mark the passes of natives with symbols. There were several objections to this idea, but the one mentioned by Drs. Peall and Dreosti, viz., that the marking of passes would be a cause of natives being refused employment has convinced me that the resolution should be withdrawn.

Resolution 2 has been altered to make it compatible with the recommendation of the Society of Medical Officers of Health, and I hope one of their members will explain the travelling-card system proposed.

Resolution 3 has been altered slightly from: "This Association resolves to ask the Chamber of Mines to arrange for free anti-syphilitic remedies to be provided by the Government" to "This Association resolves to ask the Chamber of Mines to consider the question of arranging for the Government to supply free anti-syphilitic remedies for use on the mines." The amended resolution leaves it to the Chamber of Mines to decide the most expedient course to adopt.

Now for a few points requiring clarification. First there is the question of whether the Government is aware of the urgent need for effective steps for the reduction of the incidence of syphilis. It was agreed, I think unanimously, at the last meeting that syphilis is causing a profound degree of disability among natives, and that something ought to be done about it. Dr. Orenstein has told us that the Government requires no stimulus for the recognition of the importance of syphilis. But I should like to remind members that while Dr. Orenstein's opinion is a very valuable one in this, as in all subjects related to public health, we must not lose sight of the fact that he was only expressing an opinion—not stating a fact. If you agree with Dr. Orenstein that the Government is doing all that it can possibly do for Bantu syphilis, then you will, of course, throw out my first resolution. But if, on the other hand, you agree with me that the Government could do a great deal more for syphilis than it is doing at present, you will, I hope, support my resolution.

When Dr. Orenstein says that "the Government" requires no stimulus, "who does he mean by "the Government?" I think he

really means Dr. Cluver. We all know that Dr. Cluver is one of the most enlightened men in South Africa on the subject. But I wonder what the Cabinet Ministers say when Dr. Cluver tells them that syphilis must be more intensively treated. I imagine they shrug their shoulders and say, "The problem is immense. It would cost a great deal to do as you suggest."

If you pass my first resolution, it will mean that the Chamber of Mines, the most progressive and influential private organisation in South Africa will impress upon the Government the need for immediate effective steps for the elimination of syphilis.

Secondly, there is a point about treatment cards that requires clarification. Dr. Orenstein says that treatment-cards would serve no useful purpose, as Natives in the territories, even if willing to make use of their cards, would find it impossible to obtain treatment there.

The point I want to emphasise is that clinics *must* be established in the native territories. If the Government do not introduce such clinics they are neglecting their duties towards the native community. The native pays his £1 poll-tax apart from the numerous other taxes that he pays directly or indirectly, and he is entitled to value for his money.

I was very glad to hear Dr. Dancel express the opinion that every native presenting himself for treatment should be issued with a card indicating the disease, the amount of treatment and the date of the last treatment. The type of card I had in mind when I first moved the resolution on treatment-cards was a card similar to that issued under the International Agreement of 1924 for the use of seamen, but modified to suit local conditions.

This card, two specimens of which I shall pass round, has the names of the treatment-centres on the front page, together with the identification number of the patient at each treatment-centre, and the diagnosis and stage of the disease. On pages 2, 3 and 4 are notes for the guidance of the medical officer, printed in English and French. Page 5 is for recording the results of laboratory examinations. Pages 6 to 19 are for recording the treatment administered, with any observations; and page 20 (the back page) has on it instructions to the seamen, printed in six different languages. This card could be greatly simplified and modified for the use of natives.

Lastly, there is a point about the third resolution that I want to make clear. The Government do not at present supply free antisyphilitic remedies for use on the mines. Though by law the mines are entitled to receive free antisyphilitic remedies, there is in existence at present between the Union Department of Public Health and the Chamber of Mines a private agreement, whereby all cases of syphilis occurring in native labourers 30 days after engagement are treated at the expense of the mines. I have a letter here from an official of the Public Health Department defining the position.

Recommendations (1) and (3) were duly seconded by Dr. Daubenton, and (2) by Dr. Peall.

Dr. G. W. Gale (Assit. M.O.H., Benoni) expressed the very keen appreciation of the Medical Officers of Health generally for the invitation to be present, and said that in reading the following paper he was deputising for Dr. Anning (M.O.H., Benoni), who had expressed his sincere regret at his unavoidable absence:

THE TREATMENT AND PREVENTION OF VENEREAL DISEASES IN REEF TOWNS AND IN PRETORIA.

Information collected by the Witwatersrand and Pretoria Public Health Consultative Committee.

The intention of this enquiry is to survey the facilities existing in Reef towns and in Pretoria for the prevention of the spread of the venereal diseases in these towns and for the treatment of persons suffering with these diseases.

The 12 towns under consideration are Randfontein, Krugersdorp, Roodepoort-Maraisburg, Johannesburg, Pretoria, Germiston, Boksburg, Benoni, Brakpan, Springs, Nigel and Heidelberg.

The total population resident within these Municipal areas is approximately 1,174,320, including 500,740 Europeans, 326,700 mining Natives, 299,000 non-mining Natives, and 47,800 Coloureds and Indians. Approximately one-half of this population is resident within the Johannesburg Municipal area as follows: 271,800 Europeans, 59,000 mining Natives, 144,700 non-mining Natives, 33,300 Coloureds and Indians, giving a total for Johannesburg of 508,800.

Financial Expenditure on Venereal Disease Work.

No returns have been obtained from Krugersdorp, Germiston, Heidelberg and Roodepoort-Maraisburg regarding expenditure. The

estimated expenditure of the other eight towns for 1938-1939 is £22,019 (Johannesburg £13,872), estimated refunds from Union Government £9,542 (Johannesburg £4,350), leaving a net cost to the eight Municipalities of £12,477 (Johannesburg £9,522). The main item of expenditure is in connection with hospital fees, especially preponderant for those Municipalities whose clinic services have not been fully developed as yet.

Out-patient Venereal Disease Facilities provided by Municipalities.

The 12 towns may be divided into three groups, according to their arrangements now in force —

1. Municipalities which provide full clinic services for Europeans and for non-Europeans of both sexes, *i.e.*, 9 Municipalities.
2. Municipalities which provide full clinic services for Europeans only and largely depend on Rietfontein Hospital for the treatment of non-Europeans, *i.e.*, the Municipality of Johannesburg.
3. Municipalities which provide no clinic services but send all discovered cases to Rietfontein, *i.e.*, the Municipalities of Roodepoort-Maraisburg and Heidelberg.

In Johannesburg the Native population is catered for by two Municipal clinics each week for Native females, and by the Princess Alice Nursing Home and the Bridgeman Memorial Hospital for non-Europeans.

At all Municipal clinics in these towns N.A.B. injections are given, and other necessary treatment. All drugs are obtained free from Central Medical Stores, Pretoria.

In most instances, where non-European clinics are provided, these are placed in the locations or at the local General Hospital.

Facilities for the daily treatment of Gonorrhoea are provided for non-Europeans in three towns.

During the months July-September (inclusive) 1938, in five of the towns included in group (1), with a total non-mining Native population of 101,000, there were 1,196 new cases of syphilis from that section of the population. Of these 1,196 cases, 164 were children. Of the 1,032 adults, 368 were males.

Hospital Treatment provided by Municipalities.

In each instance this treatment is given at Rietfontein Hospital. The number of cases admitted to this hospital during 1937-1938 was:

1. Nine Municipalities in Group (1), 71 Europeans, 674 non-mining Natives.

2. One Municipality in Group (2), 171 Europeans, 2,548 non-mining Natives.

3. Two Municipalities in Group (3), one European, 36 non-mining Natives.

Ante-Natal Clinics.

Ante-natal clinics for Europeans and for non-Europeans are provided at Boksburg, Benoni, Pretoria, Springs and Germiston. In each case a routine Wassermann reaction is done, and the percentage of positives in Native females varies from 20 per cent. to 40 per cent. In all these clinics positive cases are at once referred to the Venereal Disease Clinic for treatment.

In Johannesburg only European ante-natal clinics are recorded. Where returns have been made from the European clinics it would appear that about 2·1 per cent. of European cases have to be referred to the Venereal Disease Clinics.

Deaths due to Syphilis.

Deaths during 1937-1938 due to syphilis (Code No. 042), Locomotor Ataxia (302), and G.P.I. (308) in all towns except Germiston and Brakpan (not recorded) totalled:—

Ten European, 118 non-mining Native, 15 mine Native and 14 Coloured and Indian deaths. Total: 152.

The death-rates are as follows: European, 0·02 deaths per 1,000 population non-mining Natives. 0·42 deaths per 1,000 population: mining Natives, 0·06 deaths per 1,000 population; Coloureds and Indians, 0·30 deaths per 1,000 population; all non-Europeans, 0·24 deaths per 1,000 population.

Home-visiting and Follow-up Work.

All Municipalities except Roodepoort, Heidelberg, Brakpan, Krugersdorp and Randfontein report regular follow-up visits to clinic defaulters and contacts. In Johannesburg follow-up work is done by the health inspectors and health visitors when required. In other towns the total of visits paid to Native cases during July-September, 1938, varies from 50 in one town to 766 in another.

Average Duration of Attendance of Individual Cases at Clinics.

Various Municipalities report periods varying from 3 to 12 months.

Reasons for Default in Attendance at Clinic.

Indifference to consequences of neglect of treatment is given as the main reason by six Municipalities, change of domicile to another

area by three, and inconvenience of place or time of clinic by one Municipality.

As the second most frequent reason four Municipalities give change of domicile to another area, two give indifference to consequences of neglect, one gives inconvenience of time or place of clinic, and one gives fear of employer.

Of the other reasons suggested in the questionnaire unpleasant sequelae of injections, vomiting, etc.; preference for herbalists, quacks, chemists, etc.—these do not seem to be of great significance.

Pass Office Medical Examinations.

Only one Municipality undertakes these examinations. During July-September, 1938, in this Municipality 4,248 males were examined; 20 of these (0·5 per cent.) were found to be suffering with venereal disease in a contagious form and were removed to hospital, and 558 others (13·1 per cent.) were referred to the Venereal Disease Clinic for further examination. Only 12 females were examined, of whom five were found to be suffering with venereal disease in a contagious form, and three others were referred to the Venereal Disease Clinic for further examination.

These percentages obviously do not express a true figure of incidence of infection, since the examinations are made on individuals at haphazard intervals, and among males a fair proportion are coming into town from the country for the first time at the time of examination.

Propaganda Work.

Most Municipalities report propaganda work regarding venereal disease during 1937-1938. This has included the distribution of pamphlets, personal education through individual talks at clinics and during home-visiting, public lectures, the display of films, the distribution of clinic cards giving times of clinics to doctors and chemists, display of posters in public lavatories and workshops, the issue of a duplicate card to clinic attenders, advertising in bioscopes and newspapers, personal talks with medical practitioners, etc.

Summary.

1. During the period July-September (inclusive), 1938, in the 9 group (1) Municipalities, 167 European and 1,169 non-European new cases of syphilis presented themselves at Municipal clinics and 151 European and 94 non-European cases of gonorrhoea. In the 1 group (2) Municipality, 70 European and 191 non-European new cases of syphilis and 66 new cases of gonorrhoea arrived at the clinics.

2. During the same period the attendances of syphilitics at clinics run by 8 out of the 9 group (1) Municipalities totalled 2,186 for Europeans and 12,886 for non-Europeans. At the clinics run by the Municipality in group (2) there were 2,220 European and 801 non-European attendances by syphilitics.

3. On a basis of three attendances a month by each individual, there must have been 490 European and 1,521 non-European cases of syphilis attending at the various Municipal clinics during this period.

4. During 1937-1938, 243 European and 3,258 non-mining Native cases of venereal disease were sent to Rietfontein Hospital from the 12 towns.

5. Taking these figures in conjunction with the records given above of follow-up work, propaganda, co-ordination of ante-natal with veneral disease work, etc., it is suggested that evidence has been presented which discounts the comment that "the natives working on the mines are the only ones in whom any serious attempt is being made to institute effective (anti-venereal disease) measures."

Commentary.

Even though evidence is produced that the Reef Municipalities, generally speaking, are taking active steps to combat venereal disease in their areas, it is apparent that much remains to be done. There still remain a few Municipalities where clinic facilities, and especially treatment centres for non-mining Natives, held in easily accessible places at suitable times, have not as yet been provided.

The incidence of deaths due to syphilis, the high proportion of congenital cases seen at the clinics, the relatively small proportion of Native males attending at the clinics as compared with attendances of Native females—these points suggest that many cases are still failing to get proper treatment.

The absence of facilities for the daily treatment of gonorrhoeal infections, except in three towns, is another obvious weakness in the existing services. Gonorrhoea in Natives seems to clear up more quickly than it does in Europeans, and many infected persons go to chemists and quacks for treatment. As a result comparatively few non-European cases come to the clinics at present.

Six points stand out:—

1. That there is need for closer collaboration between Reef towns and between the mines and the Municipalities in providing venereal disease services.

2. That cases of venereal disease which otherwise might be missed are most frequently discovered where in addition to good facilities for venereal disease treatment, one or all of the following services are provided: (a) Polyclinics at which the general sick attend and are seen by the same medical officer who is also attending at the Venereal Disease Clinics; (b) Pass Office medical examinations done by the same Medical Officer who is also attending at the Venereal Disease Clinics; (c) Ante-natal Clinics attended by the same medical officer who is also attending at the Venereal Disease Clinics; (d) follow-up visiting done by trained visitors who obtain the confidence of the people and can therefore do efficient individual education regarding venereal disease.

3. The facilities for treatment plus propaganda are likely to achieve better results among a population a considerable proportion of which is nomadic, even within the individual locations, than any methods of compulsion which can be devised. The effect of the latter would be to arouse strong antagonisms, especially if applied to Natives only, and to drive things underground. There is ample evidence that Natives, as compared with other races, actually show less tendency to concealment and greater readiness to attend regularly for treatment, once the consequences of neglect have been explained to them by people who can speak their language, understand their mental attitudes, and thereby gain their confidence.

4. These treatment travelling cards are essential, and that every case discharged from Rietfontein hospital after treatment should be referred by the hospital authorities to the clinic at the patient's place of residence; but that in referring such cases the hospital should send to the Medical Officer of Health a statement of treatment already given.

5. That, owing to the constant flow of Natives between town and country, it is essential that there should be efficient venereal disease treatment centres in all rural areas, so that treatment of all cases may be continuous. The establishment of such clinics, and the devising of means whereby the activities of urban clinics may be effectively linked with those of rural clinics, is a function of the Union Health Department acting through rural local authorities and magistrates.

6. That as well as providing propaganda to reach the Native people, education is also needed of the employing classes, to disabuse them of the existing ignorant ideas regarding the significance of the venereal diseases, *e.g.*, that it is "dangerous" to employ a servant who is in regular weekly attendance at a venereal Disease Clinic for an old, latent syphilis.

Dr. Peall, referring to travelling passes, said that many Natives leaving the mines were given cards showing the type of work they had done, their rate of wages, and whether they were physically fit. In his experience these Natives frequently bring these cards back in a good, decent condition, and he therefore felt they could be trusted not to lose their travelling treatment cards.

Dr. Meiring inquired the reason for Resolution (3) as, after all, the cost for anti-syphilitic remedies was comparatively small.

Dr. Humphries said this Resolution had been included more for discussion than with the object of pushing it through. Not much money was at present being spent on treating syphilis, but if syphilis were treated to the extent required to get negative Wassermanns, it would involve the industry in greater expense, which should really be a Government liability. He had moved the Resolution as a matter of principle, as syphilis was a national problem and should be dealt with by the Government.

Dr. Goldsmith, referring to Resolution (1) "to ask the Chamber of Mines to impress upon the Government the need for immediate effective steps for the reduction of the incidence of the disease," said that under the Pass Laws for Proclaimed Areas, the Registering Officer had tremendous powers and could cause any Native to be examined by the Medical Officer of Health.

Would it be possible to add to Resolution (1) that the Chamber also should request, in respect of Proclaimed Areas on the Reef, that facilities be provided for all Natives in that area to receive full treatment for V.D.

Some Municipalities did good work, while others were slack, and he therefore moved that the Chamber should draw the Government's attention to the serious menace to health caused by syphilis, and ask the Government and Local Authorities to increase the V.D. clinics with a view to the establishment of uniform treatment along the Reef.

Dr. Gale (Assistant M.O.H., Benoni) said that as far as his knowledge went all Municipalities were endeavouring to establish clinics, but they were handicapped by the lack of medical officers. It was only during the last six months that V.D. clinics had been established in Benoni. In the next 12 to 18 months

there would be centres at which Natives could attend once a week. He did not know whether the Government could do anything to ginger up the Municipalities.

Dr. Hinsbeeck said that, as a Medical Officer of Health, he had much pleasure in seconding the amendment put forward by Dr. Goldsmith. There are municipalities where better work could be done, and a little prompting might stimulate such municipalities to greater activity.

Dr. J. J. du Pre le Roux (M.O.H., Boksburg) said he was one of the first full-time M.O.H's. appointed in a Reef town and had also started pass-office examinations similar to those mentioned by Dr. Gale.

It had to be realised that it was very difficult to organise complete medical services in any area within a year or two, and their full-time M.O.H's. on the Reef were a recent innovation. He thought, in fairness to other towns, that they should be given time and opportunity to establish their services. It might be unwise, and to a certain extent unfortunate, if the Government were asked to force the issue, an issue which was receiving every consideration.

Dr. Gale, referring to Resolution (3), said that any medical practitioner could get free drugs; the mine Natives could not pay, therefore according to a sort of "Gentleman's Agreement," the mining industry paid for them. The mine Natives go to locations and get syphilis, and the local authorities could therefore repudiate responsibility. The local authorities regard the mine Natives as a menace, as they also encourage the illicit brewing of liquor, etc. These problems would not exist were it not for the well-fed full-blooded mine Natives living under conditions of forced celibacy.

A great many Natives carry infection from peri-urban areas, which are outside the Public Health jurisdiction. The question was very complicated, and he suggested that the words "which are contracted outside the mines" in Resolution (3) be omitted.

Dr. Peall, referring to municipal complaints against the mines, said that without the mines the towns would not exist.

Dr. Hinsbeeck said that M.O.H's. were fully aware of the situation, and his object in seconding Resolution (1) was that Municipalities might be impressed with the necessity for improvements.

The Resolutions (see p. 134) were then put to the vote and carried.

Dr. Humphries said Natives did not contract syphilis on mines only and, therefore, it was a national affair and the Government should face the bill. On principle he accepted the amendments suggested. The Government must realise their responsibilities to mine boys as well as others.

It was decided to leave the matter to the Executive for necessary action.

The **Chairman** thanked those who had contributed to the discussions—which he hoped would bear fruit.

APPARATUS FOR ESTIMATING C.O. IN THE BLOOD IN THE CASE OF POISONING.

Dr. Orenstein said he had been asked by the Chamber of Mines to exhibit the apparatus, which was much simpler than the spectroscope examination, and was obtainable from Messrs. Sullivan & Co.

The meeting terminated at 5.5 p.m.

MACHINE FOR WASHING BEANS AND OTHER VEGETABLES.

Through the courtesy of Dr. Goldsmith, a description and diagram of a bean-washing machine designed by Mr. R. Judd, Compound Manager of East Geduld Mine are here reproduced.

The machine consists of a cone of $\frac{1}{8}$in. iron sheeting swung on two uprights. The cone's capacity is approximately 200 lbs. of beans. Compressed air and water are led into the cone (as illustrated) and serve to agitate and wash the beans. Husks, dirt and weevils come to the surface and are led away by an overflow.

Heavier debris such as stone and grit sink to the bottom of the cone and pass through a sieve, which is inserted about 8 inches from the cone's apex. After washing for 5 minutes the tap below the sieve is opened allowing the debris to flow away.

The process is repeated two or three times, depending on the state of the beans. Finally the cone is tilted over and the washed beans fall out on to a large tray.

The machine can also be used for washing any other vegetables.

The cost of the apparatus, made on the mines, is approximately £7.