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VD Fact Sheet



U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

Division of Venereal Disease - Office of Statistics

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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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INTRODUCTION

The VD Fact Sheet is intended to serve persons interested in public health and venereal disease problems as a handy source of basic statistics on the venereal diseases in the United States. The extent of the problem facing venereal disease control is indicated by the data on current incidence and prevalence while the costs of uncontrolled venereal disease and the frequency of psychoses and deaths from syphilis are indicative of the seriousness of the VD problem. On the other hand, the results of the control program are indicated by trends for the past several years in incidence, prevalence, admissions to mental institutions, and deaths. The results of case-finding effort are measured in terms of cases reported while the actual amount of case-finding effort by public facilities is described by the volume of diagnostic examinations and epidemiologic activity. Since there is no agent for immunizing the population, the only feasible means of controlling venereal diseases are the finding and treating of cases. Therefore, facts about the efficacy of various types of treatment are very necessary to an understanding of venereal disease control.

Facts on these various measures of the VD problem and program are presented in the text and tables which follow. The information is current as of the date of publication and supersedes any previously published data. Where no source is cited, the data presented are based on statistics collected by the Division of Venereal Disease or upon estimates made by the Division. Where data are indicated as being for "fiscal years", the period runs from July 1 of the previous year to June 30 of the year indicated on the table. Rates per 100,000 population shown in this Fact Sheet are based on appropriate population estimates obtained from the Bureau of the Census.

Blair, J.W., Infort, A.P., Differential Control of Venereal Diseases, *Journal of Venereal Disease Information*, 29:231-239, August 1948.

INCIDENCE

The incidence of a disease is defined as the number of new cases occurring in a given area within a specified period of time, usually one year. As in many other diseases, the true incidence of syphilis is not known because many cases are not discovered until they have entered the later stages and because some cases may escape detection completely. Furthermore, because of incomplete reporting, some discovered cases do not come to the attention of health officials. Estimates of syphilis incidence, however, have been prepared from available data on trends of reported cases in each stage of syphilis and are shown in Table 1. The estimates shown may not agree with those previously published because estimates of incidence in past years have been revised to reflect current reporting of syphilis in the later stages.

Less is known about the incidence of gonorrhea, but it is estimated to be at least eight times the syphilis incidence.

TABLE 1

ESTIMATED INCIDENCE OF SYPHILIS
Continental U.S. and Armed Forces a/ Fiscal Years 1941-1953

Fiscal Year	Estimated Incidence	
	Civilians Only	Civilians and Armed Forces <u>a/</u>
1941	320,000	326,000
1942	321,000	335,000
1943	349,000	377,000
1944	301,000	347,000
1945	267,000	320,000
1946	280,000	339,000
1947	280,000	305,000
1948	233,000	248,000
1949	187,000	198,000
1950	144,000	151,000
1951	117,000	123,000
1952	99,000	106,000
1953	91,000	96,000

a/ Includes Armed Forces Overseas

PREVALENCE

The prevalence of a disease is defined as the total number of cases existing in a specified area at a point of time. The true prevalence of syphilis in the United States has not, of course, been established since this would require the examination of every person in the country within a minimal period of time. Estimates of prevalence have been made, however, and it is now estimated that there are 2,000,000 persons in the United States requiring treatment for syphilis.

From time to time prevalence data have been obtained on large groups of persons. One of these groups, Selective Service Registrants examined for military service in World War II, was not only a large group but a fairly random selection of the young male population. The syphilis prevalence rates per 1,000 examined, by age and race, for the first two million registrants examined are shown below.

TABLE 2
PREVALENCE RATES OF SYPHILIS DETECTED PER 1,000 MALE SELECTEES
AND VOLUNTEERS EXAMINED
November 1940 to August 1941, By Color and Age

Age Groups	White	Non-white	Other and Unknown	Total
18-20	11.1	105.8	29.7	55.1
21-25	10.2	191.7	25.3	30.1
26-30	21.0	294.8	46.6	54.4
31-35	37.9	357.8	80.6	83.5
36-40	44.4	375.6	103.2	101.9
TOTAL	17.6	245.2	41.0	46.1

In 1946, the prevalence of syphilis among examined sexual contacts of persons known to have primary or secondary syphilis was approximately 50 percent for white males, 51 percent for white females, 55 percent for nonwhite males, and 59 percent for nonwhite females. ^{1/} More recent data available for the total of all contacts to primary or secondary syphilis, indicate that 33 percent of contacts examined in 1952 were infected compared to 54 percent in 1946. ^{2/}

No prevalence estimates of the other venereal diseases are available.

^{1/} Rion, J.W.; Iskrant, A.P.: Differentials in the Process of Contact Investigation. Journal of Venereal Disease Information, 29:231-239, August 1948.

^{2/} Results in the two years are from comparable areas submitting contact investigation data to the Division of Venereal Disease.

COSTS OF UNCONTROLLED SYPHILIS

The statistics presented in Table 3 indicate the toll imposed by syphilis upon the manpower and economy of the country.

The estimate of man-years of disability for institutionalization for syphilitic insanity has been based on total number of patients in mental institutions and the proportion diagnosed as syphilitic psychotics in institutions caring for over half the mental patients in the country. Patients in State, county, private and Veterans Administration hospitals for the permanent care of the insane are included.

The cost of maintenance is based upon the number of syphilitic psychotics in tax supported institutions and average per patient maintenance cost. It represents the cost of syphilitic insanity to the public since the maintenance cost for the three percent of syphilitic psychotics maintained in private institutions has not been included. The loss of income and tax payments reflects the probable earnings and tax payments of male patients had they been self-supporting in 1951. This is based on the average earnings per employed worker and average income tax payments per adult for that year.

Disability attributed to cardiovascular syphilis and to locomotor ataxia is based on conservative estimates of the prevalence of these late manifestations of syphilis.

The loss of life expectancy indicates the loss of future years of life for persons dying of syphilis in 1950 based on the expected years of life remaining to persons of that age, race, and sex. The loss of income indicates the possible earnings of these persons for the productive years of life lost to age 65 at the average 1950 per adult income.

While disability and death from syphilis have been diminishing in recent years, costs and losses per case have been rising. As a result of this, total costs and income losses from syphilitic disability and deaths remain high compared to previous estimates.

TABLE 3

ESTIMATED ANNUAL COSTS OF UNCONTROLLED SYPHILIS ^{a/}

Man-years of Syphilis Disability Per Year	
Institutionalization for syphilitic insanity (1951)	39,000
Disability from cardiovascular syphilis, including aneurysm (1951).....	9,900
Disability from locomotor ataxia (1951).....	1,400
Disability from syphilitic blindness (1951).....	26,000
Economic Costs of Syphilitic Psychoses and Syphilitic Blindness Per Year	
Maintenance of patients with syphilitic psychoses (1951).....	\$40,295,000
Loss of income by males with syphilitic psychoses (1951).....	95,500,000
Loss of State and Federal income tax payments from patients with syphilitic psychoses (1951).....	9,075,000
Maintenance of syphilitic blind (1951).....	12,500,000
Loss of Life Expectancy Due to Syphilis in Man Years Per Year (1950)	
White Male.....	59,844
White Female.....	25,096
Non-White Male.....	37,243
Non-White Female.....	19,829
Total Population.....	142,012
Loss of Income to Age 65 at 1950 per Adult Income Rate	\$136,000,000

^{a/} Revised estimates based on most recent available data for years indicated.

REPORTED MORTALITY AND INSANITY DUE TO SYPHILIS

Mortality statistics are compiled by the National Office of Vital Statistics from duplicates of death certificates filed with State or local registrars. Mortality rates for syphilis are calculated by dividing the number of deaths in a given year by the population for that year and multiplying by 100,000 (rate per 100,000 population). The infant mortality rate for syphilis for a given year is obtained by dividing the deaths due to syphilis among children under one year of age by the number of live births in that year multiplied by 1,000 (rate per 1,000 live births).

Since deaths from syphilis represent casefinding and treatment failures, mortality due to syphilis may be considered an inverse measure of the success of the syphilis control program.

The method of classifying deaths is revised decennially by international agreement. These revisions have at times affected the continuity of syphilis mortality statistics. The Sixth Revision of the International Lists of Causes of Death which became effective in 1949 reduced reported syphilis deaths by about 26 percent. (Vital Statistics in the U.S., 1949, P.H.S., and Statistical Letter No. 23, August 1949 V.D. Division.) Mortality rates given in this Fact Sheet have been adjusted to the basis of the Sixth Revision for all years previous to 1949, using provisional comparability ratios. Infant mortality was affected very little by the Sixth Revision, and no adjustment was made.

Insanity due to syphilis is measured by the rate of first admissions to mental hospitals because of syphilis. Excluded, are admission to psychopathic hospitals which provide only temporary care and admissions to Veterans Administration facilities. The number of admissions is obtained from "Patients in Mental Institutions" published by the National Institute of Mental Health. Since only first admissions are included in the rate, the figures over a period of years represent a measure of the trend of incidence of syphilitic insanity.

Data on mortality and insanity due to syphilis are presented in Table 4.

Total Population.....	125,012
Rate of Income to Age 65 at 1950 per Adult Income Rate.....	2136,000,000

Revised estimates based on most recent available data for years indicated.

TABLE 4

REPORTED MORTALITY AND INSANITY DUE TO SYPHILIS

Continental U.S.

1939 - 1952

Calendar Year	Syphilis Mortality Rates Per 100,000 Population a/			Infant Mortality Due to Syphilis, Rates per 1,000 Live Births			First Admissions to Mental Hospitals Due to Syphilis Rates per 100,000 Population b/
	Total	White	Non-White	Total	White	Non-White	Total
1939	11.1	7.7	40.8	.57	.28	2.60	6.6
1940	10.7	7.3	40.2	.53	.25	2.52	6.1
1941	9.9	6.9	35.2	.41	.18	2.10	6.1
1942	9.0	6.4	31.4	.30	.15	1.50	6.1
1943	9.0	6.4	31.2	.25	.12	1.28	5.8
1944	8.3	5.8	29.3	.27	.12	1.35	5.6
1945	7.9	5.6	27.3	.25	.11	1.26	5.5
1946	6.9	4.9	23.8	.16	.07	.92	4.7
1947	6.5	4.7	22.1	.14	.05	.82	4.2
1948	5.9	4.2	19.9	.12	.05	.63	3.7
1949	5.8	4.2	19.2	.08	.03	.44	3.2
1950	5.0	3.7	16.1	.06	.02	.26	2.6
1951	4.1	3.0	13.4	.02	.01 <u>c/</u>	.11 <u>c/</u>	2.1
1952	3.7 <u>c/</u>						

a/ Sixth Revision, International Lists of Causes of Death; see Mortality, Page 6 for explanation

b/ Does not include admissions to V.A. and Psychopathic Hospitals; rate based on population of area reporting

c/ Estimated

Sources: Mortality and Natality Data, National Office of Vital Statistics
 First Admissions to Mental Hospitals, National Institute of Mental Health
 Rates based on population estimates of the Bureau of the Census

REPORTED CASES OF VENEREAL DISEASES

All States require that syphilis cases coming to medical attention be reported to the State or local health officer. Gonorrhea is a reportable disease in all States except one, and the other venereal diseases are reportable in most States. Quarterly, each State submits to the Public Health Service a summary of the cases reported to it. All cases not previously reported, regardless of duration, are to be included in the report. The reported morbidity, as reported cases are sometimes called, indicates the volume of successful casefinding.

The trend of reported cases of early syphilis (or reported case rates) over a period of years may be indicative of incidence trends if no significant changes in casefinding effort have occurred. Reported cases of syphilis in the later stages may be considered as an indication of past casefinding failure as well as present success. Trends in reported cases must be interpreted with caution since changes in case-finding effort are reflected in morbidity data just as much as changes in incidence and prevalence.

It is believed that the current downward trend in reported morbidity reflects real decreases in incidence and prevalence. As there becomes fewer cases, however, casefinding becomes increasingly difficult so that there is a distinct possibility that downward trends in incidence and prevalence are not as great as might appear from the study of reported case trends.

Reported cases of gonorrhea indicate the known volume of successful gonorrhea casefinding and may be used as a minimum estimate of incidence. Reporting of gonorrhea is not as accurate as that of syphilis.

Reported cases of venereal diseases are shown in Tables 5 through 9.

HEALTH DEPARTMENT CASE-FINDING ACTIVITIES

The correct interpretation of casefinding success depends upon a knowledge of the volume of case-finding effort. Table 10 shows the volume of case-finding effort in public clinics and cases of venereal disease found through these efforts. Total activity is indicated by the number of diagnostic examinations performed and investigations completed. The section on contact investigation indices indicates the volume of contacts named and the success in finding cases of syphilis on a per patient basis. It should be noted that at least one infected contact should be identified for each case of primary or secondary syphilis.

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TABLE 5

CASES OF SYPHILIS AND GONORRHEA REPORTED TO THE PUBLIC HEALTH SERVICE
BY STATE HEALTH DEPARTMENTS, AND RATES PER 100,000 POPULATION
All Reporting Areas in Continental U.S.
1919 - 1953

Fiscal Year	SYPHILIS		GONORRHEA	
	Cases	Rates per 100,000	Cases	Rates per 100,000
1919	100,466	113.2	131,193	147.8
1920	142,869	145.3	172,387	175.4
1921	184,090	172.3	189,927	177.7
1922	171,824	157.7	152,959	140.4
1923	172,258	156.2	156,826	142.2
1924	194,936	174.2	161,676	144.5
1925	201,692	181.2	166,208	149.3
1926	205,595	196.1	164,808	157.2
1927	196,457	171.9	160,793	140.7
1928	185,437	174.2	147,219	138.3
1929	195,559	169.2	156,544	135.4
1930	213,309	185.4	155,875	135.5
1931	229,720	197.4	155,895	134.0
1932	242,128	208.2	154,051	132.5
1933	238,656	193.4	149,823	121.4
1934	231,129	186.7	153,542	124.1
1935	255,856	205.6	162,763	130.8
1936	267,717	212.6	163,465	129.8
1937	336,258	264.3	182,460	143.4
1938	480,140	372.0	198,439	153.8
1939*	478,738	367.1	182,314	139.8
1940	472,900	359.7	175,841	133.8
1941	485,560	368.2	193,468	146.7
1942	479,601	363.4	212,403	160.9
1943	575,593	447.0	275,070	213.6
1944	467,755	367.9	300,676	236.5
1945	359,114	282.3	287,181	225.8
1946	363,647	271.7	368,020	275.0
1947	372,963	264.6	400,639	284.2
1948	338,141	234.7	363,014	252.0
1949	288,736	197.3	331,661	226.7
1950	229,723	154.2	303,992	204.0
1951	198,640	131.8	270,459	179.5
1952	168,734	110.8	245,633	161.3
1953	156,099	100.8	243,857	157.4

*Beginning in 1939 all States are included in the reporting area

Note: Military Cases excluded after 1940
Rates based on population estimates of the Bureau of the Census

TABLE 6

CASES OF VENEREAL DISEASES REPORTED TO THE PUBLIC HEALTH SERVICE
FISCAL YEARS 1944 - 1953
(Known Military Cases Are Excluded)

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YEAR	SYPHILIS					GONORRHEA	OTHER VENEREAL DISEASES		
	Total Syphilis a/	Primary and Secondary	Early Latent	Late and Late Latent	Congenital		Chancroid	Granuloma Inguinale	Lympho-Granuloma Venereum
In States and Territories									
1944	482,281	80,341	125,936	208,282	15,709	307,595	8,046	1,772	2,906
1945	370,948	78,649	105,514	145,931	14,730	295,881	5,657	1,880	2,705
1946	373,631	96,222	111,240	128,492	14,181	375,761	7,366	2,244	2,653
1947	382,095	107,716	111,514	124,274	14,115	409,776	9,356	2,413	2,740
1948	345,992	81,428	101,399	125,938	14,510	372,167	8,853	2,325	2,518
1949	296,551	54,919	87,994	123,890	15,667	342,863	7,363	2,618	2,182
1950	238,640	32,838	68,392	115,363	15,062	313,517	5,890	2,022	1,653
1951	208,137	18,709	55,734	110,864	14,638	278,898	4,769	1,645	1,341
1952	176,462	12,447	40,646	105,389	10,426	253,984	3,969	1,089	1,237
1953 b/	162,805	9,855	33,831	103,970	8,986	251,986	3,579	791	1,111
In Continental United States									
1944	467,755	78,443	123,038	202,848	13,578	300,676	7,878	1,759	2,858
1945	359,114	77,007	101,719	142,187	12,339	287,181	5,515	1,857	2,631
1946	363,647	94,957	107,924	125,248	12,106	368,020	7,091	2,232	2,603
1947	372,963	106,539	107,767	121,980	12,271	400,639	9,039	2,403	2,688
1948	338,141	80,528	97,745	123,972	13,309	363,014	8,631	2,315	2,494
1949	288,736	54,248	84,331	121,931	14,295	331,661	7,218	2,611	2,170
1950	229,723	32,148	64,786	112,424	13,446	303,992	5,796	2,017	1,635
1951	198,640	18,211	52,309	107,133	12,836	270,459	4,707	1,637	1,332
1952	168,734	11,991	38,365	101,920	9,240	245,633	3,837	1,069	1,235
1953 b/	156,099	9,551	32,287	100,195	8,021	243,857	3,490	785	1,103

a/ Includes "Stage of Syphilis Not Stated"

b/ Provisional

TABLE 7

REPORTED SYPHILIS CASE RATES PER 100,000 POPULATION
FISCAL YEARS 1944 - 1953

Fiscal Year	Total Including Not Stated	Primary and Secondary	Primary, Secondary and Early Latent	Congenital	Late and Late Latent
Continental U.S. Civilians					
1944	367.9	61.7	158.5	10.7	159.6
1945	282.3	60.5	140.5	9.7	111.8
1946	271.7	70.9	151.6	9.0	93.6
1947	264.6	75.6	152.0	8.7	86.5
1948	234.7	55.9	123.8	9.2	86.1
1949	197.3	37.1	94.7	9.8	83.3
1950	154.2	21.6	65.1	9.0	75.5
1951	131.8	12.1	46.8	8.5	71.1
1952	110.8	7.9	33.1	6.1	66.9
1953 ^{b/}	100.8	6.2	27.0	5.2	64.7
Total Armed Forces ^{a/} and Continental U.S. Civilians					
1944	373.2	90.4	179.8	9.9	147.4
1945	295.8	93.2	166.3	8.9	102.1
1946	300.8	109.8	186.5	8.6	89.0
1947	279.2	92.6	168.1	8.6	85.4
1948	242.9	65.8	133.0	9.1	85.2
1949	203.1	44.7	101.7	9.7	82.4
1950	157.3	26.1	69.1	8.9	74.7
1951	133.3	15.4	49.6	8.4	70.0
1952	112.9	12.3	36.9	5.9	65.4
1953 ^{b/}	101.9	9.4	29.8	5.1	63.2

^{a/} Includes U.S. Armed Forces Overseas
^{b/} Provisional

Source: Based on data provided by the various Armed Services and the Division of Venereal Disease. Populations used in computing rates from estimates of the Bureau of the Census.

TABLE 8

REPORTED VENEREAL DISEASE CASE RATES PER 100,000 POPULATION BY COLOR AND SEX
CONTINENTAL U.S. CIVILIANS
Fiscal Years 1949 - 1953

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Disease, Stage and Year		TOTAL			WHITE			NON-WHITE		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Total Syphilis (Includes Not Stated)	1949	197.3	195.3	199.3	81.4	91.0	72.0	1177.7	1090.5	1260.2
	1950	154.2	151.5	156.8	62.9	69.4	56.5	917.4	846.7	984.4
	1951	131.8	135.4	128.3	52.5	60.4	45.0	790.2	766.9	812.0
	1952	110.8	114.4	107.4	45.9	52.4	39.5	646.4	631.7	659.9
	1953 <u>a/</u>	100.8	103.2	98.5	41.9	47.4	36.6	596.4	577.7	613.8
Primary and Secondary Syphilis	1949	37.1	41.5	32.7	16.4	20.6	12.4	211.5	221.7	201.9
	1950	21.6	24.1	19.2	9.4	11.7	7.2	123.1	128.6	118.0
	1951	12.1	13.9	10.3	5.0	6.5	3.6	70.9	76.2	66.0
	1952	7.9	9.4	6.4	3.3	4.4	2.3	45.5	51.2	40.3
	1953 <u>a/</u>	6.2	7.5	4.9	2.7	3.7	1.7	35.6	40.2	31.4
Early Latent Syphilis	1949	57.6	46.4	68.5	17.3	15.6	19.1	398.2	311.4	480.4
	1950	43.5	34.3	52.4	13.2	11.7	14.7	296.4	225.4	363.8
	1951	34.7	31.1	38.2	10.1	10.0	10.1	239.2	208.2	268.2
	1952	25.2	21.4	28.8	7.4	7.0	7.9	171.3	141.7	198.7
	1953 <u>a/</u>	20.8	17.5	24.0	6.3	6.1	6.6	142.9	115.3	168.5
Late and Late Latent Syphilis	1949	83.3	87.6	79.1	38.3	44.5	32.2	464.2	458.5	469.7
	1950	75.5	79.7	71.3	34.6	40.2	29.1	417.1	414.4	419.7
	1951	71.1	76.7	65.7	31.5	37.5	25.7	400.0	406.3	394.2
	1952	66.9	73.3	60.9	30.1	36.1	24.3	370.5	383.4	358.6
	1953 <u>a/</u>	64.7	69.4	60.2	28.9	34.0	24.0	366.0	371.0	361.3
Congenital Syphilis	1949	9.8	8.7	10.8	3.7	3.2	4.2	60.8	56.2	65.2
	1950	9.0	8.0	10.0	3.1	2.4	3.7	58.5	55.1	61.9
	1951	8.5	7.8	9.2	2.9	2.4	3.3	55.4	52.6	58.0
	1952	6.1	5.2	6.9	2.4	1.9	2.9	36.3	32.8	39.5
	1953 <u>a/</u>	5.2	4.5	5.9	2.1	1.5	2.6	31.3	29.4	33.1
Gonorrhea	1949	226.7	323.8	132.3	77.9	105.7	50.9	1484.3	2196.7	810.6
	1950	204.0	292.7	117.9	59.2	78.9	40.0	1414.3	2103.2	760.6
	1951	179.5	260.9	101.3	47.3	65.7	29.5	1277.2	1903.5	689.9
	1952	161.3	226.3	99.4	41.0	55.8	27.0	1149.6	1648.1	688.8
	1953 <u>a/</u>	157.4	216.4	101.7	38.3	52.6	24.8	1159.4	1609.2	742.2

a/ Provisional

Populations used to calculate rates are from estimates by the Bureau of the Census

TABLE 9

REPORTED VENEREAL DISEASE CASE RATES PER 100,000 POPULATION
Continental U.S. Civilians, By State
Fiscal Year 1953

STATE	SYPHILIS		GONORRHEA	OTHER VENEREAL DISEASES
	Total	All Early a/		
Alabama	70.75	27.35	120.70	5.21
Arizona	271.88	115.76	162.35	2.12
Arkansas	144.06	36.44	101.97	6.63
California	62.15	16.58	147.19	2.39
Colorado	27.11	9.30	71.09	1.95
Connecticut	45.52	9.10	38.43	0.57
Delaware	122.51	42.98	61.70	0.58
District of Columbia	468.06	113.05	1560.46	79.97
Florida	310.34	133.41	370.24	21.78
Georgia	85.49	41.65	400.38	16.05
Idaho	42.12	8.22	52.05	1.54
Illinois	72.17	22.02	237.11	1.93
Indiana	60.88	17.80	49.81	0.61
Iowa	52.38	10.25	27.51	0.23
Kansas	107.38	29.67	66.67	0.98
Kentucky	58.83	16.38	115.44	2.23
Louisiana	311.64	56.72	302.70	14.66
Maine	17.10	3.74	16.08	0.23
Maryland	115.51	27.13	328.93	3.81
Massachusetts	32.05	6.22	32.20	0.30
Michigan	112.51	24.46	118.48	0.94
Minnesota	13.32	2.59	20.52	0
Mississippi	167.13	30.66	417.88	9.32
Missouri	93.93	22.53	108.63	1.32
Montana	21.11	7.43	31.59	0
Nebraska	44.12	8.56	38.24	0.15
Nevada	141.01	28.65	123.60	2.25
New Hampshire	24.81	3.03	9.09	0
New Jersey	78.10	24.75	101.15	2.33
New Mexico	78.09	26.83	100.28	1.83
New York	189.62	25.95	98.02	2.49
North Carolina	84.33	41.64	343.52	6.44
North Dakota	16.61	4.98	22.92	0.17
Ohio	113.73	32.36	96.28	2.04
Oklahoma	93.46	18.51	194.38	2.06
Oregon	36.67	8.76	36.17	0.44
Pennsylvania	41.74	16.00	81.40	0.50
Rhode Island	68.67	10.49	17.77	0
South Carolina	297.73	80.76	274.21	7.12
South Dakota	22.46	9.85	33.38	0.15
Tennessee	106.64	41.81	521.60	6.06
Texas	74.25	30.29	245.67	2.20
Utah	32.61	6.96	27.42	0
Vermont	42.28	9.76	16.80	0.54
Virginia	188.60	57.74	250.63	4.33
Washington	23.69	5.45	67.59	1.89
West Virginia	154.75	30.12	116.71	2.54
Wisconsin	34.31	8.36	23.54	0.29
Wyoming	44.90	17.35	40.48	0
TOTAL				
CONTINENTAL U.S.	100.77	27.01	157.42	3.47

a/ Includes primary, secondary and early latent syphilis

Source: Cases - quarterly morbidity reports submitted to PHS

Population - estimates prepared by the Bureau of the Census

TABLE 10
HEALTH DEPARTMENT CASEFINDING ACTIVITIES
Fiscal Years 1949 - 1953

Clinic and Epidemiologic Data	1949	1950	1951	1952	1953 ^{a/}
Diagnostic examinations in public clinics.....	2,276,957	2,717,707	2,547,485	2,318,786	2,591,511
Percent of examinations in which one or more venereal diseases were found.....	20.3	15.7	14.7	14.5	13.4
Previously untreated syphilis cases found per 100 examined.....	5.7	3.9	3.4	3.0	2.5
Previously untreated primary-secondary syphilis cases found per 100 examined.....	1.3	.7	0.4	0.3	0.2
Previously untreated gonorrhea cases found per 100 examined.....	11.7	9.3	9.0	9.1	8.4
Number of contact investigations completed.....	381,464	341,495	314,356	291,253	297,823
Number of other suspect investigations completed.....	153,850	149,557	155,087	145,906	168,834
Contact investigation indices:					
Approximate number of contacts obtained from each previously untreated primary-secondary syphilis patient (contact index).....	2.63	2.84	3.06	3.04	2.79
Approximate number of syphilis infections identified in the contacts of each previously untreated primary and secondary patient (epidemiologic index).....	.77	.74	.68	.68	.62
Approximate number of syphilis infections brought to treatment in the contacts of each previously untreated primary and secondary patient (brought-to-treatment index)	.43	.41	.38	.39	.36
Approximate number of primary and secondary syphilis brought to treatment in the contacts of each previously untreated primary and secondary patient (lesion-to-lesion index).....	.20	.19	.18	.20	.20

^{a/} Provisional

FACTS ABOUT CONGENITAL SYPHILIS

INCIDENCE

Because of the inadequacy of case finding of congenital syphilis, many cases are not found early in life and thus the true incidence cannot be determined. The incidence of congenital syphilis has, however, been estimated as 3,400 cases in the fiscal year 1953.

PREVALENCE

The current prevalence of congenital syphilis in the Continental United States among children under 10 years of age is estimated as 68,000 cases.

REPORTED CASES

TABLE 11
REPORTED CASES OF CONGENITAL SYPHILIS, BY AGE

Age	Fiscal Year 1951		Fiscal Year 1952		Fiscal Year 1953	
	Number	Percent	Number	Percent	Number	Percent
0 - 1 Year	701	6.2	551	6.7	331	5.1
1 - 4 Years	817	7.2	426	5.2	265	4.1
5 - 9 Years	2,003	17.7	1,104	13.5	749	11.6
10 Years and Over	7,787	68.9	6,108	74.6	5,134	79.2
Total, Known Age	11,308	100.0	8,189	100.0	6,479	100.0
Unknown Age	1,528	-	1,051	-	1,542	-
Grand Total	12,836	-	9,240	-	8,021	-

REPORTED CASES UNDER 1 YEAR OF AGE

Reported case rate of congenital syphilis under 1 year of age per 10,000 live births was 2.2 in the fiscal year 1951, 1.5 in the fiscal year 1952, and .9 in the fiscal year 1953.

INFANT MORTALITY DUE TO SYPHILIS - See Table 4

PENICILLIN IN THE TREATMENT OF SYPHILIS

EARLY SYPHILIS

Procaine penicillin in oil with 2% aluminum monostearate (PAM) is the most widely used penicillin preparation for out-patient therapy for early syphilis. A minimum of 2,400,000 units is recommended for primary syphilis; a minimum of 4,800,000 units for secondary syphilis. A comparison of schedules utilizing varying amounts of PAM in the treatment of secondary syphilis is presented in Tables 13a and 13b. Results are shown for the 12th and 24th month following treatment. Table 13b also includes percent satisfactory (negative STS or 4 Kahn units or less) for patients observed longer than 24 months.

A relatively new preparation, N,N' dibenzylethylenediamine dipenicillin G (Bicillin*) has been used on an experimental basis in the treatment of early syphilis. Preliminary results (as of November 1953) following a single injection of 2,500,000 units and covering an observation period of 18 months are shown in Table 14. To date, 4 patients have been re-treated, representing a cumulative retreatment rate of 3.5 percent (2.5 percent reinfection and 1.0 percent serorelapse). In addition, two patients at the 15th month (or one at the 18th month) are possible treatment failures. If considered as such, the "failure" rate at 15 and 18 months after treatment would be 6.4 percent if reinfections are included or 3.9 percent if reinfections are excluded.

CONGENITAL SYPHILIS

In congenital syphilis, the earlier penicillin therapy is instituted, the more satisfactory the results. Preliminary results, 15-18 months after treatment, are shown in Table 12 by child's age at time of treatment. All types and amounts of penicillin are included.

TABLE 12

Age	Number Treated	Number Observed	Percent Seronegative	Percent Seropositive	Percent Retreated
Under 3 months	158	34	93.4	0	6.6
3 - 5 months	237	68	87.8	7.0	5.2
6 - 11 months	172	54	65.6	30.0	4.5
12-24 months	241	50	33.5	59.4	7.1

*Trade names are used for identification only and do not represent endorsement by the Public Health Service.

TABLE 13a

TREATMENT OF SECONDARY SYPHILIS WITH PROCAINE
PENICILLIN AND ALUMINUM MONOSTEARATE

Results at 12 Months After Treatment

Center or group of centers	Schedule of Therapy	Cases Observed	Cumulative percent re-treated	Not re-treated			
				Seropositive		Seronegative	
				Number	Percent	Number	Percent
A	2,400,000 units - 1,200,000 q 4 days	74	7.7	13	17.6	55	74.7
	2,400,000 units - 1 session	154	7.7	26	16.9	116	75.4
	4,800,000 units - 1 session	106	5.4	14	13.2	86	81.4
	1,200,000 units - 1 injection	101	24.4	19	18.9	57	56.6
B	2,400,000 units - 1,200,000 q 7 days	113	10.6	31	27.4	70	62.0
	4,800,000 units - 1,200,000 q 7 days	127	8.3	29	22.9	87	68.7
	4,800,000 units - 2,400,000 q 7 days	89	6.7	16	18.0	67	75.4
C	9,600,000 units - 600,000 q 3-4 days	84	3.4	20	23.9	61	72.8
	Units per Kilogram of Body Weight						
D	5,000 units or less	11	46.2	3	26.9	3	26.9
	10,000 units	36	21.7	12	33.6	16	44.8
	20,000 units	37	18.1	9	24.5	21	57.3
	40,000 units	170	12.0	51	30.0	99	58.2
	80,000 units	160	11.7	31	19.4	110	68.9
E	300,000 units - 1 injection	30	25.7	10	33.8	12	40.6
	1,800,000 units - 600,000 q 24 hrs.	23	14.8	-	-	20	85.2
F	30,000 units k/g - 1 injection	202	10.2	44	21.8	137	68.0
	3,600,000 units - 600,000 q 24 hrs.	76	6.4	16	21.1	55	72.6
G	4,800,000 units - 2.4, 1.2, 1.2 q 96 hrs.	39	5.5	8	20.4	29	74.1
	4,800,000 units - 1 injection	34	7.7	6	17.9	25	74.4

TABLE 13b

TREATMENT OF SECONDARY SYPHILIS WITH PROCAINE
PENICILLIN AND ALUMINUM MONOSTEARATE

Results at 24 Months After Treatment

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Center or group of centers	Schedule of Therapy	Cases Observed	Cumulative percent re-treated	Not re-treated				Percent Satisfactory* after 2 years observation
				Seropositive		Seronegative		
				Number	Percent	Number	Percent	
A	2,400,000 units - 1,200,000 q 4 days	28	10.6	1	3.6	24	85.8	89.4
	2,400,000 units - 1 session	110	10.7	6	5.5	92	83.9	89.3
	4,800,000 units - 1 session	50	5.4	3	6.0	44	88.6	94.6
B	1,200,000 units - 1 injection	54	26.5	5	9.2	35	64.2	73.4
	2,400,000 units - 1,200,000 q 7 days	45	17.3	4	8.9	33	73.8	77.8
	4,800,000 units - 1,200,000 q 7 days	44	12.8	6	13.8	32	73.4	87.1
C	4,800,000 units - 2,400,000 q 7 days	43	8.0	3	6.9	37	85.2	92.1
	9,600,000 units - 600,000 q 3-4 days	70	4.6	5	7.1	62	88.3	92.3
	Units per Kilogram of Body Weight							
D	5,000 units or less	11	46.2	3	26.9	3	26.9	26.9
	10,000 units	25	36.4	4	15.9	12	47.7	47.7
	20,000 units	21	28.6	5	23.7	10	47.5	71.2
	40,000 units	91	19.9	15	16.5	58	63.6	71.7
	80,000 units	100	15.8	8	8.0	76	76.3	78.2
E	300,000 units - 1 injection	24	41.5	3	12.5	11	46.0	58.5
	1,800,000 units - 600,000 q 24 hrs.	19	14.8	-	-	16	85.2	85.2
F	30,000 units k/g - 1 injection	123	15.0	15	12.1	90	72.9	79.3
	3,600,000 units - 600,000 q 24 hrs.	18	6.4	1	5.5	16	88.2	93.7
G	4,800,000 units - 2.4, 1.2, 1.2 q 96 hrs.	13	8.6	1	7.6	11	83.9	91.5
	4,800,000 units - 1 injection	16	7.7	-	-	15	92.2	92.2

*Negative or 4 Kahn units or less.

TABLE 14

PRELIMINARY REPORT OF RESULTS OF A SINGLE INJECTION OF
2,500,000 UNITS OF BICILLIN* IN THE TREATMENT OF
PREVIOUSLY UNTREATED EARLY SYPHILIS

Months of Observation	Total Cases Observed	Cumulative Percent Re-treated	Not Re-treated			
			Seropositive		Seronegative	
			Number	Percent	Number	Percent
Primary Syphilis - 75 Cases						
3	67	0.0	16	23.9	51	76.1
6	50	0.0	7	14.0	43	86.0
9	35	2.1	2	5.8	32	92.1
12	26	2.1	1	3.9	24	93.9
15	20	2.1	1	4.9	19	93.0
18	11	2.1	-	0.0	11	97.9
Secondary Syphilis - 111 Cases						
3	105	0.0	82	78.1	23	21.9
6	81	1.1	34	42.0	46	56.9
9	67	2.6	16	24.0	49	73.4
12	52	4.1	7	13.4	43	82.4
15	48	4.1	6	12.5	40	83.3
18	22	4.1	1	4.4	21	91.5
Total Syphilis - 186 Cases						
3	172	0.0	98	57.0	74	43.0
6	131	0.7	41	31.3	89	68.0
9	102	2.5	18	17.7	81	79.8
12	78	3.5	8	10.3	67	86.2
15	68	3.5	7	10.2	59	86.2
18	34	3.5	1	2.9	32	93.5

* See footnote on Page 16.

SYPHILIS IN PREGNANCY

Penicillin is effective therapy for the prevention of congenital syphilis. In two studies, comprising 528 live births, approximately 98 percent of the children were nonsyphilitic (Table 15). The percentage varied slightly by stage of mother's syphilis at time of treatment during pregnancy.

TABLE 15

OUTCOME OF PREGNANCY BY STAGE OF SYPHILIS AT TIME OF MOTHER'S TREATMENT DURING PREGNANCY

Stage of disease at time of Mother's Treatment with Penicillin	Total Live Births		Nonsyphilitic		Syphilitic	
	Number	Percent	Number	Percent	Number	Percent
A. Aqueous Penicillin - 2,400,000 units or more						
Primary or Secondary	160	100.0	156	97.5	4	2.5
Early Latent	90	100.0	89	98.8	1	1.1
TOTAL	250	100.0	245	98.0	5	2.0
B. PAM - One Session - 30,000 - 80,000 u/kg						
Primary or Secondary	48	100.0	45	93.8	3	6.2
Early Latent	174	100.0	172	98.9	2	1.1
Late (Latent, CNS, Congenital)	56	100.0	56	100.0	0	0.0
TOTAL	278	100.0	273	98.2	5	1.8
Total A and B						
Primary or Secondary	208	100.0	201	96.6	7	3.4
Early Latent	264	100.0	261	98.9	3	1.1
Late (Latent, CNS, Congenital)	56	100.0	56	100.0	0	0.0
TOTAL	528	100.0	518	98.1	10	1.9

In the absence of relapse or reinfection, a woman treated with penicillin for syphilis will not require further treatment in the event of pregnancy. The two syphilitic children reported in Table 16 were born to mothers with an unsatisfactory course following treatment for secondary syphilis - one was reinfected, the other experienced a serologic relapse.

TABLE 16

OUTCOME OF PREGNANCY IN WOMEN TREATED FOR SYPHILIS
PRIOR TO, BUT NOT DURING, PREGNANCY

	Total Live Births		Nonsyphilitic		Syphilitic	
	Number	Percent	Number	Percent	Number	Percent
Series A	154	100.0	153	99.4	1	0.6
Series B	229	100.0	228	99.6	1	0.4
TOTAL	383	100.0	381	99.5	2	0.5