VI.

THE STORY OF SYPHILIS WITH PROGRAMS FOR CONTROL

and

THE PUBLIC HEALTH ASPECT IN THE CONTROL OF SYPHILIS

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Since the beginning of time, ills have been a mystery to the human race. The people of today are little changed from those of yesterday. The emotions and pains they do not understand still fill them with awe. They turn to the mystical be it patent medicines or diagnosis by radio just as readily as would have their ancestors who prayed to the gods and the bright stars of the heavens. Scientists and students have spent long hours at the task of unraveling the world's mysteries. As the yarn is unravelled, the people are permitted to follow the best plans for advancement. They turn to their students and doctors for guidance just as did their ancestors.

Columbus and Crew Back Safe and Sound! This might be the screaming headlines of the Spanish daily news sheet had there been one in the middle of the fifthteenth century. Those adventurous men did not fall off the "flat" earth. Neither were they destroyed. Instead they travelled through strange water to a new land. Little did that crew know they would leave a lasting ripple on medical history..

Some of the members of the famous crew (1) became very ill. Their symptoms were so severe that they visited barbers for advice. The barbers, struck no doubt by the strange symptoms, thought the men were suffering a strange ill contracted on their long voyage. Soon after this, more barbers and healers began to find similar cases. In some instances the disease resembled small pox, a common human ill in those days. The lesions in most cases were very large. Since little was known about this new illness, it was often indicated by the term, great pox. Some felt that it was probably a new form of leprosy and just as contagious. Bleeding, cupping and applications of various ointments were the usual treatments. It was early suspected that sexual relations aided in its transmission.

For a time the disease gained quite a popularity. Many an idle jest made in the court led to not a little boasting of feminine conquests. A man was judged as a real fellow if he suffered this disease and lived to tell about it. Besides was not this proof of his success in amatory affairs?

People were aware of the spread of the great pox and passed quarantine laws as early as the middle of the fifteenth century. These laws restricted anyone suffering from body lesions of severe nature,

(1) Becker S. William - Ten Million Americans Have It - Page 31.

leprosy, or body discharges, from mingling with others until he was entirely well and had been properly cleansed.

It was not long until other countries began discovering cases of the great pox. The malady developed and spread rapidly as do diseases in virgin soil. Certain factors seem to have aided in this spread. At this time most soldiers fought for the commander who paid the highest wage. Since life for these reckless fellows was none too certain at best, they enjoyed "wine, women and song" to the utmost. Kings saw great possibilities in fighting their wars with disease. Often they sent out infected women to the foreign armies. Many of the men became victims and frequently a whole army would become depleted by this nefarious trick. After the war, the armies broke up and the men returned to their own countries. Many of them were infected.

Medical treatment at best did little to curb the spread of this wild-fire disease. With no diagnostic facilities and great confusion as to its symptoms, the problem grew paramount. Countries were frightened at its rapid spread and blamed one and the other for its origin. Up to this time the disease still remained unnamed. It was indicated by great pox Maladie d'Anglais, grand goree, or some other vague term. Since barbers treated most skin ills, and information was limited, patients were frequently exploited with various ointments

and magic charms.

The naming of the disease is an unusual and intriging story that portrays the art of medicine as it was practiced in the sixteenth century (1) Girolamo Fracastoro, a brilliant student of medicine, was also well versed in the stars. He, like many men of his day, was gifted in the art of writing poetry. Fracastoro was very interested in the new disease. Since it was the custom to write songs about most any subjects, he decided to write his theories and treatments in poetry. His song describes the symptoms with remarkable clearness. He suggested dietary control, the use of the muses as well as the steam bath and guiac bark. He tells us in his really delightful Latin poem about Syphilus -- a herder who dared the wrath of Apollo and was stricken with a strange illness. Some, today are surprised that such a subject is treated in so splendid a verse. If they remember the lack of the present day stigma now attached to the disease and the customary practice of ballad writing in the sixteenth century they can preceive how such a doctor might put his medical study into poetry. The following extracts tell us the story of the herder.

> ....."An ancient king had we, Alcithous,
> Who had a shepherd lad called Syphilus.
> On our prolific meads, a thousand sheep,
> A thousand kine this shepherd had to keep.

(1) Girolamo Fracastoro, THE SINISTER SHEPHERD, translated by Dr. Wm. Van Wyck.

One day, old Sirius with his mighty flame,
During the summer solstice to us came,
Taking away the shade from all our trees,
The freshness from the meadow, coolth from breeze.
His beasts expiring, then did Syphilus
Turn to his horror of a brazen heaven,
Braving the sun's so torrid terror even,
Gazing upon its face and speaking thus:
'O Sun, how we endure, a slave to you!
You are a tyrant to us in this hour.
What matters it that bulls be killed, no few?
No father are you, nor supreme of power,
If fields be burned and sheep and kine and I.
Though jealous gods may never wish to see
Cattle submitted to my might, ah me,
My flocks are helpless for your brazen sky.
If the old tales be true, which is absurd,
You have one goat, one bull, and just one ram.
As guardian of this foolish little herd,
You have a mangy cur. The thing's a sham.
Why honor you? Alcithous is worth
Worship divine. He rules the sea and earth."

....."The sun went pallid for his righteous wrath
And germinated poisons on our path.
And he who wrought this outrage was the first
To feel his body ache, when sore accursed.
And for his ulcers and their torturing,
No longer would a tossing, hard couch bring
Him sleep. With joints apart and flesh erased,
Thus was the shepherd flailed and thus debased.
And after him this malady we call
SYPHILIS, tearing at our city's wall
To bring with it such ruin and such a wrack,
That e'en the king escaped not its attack."

The term syphilis became associated with the disease and has remained so ever since.

Early treatment, palliative in nature, did little in curing or even checking the disease. Guiac bark is frequently alluded to, but proved to be of little value. Paracelsus (1568) (1) is given credit for introducing a mercurial ointment. The idea was probably adopted from the Arabs. These wandering tribes frequently suffered

(1) W. Becker - Ten Million Americans Have It. Figure 1, Page 36.

from a skin rash that was thought to be scabies. They used Mercury ointment for this rash. Some of the syphilitic skin lesions did seem to respond to the Mercurial treatment. It was applied by inunction and fumagation.

A little later Wallace and Dublin used potassium iodide with beneficial results in cases of periosteo and gumatous lesions. Very little further, by way of treatment, was developed until the twentieth century.

Several factors delayed the further development of syphilitic control. In the early eighteenth century Morgagni suggested that some of the symptoms then attributed to syphilis belonged to another disease, gonorrhea. This observation was ignored because patients were so frequently infected with both diseases. At this time, the medical groups felt that the various symptoms were those of different stages of a single disease but there was much speculation as to other possibilities.

John Hunter, a prominent surgeon and physiologist of Scotland was much disturbed over the growing contraversy. He decided to prove once and for all the posibility of two existing diseases. In 1787 he infected himself and set about noting the progress and symptoms of his illness under controlled conditions. He developed all of the symptoms and concluded that there was only one disease. This experiment was a brave one but also very costly; for his source of infection had been contaminated with both diseases. (1)

(1) Parran Thomas, Shadow on the Land - Page 44

Phillipe Record advanced again the idea of two diseases. It was a long time before this fact was accepted. John Hunter was a more prominent man than Record and had carried out a personal experiment.

Belzier might have aided with modern treatment had he not given up so soon. In 1889 he developed a preparation of bismuth with the hope it would be beneficial in the treatment of syphilis. His laboratory dogs developed blindness after administration of the drug and the preparation was discarded.

For a time in the nineteenth century the field of internal medicine gave way to surgery. A new discovery, anaesthesia opened up undreamed of possibilities (1). Formerly surgery was a cruel process. The helpless victim was held down while a knife cut through living feeling flesh. The patient often died from shock of pain. Then came "death of pain". Haste was no longer imperative. Neither were operations forced on writhing victims. They slept safely through the ordeal and lived to tell of their operation. Through this period medical diseases bowed before the more dramatic saving of life via scapel.

At the close of the nineteenth century the causitive agent was still unknown. No tests were known to reveal the concealed presence of syphilis. Other than palliative measures there were no specific cures.

The twentieth century began with new discoveries. Pasteurs work did much to encourage careful searching for

(1) Books in Brief (vol. 2 no.3) p.102

the causitive agent. First came the day when Metchnikoff and Roux could demonstrate the transmission of syphilis in laboratory controlled animals. (1903) (1) This step was important because of the larger source of material provided for study. About two years later Fritz Schaudinn and Erick Hoffman produced evidence that proved the causitive agent to be the Spirochaeta pallida. In 1906 Wassermann and Bordet introduced the fixation test. With these rapid discoveries hopes rose high that syphilis might soon be brought under control.

Up to this point no specific treatment had been devised that would no more than alleviate symptoms.

With the causitive agent known and a test to reveal its presence, men began to study drugs with renewed vigor. Bordet and Elherlich (1a) were interested in the chemistry of arsenic. They believed that a preparation could be formulated with the drugs toxicity reduced to a point not injurious to the human body but deadly to the spirochaete. They spent hours and hours breaking down preparations and building them up again. Six hundred and five of them were studied and then discarded as unsatisfactory. They tried the six hundred sixth one on their infected animals. This time the spirochaete died and the animals lived. Just one injection of this new formula seemed to rid the animals body of the crooked, wiggly germs. How excited these men

(1)Stokes, John W. - Modern Clinical Syphology PP17-24

(1a) Stokes , Hohn W. - Modern Clinical Syphology PP288-289

were - the six hundred sixth preparation seemed to be the long sought for specific cure. Theynamed it salvarson or 606.

Soon the dosage was planned and humans took treatment. These two men received much praise and publicity; for 606 seemed to cure. Their work, however, was not finished. Many of their supposedly cured patients returned with their former symptoms. A second injection and even a third was administered before these stubborn symptoms disappeared. The arsenical did not become the magic wand whereby the patient could be cured with one injection; but it did become the basic treating agent. Though the course is long and slow these men did produce a preparation that leads the syphilitic patient to permanent cure.

History (1) has many interesting characters whom are suspected of being syphilitic. Many authors suggest that Columbus, himself was a victim. On his last voyage he was placed in irons because of his manical ravings. He died soon after from ascites. His symptoms correspond with many of the early discriptions of syphilis.

Perhaps the most interesting story of all is that of Henry Vlll. He was very desirous of having an heir for his throne. Poor Catherine of Arygon, his wife, bore him children; but alas! not living ones. Two were still born births and one died in early infancy. The

(1) Parran, Thomas - Shadow On The Land, Pages 32, and 41

king became very discouraged. He appealed to the pope and begged that be might select a new queen. This being in discord with the Roman Catholic faith was not granted. The king in a rage broke away from the catholic faith and established a new one - the Protestant religion. Princess Mary was the only child that obtained adulthood in this wedlock. She did have certain physical characteristics that were very suggestive of congenital syphilis. She had a prominent forehead, notoriously poor eyesight, and thin scanty hair. Her reign as queen was a very hectic one. Being a cruel, merciless women she was known as Bloody Mary. She died suddenly in her early forties probably from heart or aortic failure.

These interesting points suggest that Henry Vlll was infected with syphilis. During its contageous period he transmitted it to Catherine. Catherine's children were victims of the disease and followed the usual pattern of syphilitic untreated pregnancies. This is further substantiated by the fact that none of the king's consorts had living healthy children except one. That child was born during the later years of his disease.

In 1917 another aid to treatment was discovered. Wagner Jauregg a Vienese, first employed fever therapy with beneficial results in late syphilis. Today heat is used in arresting third stage symptoms. Fever is

produced either by infecting the patient with Malaria or by inducing it with cabinets.

The United States did little with the problem of syphilis until the world war. These large groups of men in the army were tested and a high percent were found to be suffering from venereal disease. These men being under military control, could be forced to use prophalatic and treatment stations. Control methods and programs were available for the first time. Dr. Wm. Snow did much in developing this program. At the close of the war, federal aid was withdrawn and much of the splendid work was lost. However, many people were made conscious of the need for adequate facilities and better understanding of venereal disease.

With the present day publicity syphilis is before the people once more. Again federal aid is stimulating a program that will protect and save many. Let us hope that this opportunity will lead to a sound lasting program for the control of this disease - syphilis- whose field, although new, is equiped with diagnostic facilities and specific treatment.

BIBLIOGRAPHY

Books

Becher, William D., M.D., Ten Million Americans Have It

Parran, Thomas, M.D., Shadow on the Land

Stokes, John W., M.D., Modern Clinical Syphology

Fracastoro, Girolamo, The Sinister Shepherd translated by Dr. Wm. Van Wyck

Periodicals

Books in Brief (Volume II Number 3)

Special Materials

Notes from special course on Venereal disease Western Reserve University. Summer session 1937. Prepared by Evangeline Morris R.N.

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Syphilis with Programs for Control

I In the historical background of syphilis certain important points are:

A. the early vague mystical conceptions.
B. the uncertainty of the origin of the disease
C. the widespreading of syphilis in the 15th century probably due to:
   1. the custom of using paid soldiers from one country for another
   2. the general laxity of morals.
   3. the infection of Columbus' crew.
D. the factors that prevented progress in bringing the disease under control (1600-1900) were:
   1. the interest in developing surgery.
   2. the confusion produced by John Hunter's mistake
   3. the great sex activity during this period.
E. the period of achievement due to:
   1. the discovery of the Spirocharta pallida.
   2. the development of the fixation tests.
   3. the development of 606 and other treatments.

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II In the analysis of syphilis, points to be considered are:

A. etiology
B. pathology
C. varieties
D. Methods of treatment

III In planning a program, points to be considered are

A. the mental hygiene and educational phases
B. the future generation
C. the group served.
   1. Nationality.
   2. cultures and standards of living.
   3. geographical location.
D other systems
   1 Cleveland. Ohio
   2. Detroit Mich.
   3. Portland Ore.
   4. Rural set-ups.

IV A suggested program for:
A Urban district.
B. rural district.

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Bibliography

Warren – On your Guard.

Becker – Ten million Americans Have it.

Stokes – The Modern Clinical Syphology. (Inc)

Stokes – Syphology and Dermatology for Nurses.

Smille – Public Health Administration in the United States.

Pamphlets.

NOTES ON SYPHILIS

1. Some authorities believe that syphilis was universally present since early times. Evidence is supported by:

    1. Bible quotations - Exodus 20:5, Numbers 14:18.
    2. Illness among the Chinese and Egyptians in early days.
    3. Satires of Horace.
    4. Bone changes in neolithic age suggesting gummitus changes discovered by anthropologists.

2. Most authorities believe that syphilis was transmitted to Europe by Columbus' crew from the West Indian women. Evidence is supported by certain facts:

    1. A member of Columbus' crew on arriving home developed a new disease that was described as syphilis.
    2. At the end of the 15th century syphilis began to spread attaching virgin soil.
    3. Mandate laws were first past in 1495.
    4. Williams could not find any trace of human bones showing syphilitic changes. The bones were so subject to erosion that any evidence would be questionable.
    5. Columbus was thought to be a victim of syphilis and showed characteristic central nervous system symptoms on his second voyage.

    In 1496 we have an early description of syphilis by Durer. It is an interesting fact to note that in 1495 France, Germany and Switzerland report cases of this new malady. By 1500 England, Scotland, and Hungary were finding cases too.

3. There were certain factors that seemed to cause the sudden spread of this disease:

    1. It was an age of migration.
    2. There were many wars. Paid soldiers left the army and returned to their various countries. Many of these men were infected. (It was customary to send out diseased women to the enemy in King Charles VIII time).
    3. There was very little personal hygiene.
    4. There was no definite information at this time about syphilis. It was believed to be "catching".
    5. There was no treatment.

    The name "syphilis" was chosen to indicate the disease in the following way: In 1530 Fracastore, a poet, physician, and astronomer, wrote a poem about Syphillus, the boy who was a swine herder. The boy insulted Apollo one day and was strickem down with a horrible disease. The boy's name was always connected with the new disease. Today we have "syphilis".

4. In the period from 1600-1900, there were certain factors that prevented progress in combating syphilis.

    1. The interest of scientific medical directors was directed into other channels, e.g., surgery.
    2. The failure to follow Morgagne's observation that syphilis and gonorrhea were different diseases (1702)
    3. The confusion that arose because of John Hunter's mistake, e.g.; In 1787 Hunter decided to prove once and for all that syphilis and gonorrhea were the same diseases. The unfortunate thing that happened was that he innoculated himself with both syphilis and gonorrhea and developed symptoms of both diseases.
    4. The slow acceptance of Phillipe Ricord's statement that the two diseases were separate. Doctors would not accept Ricord because Hunter was a more prominent man.

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). (cont.)

5. In 1889 Belzier produced a preparation of bismuth. This preparation was used in experiments with dogs, that resulted in blindness. The preparation was discarded as worthless for treatment of man.
6. The victorian age was one of great sex activity.

. The factors leading to progress were:

1. The identification of the spirocheta pallida in 1905 by Fritz Schaudinn and Erick Hoffmann.
2. The transmission of the organisms to animals in 1903 by Metchnikoff and Roux.
3. The development of 606 in 1909 by Ehrlich.
4. The perfecting of the fixation test in 1906 by Wassermann and Bordet.
5. The development of heat therapy by Wagner Jauregg of Vienna in 1917.
6. William F. Snow's work on prevention in the World War 1917.

I. Definition:

. Syphilis is an infectious disease due to the Spirochaeta pallida; of great chronicity; systemic from the outset; capable of involving practically every structure of the body in its course; distinquished by florid manifestations on the one hand, and years of completely asymptomatic latency on the other; able to simulate a large proportion of the entities comprising the field of medicine, surgery, and the specialities; transmissable to the offspring in man, transmissible to certain laboratory animals; and treatable to the point of presumptive - but not thus far, demonstratable - cure by the use of derivatives of arsenic, mercury, bismuth, the iodides, and non-specific or fever therapy. (1)

. Prenatal Syphilis

1. Marriage of syphilitic is not always contra-indicated. Some points to consider are:

   a. Age of patients
   b. Duration of disease (and its progress)
   c. Financial security of patient

   Patients with early syphilis should not marry until they have had adequate treatment (two to three years of continuous treatment) and several years free from symptoms after treatment.

2. Pregnancy
   a. Is not contra-indicated if early treatment is instituted.
   b. Seems to benefit the mother
   c. Most all authorities agree that the child cannot be infected with syphilis unless the mother has the disease. (French Authorities excepted)
   d. Miscarriages usually occur in the sixth and seventh month. First trimester miscarriages are most generally not syphilitic in nature.
   e. If the mother has pregnancies during the course of her disease without treatment, she is likely to have first, miscarriages, then stillbirths. Later, she may give birth to a living premature infected child. This child is very susceptible to infections and may die in infancy. Her last pregnancies may show only slight indications or be entirely free of the disease.

1) Stokes, John W., Modern Clinical Syphilology, (fig. 7 pp. 46) 2/25/35

f. A mother may give birth to a syphilitic infant and not demonstrate any sign of disease herself. She may have also a sero-negative reaction. Prolonged and repeated observation is the only means of detection. Dr. Stokes reports William's study: 56 untreated sero negative syphilitic mothers gave birth to infants in which 93% were syphilitic. 51 sero negative treated syphilitic women gave birth to infants in which only 4% were syphilitic.

g. According to theory, the fetus may become infected any time. The most likely time is between the fourth and sixth month of gestation.

3. Chief symptoms of infantile prenatal syphilis:

a. Skin eruptions - rarely before the third week of life - usually on the face and mouth regions, soles of feet and palms of hands and the ano-genital region.
b. Snuffles - may be mild in character, and is almost diagnostic if hemorrhagic.
c. Hacking of the lips.
d. Rhagades
e. Enlarged spleen.
f. The cry: cracked and aphonic
g. Pseudoparalysis; probably due to pain on movement.
h. Bone tenderness.
i. Saddle nose deformity (misleading in young infants).
j. Loss of weight
k. Unusual crying and fretting
l. Difficulty in feeding.

4. Other symptoms developing later (3 to 28 years of age - rarely after 30)

a. Eye lesions.
b. Interstitial keratitis.
c. Bosses
d. Sabre shins
e. Characteristic teeth
f. Deafness
g. Nervousness
h. Mental retardation.

III. Treatment.

The planning of adequate treatment is the responsibility of the physician in charge of the case. The public health nurses may aid the doctor by helping to keep the patient under treatment and to reinterpret medical orders to him. In order to do this, the nurse should familiarize herself with certain phases of treatment and control.

A. Some principles in treating and controlling syphilis are: (1)
1. The patient who has early intensive treatment before the blood test becomes positive (early first stage) has a 35% better chance of cure than the patient who begins the treatment after the blood test is positive. The darkfield examination is necessary for early diagnosis of syphilis.

(1) Stokes, John W.,M.D., Dermatology and Syphilology

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II. Treatment (cont.)

2. Treatment must include the arsphenamines not less than fifteen injections for control of infectiousness.

3. Bismuth administered by intra-muscular injections should be used with perhaps some mercury in addition to arsenical preparations.

4. Treatment should be continuous without rest periods.

5. Periodic observation must be contained throughout life. As in tuberculosis, it is wiser from the standpoint of ultimate good to speak of "arrest" rather than "cure".

6. The condition of the nervous system should be checked by spinal fluid examination during the first year of the disease.

7. The condition of the heart and aorta must be carefully watched for a period of years.

B. Drugs used in treatment:

1. The arsphenamines (Salvarsan (and (its successors.

A dye carrying arsenic, poisons the spirochete but not the patient. (The patient should be carefully watched for any toxic symptoms). The drug works rapidly, destroying spirochetes and may render the patient non-infectious after two or three injections. The patient remains so provided he continues taking the drug.

2. Bismuth has little effect on the spirochete itself but seems to aid the body in fighting the infection. This drug is not very toxic.

3. Mercury is administered: (1) by injection, (2) by inunction, (3) by mouth. It has much the same reaction as does Bismuth but is more toxic, especially so for the kidneys.

4. Tryparsamide, and arsenical, is used in treating syphilis of the nervous system. This drug must be used with great care because of the danger to the optic nerve. Careful check by eye specialist is needed in its administration.

5. Stovarsal, an arsenical, that may be administered by mouth is used in treating syphilitic children. It also has some value in treating neuro-syphilis.

6. Intra-spinal injections, malarial and other forms of heat therapy are being used in treating syphilis of the nervous system.

C. The nurse should be aware of the possibility of the patient developing toxic symptoms from administration of any of the drugs, especially arsphenamines and mercury. Excellent charts are furnished in "Dermatology and Syphilology for Nurses" by John H. Stokes (Fig. 76-77-78). These charts outline various points which should be observed during the time the patient is under treatment.

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IV. B. Congenital syphilis.

1. One million potential mothers in the United States now have or have had syphilis.

2. No woman who has had syphilis can be assured she will not bear a syphilitic child without treatment during pregnancy. The chances, however decrease with time and previous treatment.

3. Each year 60,000 children are born in the United States with congenital syphilis.

4. FIVE times out of SIX the untreated syphilitic pregnant mother will bear a DEAD OR DISEASED CHILD.

5. TEN times out of ELEVEN, the syphilitic mother will bear a HEALTHY CHILD if treatment is adequate and is begun before the fifth month of pregnancy.

6. One-half of syphilis discovered in pregnancy is later than the fifth month, of the other half, starting treatment before the fifth month, only one in four takes the minimum treatment necessary to protect the child.

7. THREE times out of FIVE the syphilitic mother will bear a health child if treatment begins after the fifth month of pregnancy.

8. Some treatment, any treatment, reduces the risk of congenital syphilis.

9. A syphilis program over the past decade as effective as Denmark's would have reduced the 60,000 annual cases of congenital syphilis in the United States to 2,600.

10. One-third of the children with congenital syphilis will develop interstitial keratitis (partial or complete blindness) if untreated.

11. Only one out of every nine syphilitic pregnant women who take treatment get enough to protect the child.

V. Facts about syphilis in the United States:
Shadow on the Land, Appendix table IV & V. Thomas Parran, M.D.

1. At least one-half million persons are diagnosed annually as syphilitic.

2. The attack rate for syphilis is higher in urban than in rural communities; higher among males than females, 6:4; higher among Negros than whites 6:1; highest in the age group 20 to 30 years of age.

3. Less than one-half of cases seek treatment or are recognized within first year of the disease.

4. When we look for syphilis, one case for every one previously known is discovered.

5. Only one out of every five patients receive the minimum necessary treatment -- one year.

6. The annual incidence of newly recognized syphilis in the United States is 796; in Denmark, 20; in Sweden, 7 per 100,000 population.

7. There are 160,000 persons with cardiovascular syphilis; of these, 40,000 die each year.

8. Of patients discovered with cardiovascular syphilis, 66 per cent have never been treated.

9. Syphilis of the nervous system develops in untreated patients in 25 per cent of cases.

10. Of all the admissions to state insane hospitals, 10 per cent are because of one end result of syphilis - general paresis.

11. Among 30,000 rural southern negros, 20 per cent show positive blood Wassermann tests. Among more than 1,000,000 industrial employees, 4.8 per cent show a positive Wassermann test.

12. Among pregnant women in obstetrical clinics, 6 per cent show positive Wassermann tests.

13. Positive blood Wassermann tests are not a complete index to the amount of syphilis. One-third or patients with beginning nervous system involvement show a negative test.

B. Classification of Course of Disease

SYPHILIS MAY MASQUERADE AS ANY OTHER DISEASE
Typical Cases May Be Divided Into Stages Which Often Over-lap

Chart prepared by Detroit City Bureau of Health, Social Hygiene Dep't.

INCUBATION PERIOD	PRIMARY STAGE	EARLY SYPHILIS or Early Secondary Stage	LATE SYPHILIS Late Secondary Syphilis (latent) Tertiary Syphilis
Usually 22 days or more A latent period from contact to first open lesion which appears at point of contact. Dark Field Examination makes diagnosis of syphilis earlier than blood test.	Ulcer or sore appears at point of contact. May be inside orifices of body and characterized by a discharge. Often not painful. Glands near lesion become swollen. Blood test not yet positive. DARK FIELD EXAMINATION IMPERATIVE. Do not treat lesion locally until diagnosis is sure. (Approximately 60 days after contact)	Primary sore may have healed. Skin rashes which often resemble other skin diseases. Sores in mouth or other orifices of body. Hair falling out in patches. General weakness Fever sometimes. BLOOD TEST POSITIVE IN THIS STAGE Very easily spreadyby contact. (Approximately 81 days after contact)	Cardio-vascular disease Muscles of heart affected Brain and spinal cord attacked. Gummatous tumors. Blindness. Locomotor Ataxia. Bones soften in spots Bladder symptoms Life expectancy shortened Susceptibility to other diseases as: Pulmonary Tuberculosis Pneumonia Suicide Cancer (Approximately 2 - 20 years after contact)
Prophylaxis of value within 12 - 24 hours of contact.	Least difficult to cure in this stage.	More difficult to cure in this stage.	Most difficult to cure, often can only be arrested.

BIBLIOGRAPHY

ooks

Stokes, John W., M.D., Dermatology and Syphilology for Nurses, Second Edition, 1938 W. B. Saunders Co. Philadelphis, $2.75

Becker, William D., M.D., Ten Million Americans Have It, J. B. Lippincott Co, New York 1937 $1.35

Parran, Thomas, M.D., Shadow on the Land, Reynal and Hitchcock, Inc., 1937, $2.50

Warren, Carl, On Your Guard, Emerson's Book, Manhattan 1937, $1.50

riodicals

Proceedings of Conference on Venereal Disease Control Work
Washington. D.C., December, 1936.

U. S. Treasury Department, United States Public Health Service, Supplement No. 3, for sale by Supt. of Documents., U. S. Printing office, 15¢

Venereal Disease Information, edited by R. A. Vonderlehr, Assist. Surgeon General, Chief of Division of Venereal Diseases - published monthly, subscription price 50¢ a year, Supt. of Documents July, 1936, Venereal Disease Control Programs of State Departments of Health.

Public Health Nursing, Vol. 29., Series of articles by Gladys L. Crain, Epidemiologist, Massachusetts Department of Public Health, Boston, Massachusetts. "The Public Health Nursing in Control of Syphilis and Gonorrhea"

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American Journal of Nursing, Vol. 38. No. 2
February 1938, Lee D. Cady, M.D. "Syphilis"

American Journal of Nursing, Vol. 38. No. 2 February 1938, pp. 200-202
List of Free and Inexpensive Materials on Venoral Diseases

Survey Graphic, Parran, Thomas, M.D., "The Next Plague to Go". September 1936

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THE PUBLIC HEALTH ASPECT IN THE CONTROL OF SYPHILIS

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THE PUBLIC HEALTH ASPECT IN THE CONTROL OF SYPHILIS

> Syphilis is an infectous disease due to the Spirochaeta pallida; of great chronicity; systemic from the outset; capable of involving practically every structure of the body in its course; distinguished by florid manesfestations on the one hand and years of completely asymptomatic latency on the other; able to simulate a large proportion of the entities comprising the field of medicine, surgery, and the specialities; transmissible to the offspring in man, transmissible to certain laboratory animals; and treatable to the point of presumptive but--not, thus far, demonstratable--cure by the use of derivatives of arsnic, mercury, bismuth, the iodides, and nonspecific or fever therapy.....
> John H. Stokes, Modern Clinical Syphology. P18

The goal of all public welfare programs is adequate service. The attainment of this goal depends on the securing of skilled personnel, modern equipment, and sufficient finances. Before even a part of this can be secured, the public must understand the need for service.

There are always leaders, men and women, with undaunted vision who dare to look into the future. They have visions, a Utopia perhaps, of a society of happy individuals. Crusaders go out among people to lead, to preach. Bit by bit folks are led into schemes

and programs. Sometimes the visions are only erie fads and fanciful fashions. Sometimes the dreams become sound rational services leading to the enrichment of the human race.

Since it was only about two years ago, that the mere mention of the word, syphilis, caused a radio broadcast to be interrupted, the control of this disease is a new program. This is truly a twentieth century idea. Even so, some had visions of a people free from this disease several centuries ago.

Some countries have progressed more rapidly than others. Some are equipped with excellent control facilities while others have lagged far behind. Only just now is the United States facing her problem of syphilis.

With a scant thirty years of scientific experience, it is remarkable that any country has found a solution to her problem. In the last two years syphilis has been brought sharply before the people as a problem long neglected. The various methods of public information have stirred folk's interest as well as their immagination. Is this leading to a brief passing fancy or to a sound permanent service?

Some countries (1) have made a great deal of

(1) Parran Thomas Shadow on the Land pg.89 -132

progress in controlling syphilis. Denmark and Sweden have gone far with their programs. The Scandanavians are law abiding open minded people.

In Denmark a regulation was made as early as 1788 that offered every person, rich or poor, treatment for venereal disease. The priests had the authority to report and inform the patients who needed treatment. Many availed themselves of this opportunity. In some sections whole communities were enraged and armed themselves against the doctors and visitors who sought to give them this aid. Thus many were treated and many were not. Little progress was really accomplished.

Probably because of the numerous nose and lip lesions in their congregation, the Lutheran priests were thought to be the first to ask for inforcement of the regulation. The old regulation was reinforced with the order that all people should be first encouraged with gentleness and reasoning to take treatment and forced if they did not do so.

In 1866 a law was passed that any one practicing sexual intercourse and knowing or suspecting that he is infected shall be imprisoned or sentenced to hard labor. Professional prostitution was abolished by law in 1906.

Denmark has had a central registration of all syphilitic patients, that is maintained by the State Serum Institute, since 1920. All Wassermann tests are performed here too. This registration identifies patients, keeps track of them if they move, and aids the physician in Wassermann reports.

The Danish people are not too optomistic even with a case rate of 20 per 100,000 population. They regard syphilis as a contagious disease and discuss it as freely as they would any other. All of the Danish hospitals accept Syphilitic patients. The patients are not hampered by fear of publicity, cost of treatment, or lack of facilities. Because of this attitude, they come into clinics freely. The Danes have 98.3 % of their patients completing the full course of treatment. The United States has only about 60--80% completing treatment. The number of congenitals and parêics are droping rapidly too.

In Sweden the decline of syphilis is even greater than in Denmark. In 1919 she had a peak of 5,976 cases of syphilis. This figure dropped to 399 in 1936. Sweden has offered free treat- since 1817. In general her program is much the same as Denmark's. Sweden goes a step further in

that she traces the source of infection. Her case rate is 7 per 100,000 people.

Some have suggested that the decline of prevalence of syphilis may be due to the improved moral conduct. Apparently this is not so because the case rate of gonorrhea is still as high as ever. This is due of course, to the lack of a specific cure.

Norway has not developed her plan of control as well as the other two countries. This is due in the main to her sparcely settled area. Nevertheless her case rate has dropped from 360 in 1919 to 30 in 1933.

Indeed it is a sobering thought that the United States has a problem of syphilis four or five times as great as Sweden. Kansas, Nebraska, and Oregon as shown by surveys have the lowest case rates in the union. Their incidence of syphilis is 50,140,180 per 100,000 people respectively. Cities with populations of 50,000 or more show case rates 300 to 2900.(1) The average is 800. Even the attack rate for white people, 328 per 100,000, is very high when it is compared to Sweden's total rate of seven.

The United States do have population factors that the Scandinavians do not. American people are made up of many races. The cultural backgrounds are also varied. The United States is a large area and has both thickly settled and scattered population. American people are democratic and believe in individual rights. They are idealistic but are prone

(1) Parran Thomas, Shadow on the Land p.109

to cover up most all unpleasant facts with a nice thick coat of false modesty.

Great Britain handles her syphlitic program in a different manner than do other countries. She furnishes treatment free of charge to all who wish to avail themselves of it. The treatment is not compulsory. The patients' financial condition is investigated, not to determine this ability to pay, but to decide if he needs car fare. Contacts are not followed up, neither is reporting of cases in favor. The venereal disease group is the only one that is treated free of charge. The others are cared for by a health insurance plan. It is thought that, due to the nature of venereal disease, most patients would rather come to a clinic than to their physician. Great Britain feels, too, that there is less chance for the patient to receive inferior treatment if it is taken care of in this manner. Some in the United States would like to criticise some of the features of this plan but it is not yet their privilege to do so. Britain is reducing her incidence of syphilis. In 1935 the rate according to clinic admissions was 47.5 per 100000 population. Up state New York shows a rate of 115 by clinic admission. Other groups show rates from 300 to 939.(1)

(1) Ibed p. 117

Again it is shown that the British people have not improved their sex habits because gonorrhea still maintains the same case level, approximately. A great deal of health education is planned along with the clinic and it is not hindered by social taboo.

Continental Europe has three methods of controling syphilis. In Germany compulsion of treatment is resorted to rather than education and persuasion. The French and Italians treat their poor in clinics. They use prophylactics and governmental regulation of prostitutes as means of prevention. The Russians are educating their people to be healthy because it is the way to be and health is a glorious asset. Their venereal disease program is handled much in the same way with plenty of health education and facilities for treatment.

All the countries that have acknowledged their need for a syphlitic control program and have seriously attempted one have made progress. It is true that their methods differ, but so do the temperments of their people. The problem must be known before it is solved.

The United States is begining to note the incidence of syphilis among her people. Since she is a conservative nation she speaks the word softly--to test out the reaction of her people to mass educ-

ation. Her population is both urban and rural and distributed over a large section of land. Her people speak many languages as well as English. She is a democracy and respects her citizens' individual rights. She feels that her people should know, first the high incidence of syphilis and then, because of the understood need, demand a program for its control.

In some sections of the country there have been some attempts to control this disease. Two outstanding clinics are Dr. Cole's Clinic at the Lakeside Hospital, Cleveland, Ohio, and the social hygiene division in Detroit, Michigan. These are not the largest clinics, but they typify two methods of clinic control.

Cleveland cares for most of these patients through the general or city hospitals. Dr. Cole groups these patients in with skih ailments until diagnosis is made. He then assighs them to their respective treatment clinics. The clinic is operated on a pay and part pay basis. Contacts and sources of infection are examined as they are located. Patients lapsing treatment are notified by letter and visited later if they do not respond.

All patients admitted to the clinic or hospital are given routine sensitive Kline tests. Those

reacting are given further tests. If they are diagnosed as syphilitic the stage and treatment is determined.

Detroit has developed a very splendid venereal disease division in connection with their city health department. The social hygiene department offers eight services (a) a diagnostic clinic,(b) a treatment clinic,(c) a personal service department(d) a department of field follow-up service,(e) a quarantine unit for women,(f) the East side area experiment,(g) laboratory service,(h) an educational program.

In order to understand more fully the manner of clinic operation, Mrs. X will demonstrate her experience with it. Mrs. X had not been feeling well for several weeks. She had been having a sore throat for quite some time. A blotchy rash over her neck, chest and back, seemed very persistant regardless of how careful she had been of her diet. A friend of hers suggested that her "blood might be out of order" and told her of the help she received from the clinic. Mrs. X being in very close circumstances decided to visit the clinic. She went upstairs as directed by her friend and stood in one of the lines formed before the several windows of the admitting department.

When her turn came, one of the nurses asked her for the following information; her name, address, age, religion, and the nature of her complaint. The various sheets of her clinic record were started and she was given a ticket bearing her name and clinic number. Mrs. X was then told to keep the ticket as the number would be used instead of her name. She was directed then to the waiting room and instructed to report at the desk. The desk clerk recorded her number, gave her an envelope bearing a slide and blood specimen tube, advised her to wait until her number is called.

During this period, she listened to a staff member(usually the nurse in charge of the education department)explain to the patients, most of them new, the nature of venereal disease. Her talk briefly outlined the following points,(a)causes of syphilis, gonorrhea, and chancroid(b)the mode of transmission(c)the differences in the diseases (d)the hope of cure(e)necessity of continious treatment under the doctor's direction(f)the need for having all contacts examined(g)the importance of reporting the person who infected them(Patients assured that information given is confidential)(h) the folly of quacks(i)the importance of not infecting others.

After listening to this group instruction, she became aware of how serious her own condition might be. She found some free literature and took some with her. From another patient, she found out that films are shown some days, too.

Mrs. X's number was called and she followed a nurse to one of the dressing booths in connection with her examining room. She was instructed to prepare herself for examination by removing all of her clothing except her slip. When she came into the examining room, she found that only the doctor and nurse were there. The doctor dictated his findings through a mouth piece to the ear phones on a clerk's head in a small ajoining room. The clerk typed them on the examination sheet in the patients' record.

First the doctor examined Mrs. X's body. Then he applied a tourniquet to her arm, took a specimen of blood, and placed it in the tube Mrs. X had with her. She was then placed on the examing table. The doctor made a pelvic examination and examined the external genitalia carefully. At this time he took cervical and urethral smear using the patients glass slide. Had there been any open sore on her body, the doctor would have taken

material for a dark field examination. He also recorded any venereal disease history.

Because of the typical rash and sore throat complaints, she was tentively diagnosed as suffering from secondary syphilis and referred to the personal service division for financial investigation. Patients with no clinical symptoms are requested, usually, to wait for the report from their smears and if positive, are assigned to their treatment clinic as soon as they are cleared financially. The patients wait for darkfield examination reports too. At least two specimens are submitted. Blood specimens are sent out to the main laboratory. If the reports from smears and dark fields are negative, the patients are requested to return back to clinic on a given date for the blood report.

Mrs. X went into the personal service division. Here she was again asked about contacts and sources of infection. Because she belonged to a very low income group, she was assigned to a treatment clinic and given the date and time. Before treatment, she must wait for confirmation by the blood test's reaction. In event of a negative report the doctor decides the disposition of the case.

In the personal service department all patients are checked financially every sixty days. Most all

of the records are opened at the admitting department and placed in the various sections in the proper order according to the number and rotation of the patient.

Mrs. X reported back and found that her blood test was positive. She began treatment. Before this she was given a card for Mr. X to report to the clinic for examination as contacts. This card requested Mr. X to report at given time and date but did not explain why. The word contact and Mrs. X's number appeared in the left hand corner. The two children were requested to be examined, too. Should Mr. X fail to come in with in a week of the specified date, he will be sent for by one of the field workers. Sources of infection are sent for immediately.

In returning for treatment, Mrs. X presents her ticket at the admittance department and receives a slip of paper with a symbol indicating her treatment. She will have a spinal fluid examination before she is discharged.

The patients eligible for clinic diagnosis are (a) those living within the city limits and providing they do not have a family physician or (B) have been referred by private physicians, (C) and those not living in the expermental area. Patients with personal physicians are referred to him for a letter of release.

This broad grouping includes all most anyone and at the same time does not interfere with the physicians' private practice.

The expermental area is one that has been set aside from the clinic for the treating of syphilis only. About forty doctors agreed to aid in this experment of treating by private physicians. Patients living in this area are referred if they have no perference to the nearest cooperating doctor. He has set aside certain days for this work. He is not paid for treating but the drugs are furnished. He decides the fees for treatment and is not obligated to follow the clinics suggestion as to treatment, although most of them do.

Patients who have a positive diagnosis but are not eligible for the clinic are given a form letter for their personal physician. The physician is notified by mail and requested to report on attached slip the status of the patient with in a week. If the patient fails to report, he is referred to the field service department for investigation.

The sixty-five bed hospital in connection with the unit is a quarentine unit for women. Most of the women in this hoppital are under twenty-one years of age. The eligible women are classified into three groups. The first group is made up of girls such as domestics who, if removed from their work during treatment will not be able to care for themselves.

The second is comprised of married women who have small children and can not care for themselves. The third group is made up of known prostitutes. The unit is so arranged that each classification is kept separate from the other. The hospital not only serves as a quarentine station but also attempts rehabillitation. Various handicrafts are taught in the institution. Classes in personal hygiene are given as well as information regarding venereal disease. A nurse has charge of this division and determines the eligibility of women for this hospital. Girls needing supervision that can not be supplied by parents or guardians are referred to the proper social agency upon release.

In connection with the social hygiene department, there is maintained, also, a research department. The nurse in charge studies the activities of the clinic and prepares reports, graphs, and charts. She keeps up a file of the various types of literature available in other states. She has a large collection of wax models that may be used for studies and exhibits. She takes these wax imprints from the unusual or outstanding cases that come to the clinic for service. She keeps on file prints of photographs taken by the drug companies when they study the effects of their preparations on the patients who are being treated.

This nurse prepares the outline of clinic experiments for the affiliating student nurses and visitors. Her duties are varied and intensly interesting.

The clinic performs one more service and that is in connection with the prostitutes. This service is also detailed to the research section. All women engaged in this trade are catalogued by their working name or names and picture. Smears and blood tests are taken and the results are recorded. The women are then instructed as to the nature of venereal disease, the methods of avoiding infection, some of the hazards of their trade, and the proper methods of douching. This phase of the work is handled in a very unemotional attitude but not in a penal one. Prostitution is not encouraged in Detroit but is accepted as a very serious problem of infection. When the houses are raided, and the women are placed in jail, they are examined for infection. If they are free from venereal disease, and have been catalogued, they are released from the jail. Those who are infected are detained for treatment. If their names are not on file, no haste is made to release them. All the known prostitutes are required to have a weekly smear taken by their personal physician, the report is sent in weekly to the clinic. The smears are not taken as the soul precaution against Gonorrhea, but rather

to encourage them in keeping free from infection.

The social hygiene division is a busy place. About 500 patients pass daily through the clinic. The nurses and doctors work on routine schedule. With such a large group of patients, almost every type of venereal disease is represented. Through all the seemingly unemotional attitude, there is an atmosphere of friendliness for the patient who is willing to accept his responsibilities and be faithful.

Frequently patients present themselves for examination of other causes than venereal disease. These people are referred to the city clinic.

When a patient examined by the venereal disease clinic is found to have a condition that needs immediate medical or surgical treatment, he is also referred to the city clinic.

Folks find their way to the clinic through various channels. Frequently a friend tells them of this service. Private physicians, social agencies, the city clinic, and public health nurses refer patients, too. This department operates with appearant smoothness and little confusion considering the huge number of patients cared for daily. The department has its problems just as do smaller ones. It too has dreams of larger quarters, latest equipment and more efficient service.

Rural areas in Ohio and Michigan do not fare as well as do the cities. In most cases the local or family physician assumes the care of the patients. In both states free blood tests are available to all the people. Arsenicals and other drugs are furnished free of charge to the physicians. In Ohio a plan for doctors in rural areas has been formulated where by they receive thirty dollars in addition to free drugs for treating an indigent patient. This fee is limited and is available only as long as there is money in the fund set aside.

In Marion, Ohio, the city hospital manintains space for clinics including a well baby and dental clinic. Venereal disease is treated here too. These clinics are financed by various lay groups such as the P.T.A. and the Women's Club.

In rural or urban sections, large or small, there is one trend common to all. That is education. The extent of syphilis must be made known and accepted as truly a problem of society.

The West has not had to meet the problem in such a wholesale manner as did the East. The population is not so dense, neither are there so many Negroes. This is particularly true of Oregon. Nevertheless, she does have a problem and has neglected it seriously. Since she furnishes free blood testing

only to indigents and provides few treatment facilities for those found infected, she keeps her victims hidden well. When a small change in the system of case reporting can double even tripple the number of known syphlitics in a single county (1) the situation takes on a graver aspect for Oregonians.

First of all Oregon needs a stimulating educational program. This program should be lead by the doctors. These health leaders should demonstrate to the state the importance of a control program for syphilis just as they did for one in tuberculosis.

The similarity of tuberculosis and syphilis is striking. Both are diseases truly belonging to society. Tuberculosis is one that extends over a period of years. The patient if infected must be wary if he escapes illness. He must practice good personal hygiene and healthy living to prevent recurrance of his symptoms after he becomes arrested. This disease strikes men and women in the prime of their lives, breaks into their earning capacity, endangers the lives of children and adds to the general misery of the world. Syphilis parallells easily with tuberculosis. In addition it strikes deeper into the emotional stability of society because of its moral implications. Even innocent victims today dare not face society openly with their affliction.

(1) Clackamas co. 1936-1937

Innocent children are shunned at school; mothers are spurned when their infection becomes known to the public. In case of either disease, early discovery is the patients assurance of at least checking its progress and probable cure.

Any person may secure adequate treatment arranged according to his financial status if he is suffering from tuberculosis. He has also various apportunities for examination. Every year programs are planned for early diagnosis and prevention. Literature and information is free and available for everyone. This is not so with syphilis.

Since the possibilities of control of syphilis are products of the twentieth century, no one can be pointed out as being the last word in the best programs. There is still much to be learned. There are leaders in the medical profession who are applying their skilled knowledge to the development of a satisfactory program for the United States. These men should indicate the way.

Since the first step for Oregon is one of education, there must be someone choosen in the state to take charge of this phase of the program. He should be a doctor of medicine with adequate public health training. Since he will aid the other doctors of the state by making available, information in regards to the care and treatment of these

patients, he must have a thorough understanding of medicine. Since syphilis is a public health menace and belongs to the contagious disease group, he will need public health experience. This is particularly so, because many of the doctors do not understand the techniques of public health. It will be necessary for him to interpret the program in such a manner as will be acceptable to the medical group.

Probably the state board of health should be the best agency to take the responsibility of selecting such a person. The social hygiene society could be developed into a very satisfactory agency but could not give this educational director, the prestige he would secure were he a staff member of that state board of health.

His first duties would be to gather information as to standards of minimum adequate treatment, best methods of diagnosis, and a sufficient supply of literature and free material for distribution. He would send this information under the advisement of the state health officer to all the local health officers. These doctors in turn would send the information on to their local physicians. The director would use other means of education; hold institutes

for the health officers; outline radio programs; encourage the use of films; and have available, material for talks. It is true much of his information would reach barren soil, but some of it would find a place to grow. He could lead the doctors, the nurses, the lay groups toward certain goals. These are(a)Free diagnostic service for every person(b)Free arsenicals and other drugs needed in treatment(c)A standardization of adequate treatment(d)A plentiful supply of free literature and information(e)Available fund of money to pay private doctors for treating indigent patients. (f)Adequate follow up for contacts and sources of infection.

The director has an educational advantage in that syphilis appears in every stage of life. The maternity program should include information about early diagnosis of syphilis and prevention of transmission of the disease to the offspring. Syphilis is a foe to the infant, preschool, school, and high school groups. A space for syphilis education should be included in the dental programs, young adolescents must have knowledge about syphilis. Middle age, and older folks suffer from heart disease--nervous disorders.The contagious disease

program naturally lends itself to education for syphilis belongs to this group. Every phase of public health should include information about this disease, for indeed it is a universal one.

A program for the control of syphilis should be three fold: first and foremost at the present time; mass education provided for doctors, nurses, and lay people; second; available diagnosis and treatment facilities; third; adequate field service.

Before any control program can be instituted in Oregon there must be free diagnostic facilities. (1) After this is accomplished the following program should be workable in Oregon.

Because syphilis belongs to the contagious group and is reportable, the health officer has the authority to enforce control. He does have a disadvantage in that the name of the patient is not disclosed in the doctor's report. This has been overcome considerable by the law that all patients failing to report for treatment are referred by name to the state health office.

With available sources of scientific information, the county health officer should be able to organize an intensive educational program.

(1) Colorado, Iowa, Kansas, Oregon, and Texas are the only states that have restrictions on bloodtests. (Proceedings of conference on venereal disease control work Dec. 28- 30-1936 P.6)

His first step would be to advise the doctors that he has available information, and literature for distribution. He would then be advised by the doctors whether he might furnish them with some. This step could be accomplished either through the local medical society or by contacting the physicians personally. After the doctors have been advised of the material the health officer or a public health nurse under his direction should call on the doctors with a supply of literature. Almost all physicians are willing to distribute suitable material to their patients. The doctors will indicate their need as to standard treatment if they desire this information. The lay groups should be informed as rapidly as possible as to the nature of the disease, its extent, and the value of early treatment. The public, with its natural curiosity as has been noted in this last educational plan, will be stimulated to seek further information. Many will turn to their personal physician and aid him in breaking down the barriers of secrecy surrounding syphilis, by asking questions.

All counties should set up at least one

diagnosis and treatment clinic. This clinic should be located in the largest area of population so that it can serve the greatest number of people. Indigents and those residing in the county, who have been referred by their family physician, should be eligible. Until such time as drugs are furnished free of charge, the clinic may be operated on a pay and part-pay basis.

In the more remote sections, the local physicians should be encouraged to treat patients. At least, the drugs for indigents, and a fee for their services if possible should be furnished. By using a cooperative plan with these doctors, patients are assured of having treatment available without severe loss of time and money in transportation. This is very essential in a successful program for the patient treated over a long period of time becomes easily discouraged.

Field service is concerned chiefly with the checking up of contacts and sources of infection. Contacts should be carefully eliminated from the infected group; sources of infection carefully examined and treated if infected. The bloodtest should be popularized just as well as vaccination for small pox, diphtheria immunization and the

tuberculin tests. Every expectant mother and every prospective partner of marriage should be interested in this laboratory proceedure and encouraged to support it. Doctors should be taught the value of a darkfield examination and encouraged to use it for every suspicious lesion. Case finding is a very important factor in controlling syphilis. With such a program, Oregon would soon bring her syphilis load under control.

Portland is the largest center of population in Oregon, Since her contagious disease program is not directly supervised by the state board of health, her health officer could work out a similar program.

The public health nurse has a strategic role to play in the control of syphilis. If she is the right hand aid in the control of tuberculosis, she is at least the left hand force in this program.

If she has this important niche to fill, she must equip herself with a good understanding of the disease. Since her most frequent duty is being an interpreter between the doctor and the patient, she must have the ability and knowledge to do it. She is a stabilizer for the patient through his extreme emotional crisis. She must

keep an unemotional, though an understanding attitude and use the utmost of tact in caring for this type of patient.

Since little information has been available for the Oregon nurse, institutes would be a very acceptable source of information. They should cover such phases of syphilis as the types of disease, its course, methods of transmission, methods of diagnosis and treatment, prognosis, and social aspect. She must be encouraged to accept the responsibility of her part in its control as a section of a generalized program.

Dr. Stokes is the foremost authority in the nature of the disease. He has prepared a chart that although very technical, would be of value to any nurse.

Clinical Picture

Inoculation and Primary
cubation period--no clinical
gns of infection.

Primary Stage: Chancre
pears with wide variation in
cal reaction. Local lymph-
enitis(bulbo)Systemic symptoms
eadache, bone pains, etc.)may
pear in advance of upt-spoken
sions. Blood Wassermann and
ecipatations begin to become
sitive.

Pathological Background

1. Reproduction of Organism going on in perivascular lymph spaces, with destribution to blook, spleen bone marrow, etc. within 2 to 3 days after inoculation.

2. Lymphocytic and Plasma Cell infiltration produces papule and induration. Reproduction of organisms in chancre is at its height. Other similar foci developing through out the body, their number location and activity proportional to virulence of organism and peculiarities of hast. Spirochetes present in blood stream.

Clinical Picture	Pathological Background
3. Early Seconday Stage: Chancre begins to heal and widely distributed secondary skin manefestations develop with lymphodentis, enlargement of the spleen, bone lesions, changes in the nervous system etc. Special structures may be attacked as eye, ear, liver, kidney, with serious results. Refractory state develops, with positive blood Wassermann and precipitation reaction.	3. Local Immunity Reaction begins to destroy spirochetes in chancre and earlier secondary foci in viscera, as healing sets in. Enormous number of new foci established in skin, bones, lymphatics, voscera, etc. Systematic defense mechanisms, agglutinins, lysins etc. come in to play. Lymphocytes disappear from healing foci, fibrosis occurs, organisms may be completely or partially destroyed or surpressed in all stages of activity and decline throughout most of the body, wpirochetes numerous in blood stream, innumerable minute spirochetol rests established in pericapillary lympyatics with larger reservoirs in lymph-nodes.
. Late Secondary Stage: econdary eruption disappears pontaneously, systemic manifstations subside. Some symptoms from local foci may perist, such as palpable spleen r liver, active but asymptomatic neurosyphilis etc.	4. Enormous Destruction of Spirochetes throughout the body, complete in some foci, partial in some others, the latter providing basis for relapse. Spirochetes become fewer or disappear from the blood stream with occasional showers. Systematic resistance mechanism reaches highest development toward end of this period, leading to altency.
. Early Recurrent Stage: Any esion of the primary and secondry period may reappear but especially leisions on mucous surfaces. rimary lesion and secondary eruption may reappear if temprarly abted by treatment.	5. Defects in Local Resistance with revival of partially extinguished foci and new showers of spirochetes with new crops of lesions developing from them.
Latent and Recurant Stage: olonged absence of symptoms or riods of relative quiescene nctuated by relapse with lesions in bone, skin, mucous membanes especially. Lesions beme fewer in number due to arcity of spirochetes and more calized and destructive as in te syphilis due to developing llergy and vascular change.	6. Spirochates Much Diminished in number and held in suppression or commensalism in local foci and reservoirs by systematic and local defense at its highest development. Local lesions, however, may flare up, discharging a shower of organisms into circulation orlymphatic drainage area starting new crops of lesions insusceptible tissues, or servivng old ones Patients may be rendered temporarly

Clinical Picture	Pathological Background
	infectious to contacts or fetus may be infected for example. Chronic inflamatory defense active innumerable munute foci maintaining general immunity, but resulting in degenerative changes and fibrosis. Patient "living on his Parenchyma."
7. Late Syphilis Gummatous Phase: (tertiary Syphilis)Tumor-like lymphocytes and grandolomatous masses appear in various organs. Central necrosis from endarteric ischemia, extensive sloughs, much destruction of parenchyma and scaring. Lesions not clinically infectious.	7. Development of Allergic(?)Hypersusceptibility or effect of chronic vascular changes; wholesale tissue reaction to a small number of organisms. Spirochetes in the lesions few and far between. Cutaneous allergy of non specific type demonstratable in many cases.
8. Late Syphilis Degenerative Phase(Quaternary Syphilis or Parasyphilis)Degenerative lesions of cardiovascular and nervous systems, fibrosis of parenchymatous structure, such as liver, spleen, pancreas etc. Clinical changes and fatal results due to loss of parenchyma replaced by fibrous tissue, injury to the blood supply etc.	8. Spirochetes Present, at times numerous in some structures, but usually only to be found by special search of microscopic foci of tissue reactionis aorta, heart muscle, viscera, etc. Blood Wassermann may be negative.

Modern Clinical Syphology Stokes, John W. (fig.7-pg46)

this chart presents a clear picture of acquired syphilis.

Prenatal syphilis is perhaps, the most important type for the public health nurse. Frequently she meets the expectant mother before the doctor does. She can be instrumental in securing early prenatal supervision. The patient may secure the benefit as well as her child, of treatment before the fifth month if it is indicated.

The nurse's opportunity is unlimited in her infant supervision, preschool and school group if she is aware of suspicious symptoms. She should familiarize herself with the more common symptoms of prenatal syphilis. Some of the more common ones are:(1)

a. Skin eruptions--rarely before the third week of life--usually on the face and mouth regions, soles of feet and palms of hands and the ano-genital region.
b. Snuffles--may be mild in character, and is almost diagnostic if hemorrhagic.
c. Hacking of the lips.
d. Rhagades
e. Enlarged spleen.
f. The cry: cracked and aphonic
g. Pseudoparalysis; probably due to pain on movement.
h. Bone tenderness.
i. Saddle nose deformity(misleading in young infants).
j. Loss of weight
k. Unusual crying and fretting
l. Difficulty in feeding.

Other symptoms developing later (3 to 28 years of age--rarely after 30):

a. Eye lesions.
b. Interstitial keratitis.
c. Bosses
d. Sabre shins
e. Characteristic teeth
f. Deafness
g. Nervousness
h. Mental retardation.

The public health nurse should remember always that early treatment insures a hopeful recovery for the syphilitic patient.

Some knowledge of the laboratory side of syphilis is necessary for the nurse also. She should know about the various common types of tests used in its

(1) Stokes, John W. - Modern Clinical Syphology p. 1239

serodiagnosis. Oregon nurses are fortunate in having such a splendid state laboratory and should be familiar with the service it offers. She should keep abreast with this laboratory and know the types of tests used. The various tests most frequently used today are the Wassermann, Kahn, Hinton, Kline, and Eagle. She should remember these points: first that diagnosis does not rest entirely with the laboratory findings, second that serum from every suspicious lesion should have a darkfield examination. Frequently the spirochaete can be seen in the serum and the patient can begin treatment before his blood becomes positive, thire, that every patient should have a specimen of his spinal fluid examined before he is discharged as cured, preferably done at the end of the second or third month of treatment. The actual techniques of these tests are not important to her for this is a very special field in itself.

If the nurse is on duty in a clinic, she has several special responsibilities. She is usually delegated to care for the equipment. Needles need special care. They should be scruplously clean, free from hooks, and beveled carefully. (1) She should never offer a dull needle to the doctor, such carelessness in causing the patient needless pain is enexcusable. She should protect the doctor by

(1) Stokes, John W., Dermatology and Syphilology for Nurses. p. 255

being sure that the rubber gloves have no pricks or breaks in them. The doctor is in very close contact with the patient and should be assured at least of the protection of a whole glove. Most doctors prefer to prepare the drugs themselves. The nurse should have equipment for this ready and arranged systematically. The nurse should never administer treatment unless she has had special training for it. Frequently she has opportunity to talk with the patients. She can do much to help them understand the nature of their disease, and then help them in solving some of their personal problems, and encouraging them in remaining faithful with their treatment.

Case finding is a natural part of the public health nurses work. She has many opportunities in securing examinations and treatments for her patients. She visits contacts, sources of infections and encourages them to be examined. Always must she use her most tactful approach, her good judgment of human nature, and her true sympathy.

Frequently a series of events will bring to light a case of syphilis. One day a family physician referred a family to the local county health office. The family had a relative who had been working on

the farm. For some time the man had complained of a sore mouth and throat. It was suggested to the family by a friend that the man might be suffering from syphilis. Since one of the tiney tots of the family who had been with the relative a great deal of the time, developed a sore throat and mouth, the parents became very upset. The parents and children were examined at the health office. All were negative apparently except the father. He was placed under treatment. A careful venereal disease history indicated a possible source of infection before marriage. The public health nurse preformed all of the field service. She made the initial home call and arranged the appointments for examination. She had a private conference with the father, and explained to him the course of the disease and the value of continious treatment (frequently the doctor talks to male patients. In this case the doctor was not in when the patient called). She also attempted to strengthen the patients confidence in the health office. She visits occasionally at the home and has the rest of the family under supervision.

A child came into the office one day with his mother. He complained of a painful area on his

right knee. The child was referred to the University of Oregon Medical school clinic for further diagnosis. The X-Ray report was positive for osteomyelitis. Since the child had a positive reaction from his blood test, it was concluded that the osteomyelitis was due to a syphilitic condition. The nurse encouraged the mother to come in for a blood test for she knew that the child could not have prenatal syphilis unless the mother is infected. The mother's blood test was positive. In this case the original source of infection was the father. He had died a few months previous from the results of an accident. The mother reported that he had been taking "shots", but she didn't know what they were for. This report was confirmed by the local physician as being Leuetic treatment. The mother was phaced under treatment, too.

The nurse should aid the physician in noting the patient's symptoms. If these can be eliminated, the patient is more comfortable. Rashes, headaches and dizziness are especially important. Frequently they denote an idiocyncrasy to the drug or some further development in the progress of the disease. No symptom is too insignificant to report to the doctor.

The public health nurse is called upon to talk

to groups. Since people have been reading more about syphilis, they are anxious to have speakers on the subject. In talking to lay groups there are several points to remember First, have the subject material well in hand and approach it by classifing it definitely in the contagious disease group. This classification lessens the tension in the audience and readily convinces it that syphilis is a mentionable subject. Second, keep sensational material out of the talk. The folks present who came to the meeting for information will be happy to learn how to meet the problem, the sensation seekers will go to sleep. Third, stress the public health aspect rather than the social one. Public health nurses are better prepared to handle the subject in this manner and avoid many unpleasant situations, Fourth, make an appeal to the group for protection of the children. By turning the subject to children, an emotional appeal that i s universal, the subject syphilis is averted from personal consideration and led to a more general social need. If the nurse bears these points in imind, she will be gratified in seeing how freely her group asks questions and expresses itself. She also establishes herself with the

group in such a way that individuals will feel free to bring to her their personal worries. Frequently these conferences yield very starling results.

Since syphilis is a complex disease, there are many phases to be considered. The public health nurse should know something about the treatment of the disease just as she does in tuberculosis. Many times she will not be able to answer all the questions put to her. She should be able to direct her questioners to a source of reliable information.

Some day mental hygiene may play a very important part in the control of syphilis. This phase of public health should not be lost for the sake of mental and emotional health. When parents learn to lead their tiny babes into the world, equiped emotionally to face it, great accomplishment can be expected. A mental hygiene program should begin, not with the high school student or adult, but with the babe in arms. Habit formation begins the day the child is born. His first lesson should be self control. This lesson well learned will stand by him all his life. Self control plus smooth easy adaptability are the two keys to mental peace and happiness.

Syphilis is a new problem for the American

people. This disease was one of the unmentionables until the World War. During that time control was demonstrated under certain definite conditions. The Army served as a piece of good experiemental material. After the federal fiancial aid was withdrawn, general apathy descended over all the people. Syphilis did not stop its undermining of health and happiness. Once more folks are awakened with a stimulating program. Much talk about the disease and its control is in evidence. Once again the stage is set for a real program a life saving program. Let it be dependable and sure--one that renders permenant service to mankind. Most of all, let it be remembered that no program so closely interlocked with human emotions, can stand alone on mere treatment. Sympathy and human understanding are just as essential. Dr. John Stokes expresses this thought so ably in the closing paragraph of his address at the Venereal Disease Conference of December 1936.

"------While the door closes, may I remark, that all that has gone before is reduced to nothing unless you bring your patient to an unswerving allegiance to yourself and all you represent and advocate, by such a humanity of approach,

such an anticipation of his needs and problems as a being like yourself, as only the heart can compass. Injections of chemotherapeutic agents are merely mediated by the hand and head. Effective treatment for syphilis may indeed be mechanized to a certain perfection by knowledge. But the uprooting of the disease from its hold upon humanity is done by the eye, the voice, the understanding and sympathetic spirit, without which all our much gathering of knowledge is but the unliving dust."

BIBLIOGRAPHY

Books

Stokes, John W., M.D., Modern Clinical Syphology

Stokes, John W., M.D., Dermatology and Syphilology for Nurses

Becker, William D.,M.D., Ten Million Americans Have It

Parran, Thomas, M.D., Shadow on the Land

Warren, Carl, On Your Guard

Periodicals

Public Health Nursing, Vol. 29., Series of articles by Gladys L. Crain, Epidemiologist, Massachusetts. "The Public Health Nursin in Control of Syphilis and Gonorrhea"

Part I	January 1937 pp.5
Part II	February 1937, pp95
Part III	March 1937, pp.160
Part IV	April 1937, pp.237
Part V	May 1937, pp.303
Part VI	June 1937, pp. 376
Part VII	July 1937, pp. 435
Part VIII	August 1937, pp. 475

American Journal of Nursing, Vol. 38. No. 2 February 1938, Lee D. Cady M.D. " Syphilis"

American Journal of Nursing, Vol. 38. No. 2 February 1938, pp. 200-202 List of free and Inexpensive Materials on Veneral Diseases

Survey Graphic, Parran, Thomas, M D., "The Next Plague to Go" Setpember 1936

Periodicals (cont'd)

Survey Midmonthly, Lindenberg, Ruth Ellen, "Are You Afraid of Syphilis" February 1938

Venereal Disease Information, issued by the United States Public Health Service

Readers Digest, July 1936, March 1937

American Journal of Public Health, Vol.27 No. 1 January 1937

Pamphlets

Proceedings of Conference on Venereal Disease Control Work, Washington D.C. December, 1936.

Miscellaneous from:
Social Hygiene Division
Oregon State Board of Health
Public Health Service, U.S. Treasury Dept.
Metropolitan Life Insurance Co.
Treasury Department U.S Public Health Service

Special Material

Notes from special course on Venereal disease Western Rsesrve University. Summer session 1937. Prepared by Evangeline Morris R.N.

Work kit Health Center Boston, Massachuetts

The Controlof Gonorrhea and Syphilis in a Metropolitan Area, Detroit Department of Health

Facts About Syphilis, Department of Dermatology City Hospital Cleveland, O.

Collection of Pamphlets, Ohio State Board of Health
Detroit Department of Health
Illnois Department of Public Health