THE SOCIAL AND ECONOMIC ASPECTS OF GONORRHEA IN WOMEN

by

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PREVALENCE

In the female gonorrhea is a devastating curse whose complications, sterility, invalidism, obstinate infection and mutilating operations, are responsible for a major part of the work of the specialist in diseases of women. The prevalence of gonorrhea in the female has been variously estimated at from five to ten per cent among private patients and sixty to seventy-five per cent among prostitutes. The difficulties to be overcome have until recently prevented any serious attempt to determine the prevalence of gonorrhea in the general population. It is likely that we will never know with accuracy the full extent of the disease. The same is true, however, of many other diseases and should not discourage attempts to ascertain by all means available the prevalence, distribution and trend of new infections of gonorrhea. This information is basic as a guide to intelligent control efforts and a measure of their effect.

The Public Health Service with the cooperation of the American Social Hygiene Association and of State and local public health and medical organizations has devoted considerable effort in recent years to this problem. A number of methods have been followed. The most important has been a series of prevalence studies carried out in communities with a total population of more than 17,758,000, located in various parts of the United States and being representative of the population as a whole. In these communities statements were secured from practically every physician, hospital, clinic, and other institutions in which gonorr-
rhea might be treated as to the total number of cases under active
treatment or observation on a given date. From these studies consid-
erable new information is available as to extent of these new infections.
These data obviously by no means represents all the cases which exist
in the communities. For every case of gonorrhea under treatment there
are an unknown number of others equally in need of treatment. The
latest report showed that there were 15,496 cases of gonorrhea in women,
which reported for treatment or observation on the given specific day,
or 1.77 per thousand population.

The United States Public Health Annual Report by State Health
Departments show the following from 1919 to 1931. From thirty to fifty
per cent of cases listed below represent the number of cases of gonorrhea
in women.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
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<tbody>
<tr>
<td>1919</td>
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<td>1920</td>
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<td>158,083</td>
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</table>

In the case of gonorrhea we have a disease with not as many
cases constantly under medical care, but with an attack rate nearly twice
that for syphilis; one which in the individual case is less serious than
syphilis but in the aggregate competes with syphilis in the extent of its economic and social effects.

Another result of serious social implication is the blindness due to ophthalmia of the newborn, caused by infection of the mother at time of birth. This is a preventable and controllable disease and yet in figures from the Federal census, out of a total of 150,000 reported as blind, 1,198 were blind from ophthalmia neonatorum. This shows that about three per cent of total blindness in the United States is caused by ophthalmia neonatorum. Mayan reports that in 1931 of 231 children enrolled in the London County Council Blind Schools under eighteen years of age, 20.6% are blind from ophthalmia neonatorum.

The large incidence of gonorrhea is emphasized best by comparison of incidence of some of our other very common diseases. There is much evidence available to reveal that even those cases of gonorrhea which actually come under medical care are incompletely reported and yet there are twice as many new cases reported in a year as cases of diphtheria, more than four times the number of cases of small pox and six times the number of typhoid fever. In fact, in the twenty-six states where the reporting of all forms of tuberculosis is compulsory there were 14,000 more new cases of gonorrhea than cases of tuberculosis. This preponderance of gonorrhea amongst reportable communicable disease is even more pronounced when consideration is given to the fact that approximately thirty four per cent of cases of gonorrhea do not come to treatment while in the acute stage and that numerous cases of gonorrheal infection never
seek any medical treatment from physicians, but either are untreated or treated by unauthorized sources.

SOCIAL AND ECONOMIC EFFECTS

There are many distinctly economic phases in social hygiene which can make their appeal even to those who might not fully understand other implications. Some of these phases are so near to the surface of our every day life that it cannot but strike one as surprising that they have not more generally pushed themselves upon the public notice. One of these economic phases is the cost to the community of venereal diseases.

Industrial classes occasioned by venereal disease are very important. Our highly mechanized civilization makes doubly important the efficiency of the individual employee. Production rests mainly upon the efficiency of the employee. Many influences which operate to make an employee less efficient are intangible. They cannot be definitely located and given their true value. The venereal diseases, because of their clinical manifestations and laboratory methods of detection can be definitely found and listed as factors tending to produce inefficiency. When grave responsibility rests upon an employee, either in the way of valuable property handled or human life protected these disorders are singled out and persons afflicted with them are transferred to fields of lesser responsibility. The loss of time and of attention to business of persons afflicted with gonorrhea frequently causes them to be discharg-
ed from duty. Competition demands that employees be physically capable and mentally alert. The handicapped persons, for they are truly handicapped, fail to secure and hold the better positions. Modern business is not hampered by many external influences as are other activities.

Whatever produces results in terms of money will find ample means of justification. Modern business represents one of the most powerful of all instincts, self preservation as expressed in acquisition.

Women are an integral part of our business world. The entrance of women into gainful occupations varies from division to division. While the per cent of females ten years of age and over gainfully employed in the United States in 1930 was 22.1%, in the New England Division it was 27.6%, in the Middle Atlantic 24.6%, in the South Atlantic 24.1%, and in the Pacific 23.2%. In the 1920 census almost one-fourth of all women gainfully employed were married women and the census figures show an increasing proportion of married women who are entering the business world and industrial world. The 1930 census demonstrated this fact by showing that 10,000,000 women were then gainfully employed in occupations.

A medical investigation in a great industrial concern in which personnel efficiency had dropped below the expectations was reported as follows:

1. That one employee in every ten had gonorrhea or syphilis.
2. That sixty-eight per cent of the non-effective employees were on the sick list because of one of these diseases.

3. That every person who had gonorrhea or syphilis on an average lost three times as many hours from work as persons not infected.

4. That each person with gonorrhea or syphilis was paying out on the average of $75.00 per year for such treatment as was being received—a total of $50,000 with a loss of time greatly exceeding in money values of this amount.

An analysis of one thousand records applying for admission to the venereal clinic of the Detroit Department of Health in 1923 gave the following information. The average loss to each person in wages, cost of medical services and cost of drugs was $184.00. 41.5% of these lost their jobs as well. This was not a purely indigent group as one-third of them had sufficient means to begin treatment at once with a private physician. They had merely taken advantage of a free diagnosis. The average number of visits of the persons under treatment in 1920 was 15.74. If the average number of visits to the private physicians was as many, as it must have been to secure favorable results, then the thousands of women afflicted with gonorrhea in the United States in the past year, the total loss of wages and cost of treatment was a staggering sum.
From a report of the American Social Hygiene Association, comprising a summary of available information, indications are that among the general population between fifteen and forty, the number of days lost from work through venereal disease approximates at least 21,000,000 per annum. At an average rate of $4.00 per day, this amounts to $84,000,000 in wages lost, to say nothing of the cost to employers in compensation, relief and medical attention plus the difficulties of labor turnover and temporary substitute employees. A large share of this loss is sustained to the community and to women with gonorrhea as can be gleaned by the high incidence of gonorrhea in women and the large number of women engaged in gainful occupations.

Gonorrheal vaginitis in little girls is a problem which demands attention, by reason of its high incidence and suffering that it causes. By reason of its nature, chronicity, high degree of infectiousness, our lack of a specific method of treatment and cure and the social and economic factors involved, the disease presents a challenge to society. In communities the difficulty of continuing education of children so infected while they must be excluded from school is one which every responsible community must face.

Gonorrhea in little girls is a very chronic disease. Its average duration is four to five months and it may last as long as one or two years. There is a very high percent of recurrences, so children must be kept under observation for a long time. This makes the situation very difficult for the family and interferes seriously with the child's school
work. The high cost of hospital treatment seems out of proportion to
the severity of the disease and the child is in danger of psychic injury
from the long continued local examination of the genitalia. The law
forbids a child going to school as long as there is any danger of her
infecting others and there is a possibility of infection long after she is
subjectively well. The parents may even try to get her back to school
without the teacher knowing she is not yet cured. The teacher also
often shows lack of understanding and assumes a hostile attitude toward
the child because they think any form of venereal disease is a sin. This
also has a bad psychic effect on the child and the child may be greatly
injured mentally and physically.

Because many individuals and organizations in Washington inter-
rested in children and control of venereal disease felt that some edu-
cation of children who apparently were excluded from school for relative-
ly long periods of time due to infection, a limited study was undertaken
(April–June 1932) by the United States Children’s Bureau and the Social
Hygiene Society of the District of Columbia. Its aims were to determine
the facts regarding the probable number of such children, the period of
their exclusion from school, aspects of their social and economic back-
ground and of their treatment and the treatment facilities in Washington.
They found the following:

1. A total of 321 school children excluded from
   school for gonorrhea (259 being girls).
2. Most of them were of compulsory school age.

3. Some of the children had been placed under public care.

4. Neglect and absence of parental supervision is responsible for both accidental infection and that which may result from illicit sexual contact.

Onman of the Houston City Venereal Clinic found that the percent of gonorrheal infection in little girls is on the increase. The City of Houston in 1930 cared for twelve little girls with gonorrheal vaginitis and found that isolation and treatment of these twelve patients cost $500.00 per month. An effort was made to isolate all the gonorrheal cases in little girls as forty could be treated for the same amount that it took to isolate the twelve patients.

The most tragic sequelae to gonorrhea in women is contamination of the eyes of newborn. The cost of the upkeep of the many institutions for the blind are greatly increased by the large percent of those attending, blind as a result of ophthalmia neonatorum. In a series of 57 American Institutions for the Blind, for the school year 1923-24, 19.1% of the cases were credited to gonorrhea, while of 8,000 new admissions 11.5% were caused by the same disease. Lamb found 2% of the total number of cases of blindness to be ophthalmia neonatorum among those persons applying for a blind pension in Missouri. Mc Alister has estimated that the
education of the child blinded by gonorrhea approximates the cost of 7 normal children (in lost school hours and special care and medicinal treatment). Even on reaching adult life these blind persons are still liabilities from a crude economic standpoint, since the earning capacity of those who are gainfully employed is reduced by at least two-thirds, according to the Metropolitan Life Insurance Company in their special study of the burden of the handicapped to the State.

Then there are the costs to society, the costs whose estimates of the intangible are impossible. The costs in broken homes, suffering due to one child sterility, the suffering caused by ophthalmia neonatorum, severe endocarditis and even death.

PREVENTION AND CONTROL

Prevention and eradication of gonorrhea is of vital importance to the very structure of our nation. Science has seen this terrible enemy of man and knows its life history, but unlike smallpox, diphtheria, malaria or typhoid, it cannot protect the people by any means of immunization, control of food and water supply nor by any method except the treatment of infected cases and the cooperation of the public and physicians in the precautions indicated. There can be no eradication in one sex without the eradication in the other. A good deal is being done but apparently much greater effort is necessary as gained from high incidence of gonorrhea at the present day.

William F. Snow has suggested the following four points for
solution of the problem of gonorrhea.

1. Measures for the location and control of sources of infection.

2. Measures for reduction in the number of contacts and in the liability of infection developing after exposure.

3. Measures for elimination of environmental and other conditions favorable to transmission of the spirochaete and the gonococci.

4. Measures for promotion through character building agencies and influences of knowledge and control of sex as a factor in human life.

Practically all infections occur from direct contact between infected and susceptible persons and we have no general sources of infection with which to control such as milk, insect carriers and other modes of transmission in many diseases. On the other hand, practically all infected individuals are carriers at some stage of their infection and many of them are infectious for long periods of time without any manifestation of ill health to call attention to their condition. To deal with the problem, first we must discover cases. Then this demands efficient and well trained physicians and technicians for clinical and laboratory diagnostic work. This requires the physician's office, clinic and hospital facilities of extensive equipment and personnel. Third, we
must get in touch with persons having intimate contact with the cases discovered. Fourth, selection of treatment which will render patients non-infectious at the earliest moment compatible with due regards to the interests of the patient. Fifth, isolation or quarantine of those cases which cannot be rendered non-infectious, must be carried out to the extent necessary to insure protection to the public.

Having set in operation every measure which may be devised on the basis of our present knowledge regarding diagnosis, treatment and follow-up of individuals already infected, there remains certain things we may attempt in an endeavor to protect those who have been exposed but in whom infection may not as yet have developed, and other activities which we may undertake to reduce the number of contacts of susceptible persons with infectious cases.

1. The most successful of these measures is the disinfection of the eyes of the newborn babies to prevent gonorrheal ophthalmia. Experimental work by Karl Sigmund Franz Crede during the period from 1879 to 1881, for the first time standardized methods of protecting the eyes of the newborn and convinced the world that sore eyes in babies would nearly always be prevented. The prophylactic measures urged by Crede were slow to be adapted. In this country we cannot claim to have urged the use of silver nitrate routinely until within the last twenty five years and
in some states great laxity in the enforcement of
this prophylactic procedure is still apparent.
Annually figures are gathered from schools for edu-
cating the blind as a check against what is now hap-
pening compared with years gone by. Most of the
large schools for educating the blind send in detail-
ed reports based on diagnoses made by attending
ophthalmologists. In 1907, 28.2% of admissions were
reported blind from birth infections in eyes, while in
1929 9.3% have been reported blind from this cause.
The decline has been so steady and consistent, even
when midwife procedure has been far from perfect, that
the value of prophylaxis of the eyes of the newborn
as a protective measure cannot be doubted.

2. A similar measure equally sound scientifically but
greatly limited in practice because of administrative
difficulties is chemical disinfection of adults after
exposure.

3. Of unmeasurable but undoubtedly great value are the
programs of information regarding the nature of and
spread of the venereal diseases and the application
of this knowledge by the individualized citizen to his
or her own protection from infection.
4. Finally, the special instruction of infected persons concerning avoidance of contact with others is vitally important.

Also, there is the group of measures which have to do with the elimination of environmental and other conditions favorable to the transmission of the venereal diseases. First among these are the facilities for wholesome recreation and use of leisure time. The remarkable story of what was done for army and navy men during the war is too fresh in our minds to need any elaboration. The second type of activities in this group has been called protective measures. Here we have a wide range of efforts between the time when boys and girls begin to be "wayward" or to drift toward delinquency, and the time when society through its police and law officers take custodial charge of them. These protective measures are in turn succeeded by the third series of more formal legal measures.

Finally, among these groupings of measures calculated to aid in solving this problem, high value should be placed upon the promotion through building agencies of knowledge and of sex as a factor in human life. The home stands first among these agencies and influences. The school is a close second and the church is the third of these great institutions, which are in a position to affect profoundly people of all ages in respect to their view and conduct in regard to sex life.

For a period of years during the World War and shortly after,
many laws were enacted with the result that almost every state at the present time has a fairly satisfactory working set. Every state has some kind of law requiring reporting of venereal diseases. Forty three states provide for compulsory examination of suspected persons and isolation and quarantine when necessary, and thirty five states now have laws against quackery. Twenty one states legally have persons infected with a venereal disease unable to marry until various conditions have been met. Much legislation has been enacted for the protection of young people, the delinquents, the prevention of crime and for enabling administrative officers to deal with sex problems in health, conduct and law enforcement. Obviously, a great deal remains to be done, but is gratifying to note the additional helpful legislation being put into effect each year.

There seems to be no doubt that gonorrhea represents one of the greatest liabilities of mankind. Gonorrhea will and must give way before the advance of medical knowledge and the intelligent cooperation of the every day man and woman.
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