

VD FACT SHEET - 1967

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

Basic Statistics on the Venereal Disease Problem in the United States

VD FACT SHEET 1967

Twenty-Fourth Revision

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL
NATIONAL
COMMUNICABLE DISEASE CENTER
Atlanta, Georgia 30333

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Introduction

The VD Fact Sheet is intended as a handy source of basic statistics on the venereal diseases in the United States. In this booklet, public health specialists, students, physicians, and other persons interested in medical data will find venereal diseases measured by incidence and prevalence. The general public will find tables showing the costs of uncontrolled venereal disease and the frequency of psychoses and deaths from syphilis. While the results of case-finding are measured in terms of cases reported, the actual amount of casefinding effort is seen in the volume of diagnostic examinations and epidemiologic activity. As there is no agent for immunizing the population, finding and treating cases continues to be the only feasible means of controlling venereal disease.

Facts on these aspects of the venereal disease problem and program are presented in the text and tables which follow. The information is current as of the date of publication, and it supersedes any previously published data. Where no source is cited, the data presented are based on the statistics collected by the Venereal Disease Program of the National Communicable Disease Center, or upon estimates made by the Program. Where data are indicated as being for "fiscal years," the period runs from July 1 of the previous year through 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.

Incidence and Prevalence

The incidence of syphilis is defined as the number of new cases occurring in a given area within a specified period of time, usually a year.

Since the symptoms of primary and secondary syphilis appear soon after the disease is acquired, the number of primary and secondary cases occurring in the population within a given period of time would be the same as the incidence of syphilis.

Cases of primary and secondary syphilis are reportable by law in all of the 50 States and the District of Columbia. In the fiscal year ending June 30, 1967, physicians and clinics in the United States reported 21,090 cases to State or local departments of health. But the number of cases reported understates actual incidence for two reasons:

1. Not all cases are diagnosed, and
2. Not all diagnosed cases are reported.

The Venereal Disease Program currently estimates that the actual occurrence of syphilis was about 80,000 cases in Fiscal Year 1967 of which 21,090 were diagnosed and reported to health departments.

Cases of syphilis which occur but go untreated cumulate to form a large reservoir of cases needing treatment. This reservoir of cases needing treatment (prevalence), most of which are in the latent stage of disease and are detectable only by means of bloodtests, is currently estimated to number about 639,000.

Gonorrhea is underreported for the same reasons given above for the underreporting of syphilis but the problem of underdiagnosis is more acute in females than males due to the frequent asymptomatic nature of disease in the female. The Venereal Disease Program estimates that at least 1,200,000 cases of gonorrhea occurred in the United States in Fiscal Year 1967, of which 376,000 were diagnosed and reported to health departments.

Costs of Uncontrolled Syphilis

The statistics presented in Table 1 (next page) indicate the toll imposed by syphilis upon the manpower and economy of the country.

The estimate of man-years of disability for institutionalization of the syphilitic insane is based on the total number of patients in mental institutions and upon the proportion of those diagnosed as having syphilitic psychoses. Patients in State, county, and Veterans Administration hospitals for the permanent care of the insane are included.

The cost of maintenance is based upon the number of patients with syphilitic psychoses in tax supported institutions and upon the average per patient maintenance cost. Approximately three percent of patients with syphilitic psychoses are maintained in private institutions and these have not been included in this report.

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 1965. The loss of life expectancy is based on the expected years of life remaining to persons of that age, color and sex. The loss of income is based on projected earnings of these persons for the productive years of life lost to age 65. The estimated earnings are based on the median total money income rate for adults for 1965.

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

On the basis of findings of research conducted in Macon County, Alabama, it has been estimated that the life expectancy of a Negro male between the ages of 25 and 60 years, infected with syphilis and receiving no appreciable treatment for his infection, is reduced by about 17 percent.*

*Shafer, J.K.; Usilton, Lida J.; Gleeson, Geraldine A.: Untreated Syphilis in the Male Negro: A prospective study of the effect on life expectancy. Public Health Reports, 69:684-690, July 1954. Milbank Memorial Fund Quarterly, 32:262-274, July 1954.

TABLE 1
ESTIMATED ANNUAL COSTS OF UNCONTROLLED SYPHILIS
UNITED STATES, 1965*

MAN-YEARS OF SYPHILIS DISABILITY PER YEAR

Institutionalization for syphilitic insanity	15,505
Disability from cardiovascular syphilis including aneurysm	7,600
Disability from syphilitic blindness	6,000

ECONOMIC COSTS OF SYPHILITIC PSYCHOSES
AND SYPHILITIC BLINDNESS PER YEAR

Maintenance of patients with syphilitic psychoses	\$45,184,000
Compensation to syphilitic blind	\$ 6,624,000

LOSS OF LIFE EXPECTANCY FROM DEATHS DUE TO SYPHILIS IN MAN-YEARS

White males	17,489
White females	7,946
Non-white males	7,592
Non-white females	4,278
Total population	37,305

LOSS OF INCOME TO AGE 65 AT 1965 MEDIAN TOTAL MONEY INCOME RATE \$36,187,000

*Estimates based on most recent year (1965) for which data is available.

Reported Mortality and Insanity Due to Syphilis

Mortality statistics are processed and tabulated in the National Center for Health Statistics (NCHS) from microfilm copies of the original 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 number of deaths due to syphilis among children under one year of age by the number of live births in the year multiplied by 10,000 (rate per 10,000 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.

It has been the practice since 1900 to revise the International Lists of Diseases and Causes of Death about every 10 years to keep abreast of medical progress. 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. In "The Seventh Revision of the International Lists of Causes of Death," which was published in 1955 and became effective beginning January 1958, an increase of 3.3 percent for syphilis and its sequelae occurred by reason of a change in interpretation of "aneurysm of the aorta" reported in a sequence involving arteriosclerosis of sites other than the aorta. It should be noted, however, that the interpretation of such sequences reverted in 1959 to that used with the Sixth Revision. Mortality rates given in this FACT SHEET have been adjusted to the basis of the Seventh Revision. No adjustment was made for infant mortality since it was affected very little by changes in the Seventh Revision.

Insanity due to syphilis is measured by the rate of first admissions to mental hospitals because of syphilis. Excluded are first admissions 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 2 (next page).

TABLE 2

REPORTED MORTALITY AND INSANITY DUE TO SYPHILIS
UNITED STATES
SELECTED YEARS 1940-1967

Calendar Year	SYPHILIS MORTALITY*				INFANT MORTALITY DUE TO SYPHILIS				FIRST ADMISSIONS TO MENTAL HOSPITALS DUE TO SYPHILIS	
	Total Number	Rate Per 100,000 Pop.			Total Number	Rate Per 10,000 Live Births			Rate/100,000 Number	Pop.** Rate
		Total	White	Nonwhite		Total	White	Nonwhite		
1940	14,064	10.7	7.3	40.2	1,251	5.30	2.50	25.20	7,694	6.1
1945	10,406	7.9	5.6	27.3	684	2.50	1.07	12.59	6,897	5.5
1950	7,568	5.0	3.7	16.1	201	.57	.24	2.59	3,751	2.6
1951	6,274	4.1	3.0	13.4	129	.34	.12	1.73	3,035	2.1
1952	5,719	3.7	2.7	11.4	92	.24	.10	1.14	2,602	1.8
1953	5,273	3.3	2.4	10.9	56	.14	.04	.77	2,360	1.5
1954	4,835	3.0	2.3	9.2	43	.11	.03	.54	2,145	1.3
1955	3,834	2.4	1.7	7.9	34	.08	.03	.41	1,663	1.0
1956	3,870	2.3	1.7	7.1	30	.06	.02	.31	1,373	.8
1957	3,825	2.2	1.7	6.9	20	.06	.05	.16	1,307	.8
1958	3,469	2.0	1.5	6.4	29	.07	.02	.36	1,321	.6
1959	3,069	1.7	1.3	4.9	19	.06	.02	.23	774	.4
1960	2,945	1.6	1.3	4.5	30	.07	.04	.24	742	.4
1961	2,850	1.6	1.2	4.5	20	.05	.02	.18	639	.3
1962	2,811	1.5	1.2	3.9	29	.07	.02	.33	452	.2
1963	2,666	1.4	1.1	3.5	19	.07	.01	.22	312	.1
1964	2,619	1.4	1.1	3.2	20	.05	.02	.18	260	.1
1965	2,434	1.3	1.1	2.7	25	.07	.04	.20	232	.1
1966***	2,480	1.3	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1967***	2,445	1.2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

* Seventh Revision, International Lists of Causes of Death, 1955; see Mortality, Page 5 for explanation.

** Does not include admissions to Veterans Administration and psychopathic hospitals; rate based on population of area reporting.

*** Estimated.

N.A.: Not Available Source: Mortality and Natality Data, National Vital Statistics Division; 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 Disease

All States require that each case of syphilis and gonorrhea which comes to medical attention must be reported to the State or local health officer. The other venereal diseases are also reportable in most States. Every three months, each State submits to the Public Health Service a statistical summary of cases reported during the quarter. All cases not previously reported in the State, regardless of duration of infection or treatment status, are to be counted in the statistical report of cases. Reported morbidity, as reported cases are sometimes called, indicates the volume of successful casefinding.

The trend of reported cases or case rates of early syphilis over a period of years may be indicative of incidence trends if no significant changes in casefinding efforts or completeness of case reporting have occurred. Similarly, the trend of reported cases of syphilis in all stages of disease can be interpreted as indicative of prevalence trends subject to the limitations imposed by changes in casefinding efforts and completeness of case reporting. For these reasons, trends in reported cases and rates must be interpreted with caution since changes in casefinding efforts and completeness of case reporting are reflected in morbidity data just as much as changes in disease incidence and prevalence.

Reported venereal disease cases and rates are shown in Tables 3 through 9. Of particular recent interest are the decreases in primary and secondary syphilis cases which occurred in Fiscal Years 1966 and 1967 after eight successive years of increases, the increases measuring as much as 50 percent per year in the years 1960 and 1961. Reported cases of gonorrhea have increased in nine of the last ten years. During the last decade, gonorrhea cases increased by 74 percent while cases per capita increased 49 percent.

The differences in reported cases and rates between color groups as shown in Table 5 may be biased because nonwhites tend to utilize public diagnostic and treatment facilities where reporting is complete and whites tend to seek treatment at private diagnostic facilities where reporting is not complete.

The trend of reported cases of congenital syphilis by age is shown in Table 6, and Tables 7 and 8 show age specific cases and rates by color and sex for primary and secondary syphilis and for gonorrhea.

TABLE 3

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 United States
Fiscal Years 1919-1940

Fiscal Year	ALL STAGES OF SYPHILIS		GONORRHEA	
	Cases	Rates	Cases	Rates
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

NOTE: Beginning in 1939, all States are included in the reporting area.

TABLE 4

CASES OF VENEREAL DISEASE REPORTED TO THE PUBLIC HEALTH SERVICE BY
STATE HEALTH DEPARTMENTS, AND RATES PER 100,000 POPULATION
Fiscal Years 1941-1967
(Known Military Cases Excluded)
United States

Fiscal Years	SYPHILIS										GONORRHEA		CHAN- CROID		GRANULOMA INGUINALE		LYMPHO- GRANULOMA VENEREUM	
	All Stages*		Primary and Secondary		Early Latent		Late and Late Latent		Congenital									
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
1941	485,560	368.2	68,231	51.7	109,018	82.6	202,984	153.9	17,600	13.4	193,468	146.7	3,384	2.5	639	.4	1,381	1.0
1942	479,601	363.4	75,312	57.0	116,245	88.0	202,064	153.1	16,918	12.8	212,403	160.9	5,477	4.1	1,278	.9	1,888	1.4
1943	575,593	447.0	82,204	63.8	149,390	116.0	251,958	195.7	16,164	12.6	275,070	213.6	8,354	6.4	1,748	1.3	2,593	2.0
1944	467,755	367.9	78,443	61.6	123,038	96.7	202,848	159.6	13,578	10.7	300,676	236.5	7,878	6.1	1,759	1.3	2,858	2.2
1945	359,114	282.3	77,007	60.5	101,719	79.9	142,187	111.8	12,339	9.7	287,181	225.8	5,515	4.3	1,857	1.4	2,631	2.0
1946	363,647	271.7	94,957	70.9	107,924	80.6	125,248	93.6	12,106	9.0	368,020	275.0	7,091	5.2	2,232	1.6	2,603	1.9
1947	372,963	264.6	106,539	75.6	107,767	76.4	121,980	86.5	12,271	8.7	400,639	284.2	9,039	6.4	2,403	1.7	2,688	1.9
1948	338,141	234.7	80,528	55.9	97,745	67.9	123,972	86.1	13,309	9.2	363,014	252.0	8,631	6.0	2,315	1.6	2,494	1.7
1949	288,736	197.3	54,248	37.1	84,331	57.6	121,931	83.3	14,295	9.8	331,661	226.7	7,218	4.9	2,611	1.8	2,170	1.5
1950	229,723	154.2	32,148	21.6	64,786	43.5	112,424	75.5	13,446	9.0	303,992	204.0	5,796	3.9	2,017	1.4	1,635	1.1
1951	198,640	131.8	18,211	12.1	52,309	34.7	107,133	71.1	12,836	8.5	270,459	179.5	5,707	3.1	1,637	1.1	1,332	.9
1952	168,734	110.8	11,991	7.9	38,365	25.2	101,920	66.9	9,240	6.1	245,633	161.3	3,837	2.5	1,069	.7	1,235	.8
1953	156,099	100.8	9,551	6.2	32,287	20.8	100,195	64.7	8,021	5.2	243,857	157.4	3,490	2.3	785	.5	1,103	.7
1954	137,876	87.5	7,688	4.9	24,999	15.9	93,601	59.4	7,234	4.6	239,661	152.0	3,294	2.1	607	.4	917	.6
1955	122,075	76.0	6,516	4.1	21,553	13.4	84,741	52.7	5,515	3.4	239,787	149.2	2,863	1.8	584	.4	875	.5
1956	126,219	77.1	6,757	4.1	20,014	12.2	89,851	54.8	5,535	3.4	233,333	142.4	2,322	1.4	419	.3	602	.4
1957	130,552	78.3	6,251	3.8	19,046	11.4	96,856	58.1	5,452	3.3	216,476	129.8	1,860	1.1	348	.2	449	.3
1958	116,630	68.5	6,661	3.9	16,698	9.8	85,974	50.5	4,839	2.8	220,191	129.3	1,574	.9	332	.2	436	.3
1959	119,981	69.3	8,178	4.7	17,592	10.2	86,776	50.1	5,215	3.0	237,318	137.1	1,604	.9	282	.2	485	.3
1960	120,249	68.0	12,471	7.1	16,829	9.5	84,195	47.6	4,593	2.6	246,697	139.6	1,555	.9	273	.2	800	.5
1961	125,262	69.7	18,781	10.4	19,146	10.7	80,942	45.0	4,388	2.4	265,665	147.8	1,595	.9	296	.2	842	.5
1962	124,188	68.1	20,084	11.0	19,924	10.9	78,264	42.9	4,085	2.2	260,468	142.8	1,401	.8	203	.1	635	.3
1963	128,450	69.3	22,045	11.9	18,683	10.1	81,736	44.1	4,140	2.2	270,076	145.7	1,242	.7	196	.1	589	.3
1964	118,247	62.9	22,733	12.1	18,104	9.6	72,184	38.4	3,737	2.0	290,603	154.5	1,260	.7	145	.1	543	.3
1965	113,018	59.7	23,250	12.3	17,315	9.1	67,636	35.7	3,505	1.9	310,155	163.8	1,083	.6	144	.1	873	.5
1966	110,128	57.1	22,473	11.6	16,974	8.8	66,149	34.3	3,464	1.8	334,949	173.6	950	.5	164	.1	625	.3
1967	103,546	53.2	21,090	10.8	15,618	8.0	62,653	32.2	3,050	1.6	375,606	193.0	787	.4	128	.1	380	.2

*Includes "Stage of Syphilis Not Stated."

TABLE 5

REPORTED VENEREAL DISEASE CASE AND CASE RATES PER 100,000 POPULATION BY COLOR AND SEX
Fiscal Years 1963-1967
(Known Military Cases Excluded)
UNITED STATES

Disease, Stage	Fiscal Year	Total						White						Nonwhite					
		Total		Male		Female		Total		Male		Female		Total		Male		Female	
		Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
All Stages of Syphilis*	1963	128,450	69.3	70,530	78.1	57,920	60.9	55,434	33.9	32,499	40.7	22,935	27.3	73,016	337.9	38,031	364.7	34,985	312.9
	1964	118,247	62.9	65,291	71.4	52,956	54.8	50,015	30.1	29,454	36.5	20,561	24.1	68,232	310.0	35,837	338.0	32,395	284.0
	1965	113,018	59.7	62,388	67.9	50,630	52.0	44,643	26.7	26,479	32.6	18,164	21.3	68,375	304.9	35,909	332.5	32,466	279.2
	1966	110,128	57.1	60,935	65.0	49,193	49.5	41,269	24.3	24,239	29.3	17,030	19.5	68,859	299.9	36,696	243.9	32,163	270.2
	1967	103,546	53.2	56,250	59.7	47,296	47.1	40,485	23.6	23,206	28.0	17,279	19.5	63,061	272.2	33,044	297.4	30,017	249.1
Primary and Secondary Syphilis	1963	22,045	11.9	14,074	15.6	7,971	8.4	6,128	3.8	4,800	6.0	1,328	1.6	15,917	73.7	9,274	88.9	6,643	59.4
	1964	22,733	12.1	14,349	15.7	8,384	8.7	6,153	3.7	4,815	5.9	1,338	1.5	16,580	75.3	9,534	89.9	7,046	61.7
	1965	23,250	12.3	14,351	15.6	8,899	9.1	5,571	3.3	4,213	5.2	1,358	1.6	17,679	78.8	10,138	93.9	7,541	64.8
	1966	22,473	11.6	13,730	14.6	8,743	8.8	4,736	2.8	3,567	4.3	1,169	1.3	17,737	77.2	10,163	67.6	7,574	63.6
	1967	21,090	10.8	12,903	13.7	8,187	8.2	4,501	2.6	3,314	4.0	1,187	1.3	16,589	71.6	9,589	86.3	7,000	58.1
Early Latent Syphilis	1963	18,683	10.1	10,010	11.0	8,673	9.1	6,282	3.4	3,965	5.0	2,317	2.8	12,401	57.4	6,045	58.0	6,356	56.8
	1964	18,104	9.6	9,880	10.8	8,224	8.5	5,614	3.4	3,652	4.5	1,962	2.3	12,490	56.8	6,228	58.7	6,262	54.9
	1965	17,315	9.1	9,522	10.4	7,793	8.0	4,695	2.8	3,179	3.9	1,516	1.8	12,620	56.3	6,343	58.7	6,277	54.0
	1966	16,974	8.8	9,729	10.4	7,245	7.3	4,399	2.6	2,963	3.6	1,436	1.6	12,575	54.8	6,766	44.9	5,809	48.8
	1967	15,618	8.0	8,358	8.9	7,260	7.2	4,093	2.4	2,558	3.1	1,535	1.7	11,525	49.8	5,800	52.2	5,725	47.5
Late and Late Latent Syphilis	1963	81,736	44.1	44,083	48.8	37,653	39.6	40,042	24.9	22,552	28.2	17,490	20.8	41,694	192.9	21,531	206.5	20,163	180.3
	1964	72,184	38.4	38,882	42.5	33,302	34.4	35,604	21.4	19,895	24.7	15,709	18.4	36,580	166.2	18,987	179.1	17,593	154.3
	1965	67,636	35.7	36,578	39.8	31,058	31.9	31,993	19.2	18,133	22.3	13,860	16.2	35,643	158.9	18,445	170.8	17,198	147.9
	1966	66,149	34.3	35,586	38.0	30,563	30.8	29,905	17.6	16,772	20.3	13,133	15.1	36,244	157.8	18,814	125.1	17,430	146.4
	1967	62,653	32.2	33,240	35.3	29,413	29.3	29,778	17.4	16,429	19.8	13,349	15.1	32,875	141.9	16,811	151.3	16,064	133.3
Congenital Syphilis	1963	4,140	2.2	1,497	1.7	2,643	2.8	1,938	1.2	684	.9	1,254	1.5	2,202	10.2	813	7.8	1,389	12.5
	1964	3,737	2.0	1,396	1.5	2,341	2.4	1,794	1.1	644	.8	1,150	1.4	1,943	8.8	752	7.1	1,191	10.5
	1965	3,505	1.9	1,284	1.4	2,221	2.3	1,647	1.0	575	.7	1,072	1.3	1,858	8.3	709	6.6	1,149	9.9
	1966	3,464	1.8	1,345	1.4	2,119	2.1	1,546	.9	589	.7	957	1.1	1,918	8.4	756	5.0	1,162	9.8
	1967	3,050	1.6	1,154	1.2	1,896	1.9	1,368	.8	496	.6	872	1.0	1,682	7.2	658	5.9	1,024	8.5
Gonorrhea	1963	270,076	145.7	199,289	220.7	70,787	74.5	75,354	46.0	55,329	69.3	20,025	23.9	194,722	901.1	143,960	1380.4	50,762	454.0
	1964	290,603	154.5	217,633	238.1	72,970	75.5	81,280	49.0	59,056	73.1	22,224	26.1	209,323	951.0	158,577	1495.6	50,746	444.8
	1965	310,155	163.8	233,224	253.6	76,931	79.0	86,055	51.6	62,201	76.6	23,854	27.8	224,100	999.2	171,023	1583.7	53,077	456.4
	1966	334,949	173.6	253,392	270.3	81,557	82.2	94,108	55.3	67,561	81.8	26,547	30.4	240,841	1048.7	185,831	1235.6	55,010	462.1
	1967	375,606	193.0	284,255	301.8	91,351	91.0	109,181	63.7	78,410	94.4	30,771	34.8	266,425	1150.2	205,845	1852.1	60,580	502.8

*Includes "Stage of Syphilis Not Stated."

TABLE 6a

REPORTED CASES OF CONGENITAL SYPHILIS, BY AGE*
 UNITED STATES
 Fiscal Years 1964-1967

Age Group	1964		1965		1966		1967	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
0 - 1 Year	374	10.0	373	10.6	370	10.7	398	13.1
1 - 4 Years	59	1.6	59	1.7	33	1.0	26	0.9
5 - 9 Years	24	0.6	44	1.3	72	2.1	37	1.2
10 Years and Over	3,280	87.8	3,029	86.4	2,989	86.2	2,589	84.8
GRAND TOTAL	3,737	100.0	3,505	100.0	3,464	100.0	3,050	100.0

*Approximately 90% of congenital cases reported by age. Cases not reported by age have been prorated according to known ages.

TABLE 6b

REPORTED CASES OF CONGENITAL SYPHILIS, UNDER ONE YEAR OF AGE
 Case Rates per 10,000 Live Births**
 UNITED STATES
 Fiscal Years 1964-1967

1964		1965		1966		1967	
Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
374	0.8	373	0.8	370	1.0	398	1.1

**Live births are reported in Monthly Vital Statistics Report, National Center for Health Statistics, (DHEW-PHS)

INFANT MORTALITY DUE TO SYPHILIS - See Table 2.

Table 7
PRIMARY AND SECONDARY SYPHILIS
MORBIDITY AND AGE-SPECIFIC CASE RATES PER 100,000 POPULATION BY AGE-GROUPS, COLOR, AND SEX

UNITED STATES

Calendar Years 1956, 1964-1966

MORBIDITY											AGE-SPECIFIC CASE RATES PER 100,000 POPULATION										YEAR	AGE
AGE	YEAR	White			Nonwhite			Total			White			Nonwhite			Total					
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total						
0-14	1956	4	6	10	13	55	68	17	61	78	.0	.0	.0	.4	1.7	1.0	.1	.2	.2	1956	0-14	
	-----																			-----		
	1964	10	11	21	61	210	271	71	221	292	.0	.0	.0	1.4	4.8	3.1	.2	.8	.5	1964		
	1965	7	8	15	73	193	266	80	201	281	.0	.0	.0	1.6	4.4	3.0	.3	.7	.5	1965		
	1966	5	7	12	64	166	230	69	173	242	.0	.0	.0	1.4	3.7	2.6	.2	.6	.4	1966		
15-19	1956	127	139	266	400	497	897	527	636	1163	2.8	2.8	2.8	59.3	68.7	64.2	10.1	11.3	10.7	1956	15-19	
	-----																			-----		
	1964	310	238	548	1317	1730	3047	1627	1968	3595	4.6	3.4	4.0	134.5	169.9	152.5	20.9	24.5	22.7	1964		
	1965	286	248	534	1494	2011	3505	1780	2259	4039	3.9	3.4	3.7	142.3	186.2	164.5	21.4	26.9	24.2	1965		
	1966	239	227	466	1492	1888	3380	1731	2115	3846	3.2	3.0	3.1	133.2	163.6	148.6	20.0	24.0	22.1	1966		
20-24	1956	399	138	537	739	482	1221	1138	620	1758	10.9	3.0	6.4	136.1	72.4	101.1	27.0	11.6	18.4	1956	20-24	
	-----																			-----		
	1964	989	394	1383	2866	2206	5072	3855	2600	6455	20.3	6.9	13.0	419.0	277.1	342.5	69.4	39.7	53.4	1964		
	1965	918	354	1272	3032	2271	5303	3950	2625	6575	18.3	5.9	11.6	426.4	273.3	343.9	68.9	38.7	52.5	1965		
	1966	749	325	1074	2760	2199	4959	3509	2524	6033	14.9	5.3	9.7	382.8	256.0	313.7	61.2	36.2	47.5	1966		
25-29	1956	394	104	498	464	301	765	858	405	1263	8.3	2.0	5.0	81.1	43.5	60.5	16.1	6.9	11.3	1956	25-29	
	-----																			-----		
	1964	851	201	1052	2157	1331	3488	3008	1532	4540	18.8	4.1	11.1	362.5	187.5	267.3	58.6	27.2	42.2	1964		
	1965	750	206	956	2266	1322	3588	3016	1528	4544	16.3	4.1	10.0	375.8	184.9	272.2	57.9	26.8	41.7	1965		
	1966	656	217	873	2179	1287	3466	2835	1504	4339	14.0	4.2	8.9	350.9	176.5	256.6	53.3	25.8	38.9	1966		
30-39	1956	461	130	591	476	291	767	937	421	1358	4.5	1.2	2.8	41.8	22.1	31.2	8.2	3.4	5.7	1956	30-39	
	-----																			-----		
	1964	1311	271	1582	2299	1284	3583	3610	1555	5165	13.4	2.6	7.8	191.3	89.2	135.6	32.9	13.1	22.6	1964		
	1965	1105	207	1312	2294	1367	3661	3399	1574	4973	11.5	2.0	6.6	192.9	95.6	139.8	31.4	13.5	22.1	1965		
	1966	913	243	1156	2134	1195	3329	3047	1438	4485	9.7	2.4	5.9	181.5	84.0	128.1	28.7	12.5	20.3	1966		
40-49	1956	215	54	269	153	78	231	368	132	500	2.3	.5	1.4	15.1	6.9	10.8	3.5	1.2	2.3	1956	40-49	
	-----																			-----		
	1964	631	168	799	809	429	1238	1440	597	2037	6.2	1.5	3.8	71.5	33.6	51.4	12.7	4.9	8.7	1964		
	1965	583	147	730	902	423	1325	1485	570	2055	5.6	1.3	3.4	79.1	32.6	54.3	13.0	4.7	8.7	1965		
	1966	448	111	559	810	383	1193	1258	494	1752	4.3	1.0	2.6	70.4	29.0	48.3	10.9	4.0	7.3	1966		
50 +	1956	120	29	149	88	38	126	208	67	275	.7	.2	.4	6.0	2.5	4.2	1.1	.3	.7	1956	50 +	
	-----																			-----		
	1964	336	69	405	358	122	480	694	191	885	1.8	.3	1.0	19.3	6.0	12.3	3.3	.8	2.0	1964		
	1965	266	84	350	378	143	521	644	227	871	1.4	.4	.8	20.1	6.8	13.1	3.0	.9	1.9	1965		
	1966	234	40	274	314	129	443	548	169	717	1.2	.2	.6	16.5	6.0	10.9	2.6	.7	1.5	1966		
Total	1956	1720	600	2320	2333	1742	4075	4053	2342	6395	2.4	.8	1.6	26.7	18.6	22.5	5.0	2.8	3.9	1956	Total	
	-----																			-----		
	1964	4438	1352	5790	9867	7312	17179	14305	8664	22969	5.5	1.6	3.5	91.4	62.9	76.6	15.6	8.9	12.1	1964		
	1965	3915	1254	5169	10439	7730	18169	14354	8984	23338	4.8	1.4	3.1	94.7	65.1	79.3	15.4	9.1	12.2	1965		
	1966	3244	1170	4414	9753	7247	17000	12997	8417	21414	3.9	1.3	2.6	87.0	59.8	72.9	13.9	8.4	11.1	1966		

Note: Cases not reported by age have been included on the bases of the known age distribution. Rates are based on population estimates of the Bureau of the Census. Numbers include Alaska and Hawaii for 1956 and 1964-1966. Rates are based on cases excluding Alaska and Hawaii for 1956. For 1964-1966 rates are based on numbers for the United States, including Alaska and Hawaii.

Table 8

GONORRHEA
MORBIDITY AND AGE-SPECIFIC CASE RATES PER 100,000 POPULATION BY AGE-GROUPS, COLOR, AND SEX
UNITED STATES

Calendar Years 1956, 1964-1966

MORBIDITY											AGE-SPECIFIC CASE RATES PER 100,000 POPULATION												
		White			Nonwhite			Total			White			Nonwhite			Total						
AGE	YEAR	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	YEAR	AGE		
0-14	1956	130	648	778	619	2203	2822	749	2851	3600	.6	3.0	1.8	18.7	66.8	42.7	2.9	11.5	7.1	1956	0-14		
	1964	218	889	1107	1338	2159	3497	1556	3048	4604	.8	3.6	2.2	30.8	49.7	40.2	5.2	10.5	7.8	1964			
	1965	298	741	1039	1274	2212	3486	1572	2953	4525	1.1	3.0	2.0	28.6	49.9	39.2	5.2	10.0	7.6	1965			
	1966	226	839	1065	1181	2000	3181	1407	2839	4246	.9	3.4	2.1	26.2	44.5	35.3	4.6	9.6	7.1	1966			
15-19	1956	3454	3359	6813	20769	17579	38348	24223	20938	45161	75.7	68.2	71.8	3076.0	2430.4	2742.1	462.9	372.0	415.7	1956	15-19		
	1964	7968	7140	15108	30315	15643	45958	38283	22783	61066	117.0	101.9	109.3	3096.5	1536.6	2300.2	491.4	283.9	386.2	1964			
	1965	8808	7485	16293	34026	16628	50654	42834	24113	66947	121.3	102.4	111.8	3240.6	1539.6	2377.0	515.3	287.4	400.8	1965			
	1966	10639	8505	19144	38708	18180	56888	49347	26685	76032	141.6	111.2	126.3	3456.1	1575.4	2501.7	571.5	303.2	436.1	1966			
20-24	1956	10127	3633	13760	42842	18091	60933	52969	21724	74693	275.1	77.3	164.4	7886.2	2714.1	5041.2	1255.8	406.8	781.8	1956	20-24		
	1964	21386	7662	29048	59451	17308	76759	80837	24970	105807	439.0	133.4	273.6	8691.7	2174.4	5182.9	1455.0	381.7	874.7	1964			
	1965	23178	8847	32025	64123	18797	82920	87301	27644	114945	461.8	148.6	291.9	9018.7	2262.0	5377.4	1523.3	407.5	918.5	1965			
	1966	26857	10463	37320	69676	19343	89019	96533	29806	126339	535.7	171.2	335.5	9663.8	2251.8	5630.6	1683.5	427.6	994.4	1966			
25-29	1956	7630	2148	9778	29334	9512	38846	36964	11660	48624	159.8	41.2	98.1	5125.7	1372.5	3071.0	692.6	198.6	434.2	1956	25-29		
	1964	12689	3123	15812	34402	8409	42811	47091	11532	58623	279.7	63.5	167.2	5781.8	1184.4	3280.5	917.6	204.9	544.8	1964			
	1965	14210	3680	17890	46635	8680	55315	52165	12360	64525	306.8	73.9	186.7	6294.4	1214.0	3538.3	1002.0	217.1	592.0	1965			
	1966	16325	4087	20412	41222	8629	49851	57547	12716	70263	347.7	80.0	208.3	6638.0	1183.7	3689.9	1082.3	217.9	630.0	1966			
30-39	1956	7537	2251	9788	24030	6869	30899	31567	9120	40687	73.5	20.3	45.9	2110.3	521.7	1259.0	277.4	73.7	171.5	1956	30-39		
	1964	11357	2538	13895	29464	6713	36177	40821	9251	50072	116.2	24.4	68.8	2451.2	466.2	1368.8	371.9	78.0	219.3	1964			
	1965	11927	2843	14770	31563	6255	37818	43490	9098	52588	123.8	27.8	74.4	2654.6	437.4	1444.0	401.9	78.0	234.0	1965			
	1966	12667	2824	15491	31619	6493	38112	44286	9317	53603	134.3	28.0	79.4	2688.7	456.6	1467.0	417.4	81.0	242.3	1966			
40-49	1956	2243	827	3070	4471	1507	5978	6714	2334	9048	23.4	8.3	15.7	439.2	133.8	278.7	63.7	21.1	41.9	1956	40-49		
	1964	4073	988	5061	8132	1462	9594	12205	2450	14655	39.8	9.1	24.0	719.0	114.5	398.6	107.3	20.2	62.3	1964			
	1965	4224	962	5186	9064	1459	10523	13288	2421	15709	40.9	8.8	24.4	794.4	112.4	431.4	116.0	19.8	66.2	1965			
	1966	4323	950	5273	9483	1341	10824	13806	2291	16097	41.8	8.6	24.7	824.6	101.6	438.2	120.0	18.6	67.5	1966			
50 +	1956	953	311	1264	1126	480	1606	2079	791	2870	5.6	1.7	3.6	76.0	30.9	52.9	11.3	4.0	7.5	1956	50 +		
	1964	2041	548	2589	2741	509	3250	4782	1057	5839	10.7	2.5	6.3	147.6	24.9	83.3	22.8	4.4	13.0	1964			
	1965	2069	606	2675	2493	518	3011	4562	1124	5686	10.7	2.7	6.4	132.5	24.7	75.7	21.5	4.6	12.4	1965			
	1966	1708	503	2211	2410	537	2947	4118	1040	5158	8.8	2.2	5.2	126.6	25.1	72.8	19.2	4.2	11.1	1966			
Total	1956	32074	13177	45251	123191	56241	179432	155265	69418	224683	44.5	17.4	30.6	1409.5	600.0	990.9	192.4	81.7	135.7	1956	Total		
	1964	59732	22888	82620	165843	52203	218046	225575	75091	300666	73.6	26.7	49.5	1535.9	448.9	972.2	245.3	77.1	158.8	1964			
	1965	64714	25164	89878	180498	54549	235047	245212	79713	324925	78.7	29.0	53.2	1636.7	459.2	1026.0	263.1	80.8	169.3	1965			
	1966	72745	28171	100916	194299	56523	250822	267044	84694	351738	88.1	32.1	59.2	1734.2	466.4	1075.4	284.7	84.8	181.6	1966			

Note: Cases not reported by age have been included on the basis of the known age distribution. Rates are based on population estimates of the Bureau of the Census. Numbers include Alaska and Hawaii for 1956 and 1964-1966. Rates are based on cases excluding Alaska and Hawaii for 1956. For 1964-1966 rates are based on numbers for the United States, including Alaska and Hawaii.

TABLE 9

REPORTED VENEREAL DISEASE CASES AND CASE RATES PER 100,000 POPULATION*
 UNITED STATES
 (Known Military Cases Excluded)
 Fiscal Year 1967

State	Syphilis					Other Venereal Diseases		
	All Stages		Primary and Secondary		Gonorrhea			
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
Alabama	1,552	44.6	1,117	32.1	4,245	121.9	19	.6
Alaska	55	22.7	10	4.1	1,190	493.8	0	.0
Arizona	638	39.8	267	16.7	3,157	197.6	7	.4
Arkansas	1,062	54.6	138	7.1	5,996	308.1	4	.3
California	11,557	62.4	1,666	9.0	49,547	267.4	60	.3
Colorado	418	21.5	61	3.1	2,471	127.3	3	.2
Connecticut	629	22.0	100	3.5	3,616	126.3	3	.1
Delaware	412	81.6	65	12.9	1,265	250.5	2	.4
Dist. of Columbia	1,728	218.3	604	76.3	11,615	1466.5	179	22.6
Florida	5,027	86.1	1,929	33.0	11,551	197.7	133	2.3
Georgia	2,567	59.0	957	22.0	15,140	348.0	86	2.0
Hawaii	150	22.4	16	2.4	385	57.7	0	.0
Idaho	55	8.0	33	4.8	954	138.5	0	.0
Illinois	6,620	62.1	1,158	10.9	37,485	351.6	10	.1
Indiana	1,127	22.9	117	2.4	5,198	105.9	2	.0
Iowa	992	36.2	54	2.0	3,193	116.3	6	.2
Kansas	1,014	45.6	54	2.4	3,487	157.2	9	.4
Kentucky	1,676	53.4	153	4.9	3,670	116.9	14	.4
Louisiana	2,393	67.1	628	17.6	5,910	165.9	47	1.3
Maine	465	48.0	0	.0	494	51.1	2	.2
Maryland	2,968	83.8	593	16.8	7,228	204.2	14	.4
Massachusetts	2,211	41.4	249	4.7	4,925	92.2	11	.2
Michigan	5,925	70.9	1,260	15.1	16,741	200.4	98	1.2
Minnesota	172	4.9	38	1.1	2,640	73.9	1	.0
Mississippi	677	29.5	414	18.0	5,208	226.5	43	1.9
Missouri	3,461	77.4	101	2.3	9,105	203.7	55	1.2
Montana	64	9.2	11	1.6	449	64.7	1	.1
Nebraska	460	32.0	47	3.3	1,356	94.0	5	.3
Nevada	267	59.8	22	4.9	635	142.4	1	.2
New Hampshire	78	11.5	14	2.1	466	69.0	2	.3
New Jersey	3,945	57.7	648	9.5	4,922	71.9	14	.2
New Mexico	780	77.9	162	16.2	1,806	180.2	5	.5
New York	15,310	83.9	2,500	13.7	36,754	201.7	59	.3
North Carolina	1,875	38.5	682	14.0	10,417	213.3	88	1.9
North Dakota	22	3.4	2	.3	455	71.3	0	.0
Ohio	4,872	47.3	700	6.8	15,797	153.6	43	.4
Oklahoma	1,393	57.5	132	5.5	3,918	161.9	1	.0
Oregon	205	10.5	45	2.3	3,163	162.3	2	.2
Pennsylvania	4,180	36.1	513	4.4	10,562	91.4	28	.2
Rhode Island	454	51.8	26	3.0	405	46.2	0	.0
South Carolina	1,690	67.3	848	33.8	7,765	309.9	30	1.2
South Dakota	125	18.4	32	4.7	701	103.7	0	.0
Tennessee	1,111	28.9	295	7.7	11,582	300.7	27	.6
Texas	5,860	55.6	2,134	20.2	28,928	273.8	137	1.2
Utah	94	9.4	12	1.2	773	77.0	0	.0
Vermont	30	7.4	4	1.0	265	65.4	0	.0
Virginia	2,170	50.1	311	7.2	9,282	214.3	31	.7
Washington	264	9.1	52	1.8	4,765	162.9	4	.1
West Virginia	1,268	70.7	53	3.0	1,129	62.9	2	.2
Wisconsin	1,410	33.9	51	1.2	2,707	65.1	7	.1
Wyoming	68	20.9	12	3.7	188	57.8	0	.0
United States Total	103,546	53.2	21,090	10.8	375,606	193.0	1,295	.7

*Rates less than .05 not shown.

Health Department Casefinding Activities

Casefinding investigations fall into two categories: (1) the investigation of sex contacts of patients with recently acquired and infectious disease, and (2) the investigation of persons other than sex contacts who are suspected of having venereal disease. Most of the latter group of suspects are persons with reactive tests for syphilis which are generated by the estimated 38,000,000 serologic tests performed annually in the United States, and are referred to in Table 10 as positive diagnostics. Thousands of the investigations of positive diagnostics and sex contacts carry health department casefinding workers into the offices of private physicians who make the medical determination of whether or not the suspects have syphilis.

For many years, the proficiency of the interviewing-contact investigation process in ferreting out the foci of syphilis infections in the community has been measured by a series of epidemiologic indices. The indices presented in Table 10 are based only on infectious cases diagnosed in health department clinics and do not include cases diagnosed and reported by private physicians. These indices are defined as follows:

The Contact Index is the average number of sex contacts elicited per infectious (primary and secondary) syphilis case interviewed.

The Epidemiologic Index is the average number of cases of syphilis identified per infectious case interviewed. A number of these identified cases will already have been diagnosed and treated.

The Brought-to-Treatment Index is the average number of previously not diagnosed cases of syphilis brought to treatment per infectious case interviewed.

The Lesion-to-Lesion Index is the average number of infectious (lesion or primary or secondary) cases brought to treatment per infectious case interviewed.

TABLE 10
HEALTH DEPARTMENT CASEFINDING ACTIVITIES, UNITED STATES
FISCAL YEARS 1962-1967

	1962	1963	1964	1965	1966	1967
Number of positive diagnostics investigated.	234,305	243,257	241,016	245,715	257,009	231,517
Number of contacts investigated.	186,784	179,715	192,580	186,386	183,634	176,583
Contact Investigation Indices:						
Contact Index	4.03	3.98	3.86	3.69	3.59	3.40
Epidemiologic Index	1.24	1.17*	1.13*	1.11*	1.13*	1.07*
Brought-to-Treatment Index	.52	.47*	.46*	.45*	.45*	.44*
Lesion-to-Lesion Index	.32	.30	.31	.32	.30	.28

*Excludes Missouri, South Carolina, and Tennessee.

Treatment of Syphilis

Congenital Syphilis

For the treatment of very small infants with congenital syphilis, aqueous procaine penicillin G is the preferred form of penicillin, the schedule consisting of 100,000 u/kg. of body weight in 10 equally divided daily doses. Benzathine penicillin G in a single injection of 50,000 u/kg. is recommended for all other children under 12 years of age or under 70 pounds in weight. Older or heavier children are generally treated with schedules recommended for adults in comparable stages of syphilis.

The earlier penicillin therapy is instituted for congenital syphilis, the more satisfactory the results.

Early Syphilis

Benzathine penicillin G and procaine penicillin G in oil with 2-percent aluminum monostearate (PAM) are the most widely used penicillin preparations for the treatment of early syphilis. Since benzathine penicillin G maintains a detectable blood level for a much longer period of time than PAM, a smaller total dosage is required for satisfactory results. The recommended schedules are 2,400,000 units of benzathine penicillin G administered in a single session (1,200,000 units in each buttock) or 4,800,000 units of PAM, 2,400,000 units at first session, and subsequent injections of 1,200,000 units given at 2- or 3-day intervals. If aqueous procaine penicillin G is used, 600,000 units should be administered daily for 8 days to total 4,800,000 units.

For the patient who is sensitive to penicillin, erythromycin or tetracycline in a total dosage of 30-40 grams administered over a 10-15 day period is recommended for the treatment of syphilis.

Epidemiologic Treatment

The treatment of all sex contacts of patients with early infectious syphilis is recommended as the most effective procedure for preventing the spread of syphilis. Although clinically and serologically negative at time of initial examination, some of these contacts will have incubating syphilis and some, particularly females who may have an inconspicuous or no primary lesion, will already have developed syphilis. It is suggested, therefore, that contacts be treated for syphilis (rather than for incubating syphilis) with a dosage of 2,400,000 units of benzathine penicillin G.

Syphilis in Pregnancy

Congenital syphilis is completely preventable. Adequate treatment of the mother during the first 18 weeks of gestation prevents infection of the baby; adequate treatment after the 18th week cures the baby in utero.

In two studies, comprising 528 infants born to treated syphilitic mothers, approximately 98 percent of the children were nonsyphilitic. The percentage varied slightly by stage of mother's syphilis during pregnancy.

In the absence of relapse or reinfection, a woman treated with penicillin for syphilis will not require further treatment in the event of pregnancy.

Neurosyphilis

A cooperative study conducted by the Public Health Service and leading neurosyphilologists in the United States has demonstrated that penicillin is the most effective treatment yet known for neurosyphilis.

Asymptomatic Neurosyphilis — Among 765 patients with asymptomatic neurosyphilis, approximately 75 percent of whom were treated with a minimum of 4,800,000 units of penicillin, only one bona fide progression to symptomatic neurosyphilis was observed; 11 other patients exhibited minor neurologic changes. In contrast, among 467 patients treated with metal chemotherapy, 29 progressed to symptomatic neurosyphilis and an additional 15 showed minor neurologic changes.

Paresis — Six hundred and twenty-nine patients were treated for paresis with penicillin only, 60 percent of whom received a minimum of 6,000,000 units. Paresis was diagnosed severe in 330, moderately severe in 141, and mild in 158. Five years after treatment 42 percent of those with severe psychoses were in remission or showed significant improvement, 45 percent remained unchanged, and only 13 percent had progressed or died from paresis. Progression or death from paresis occurred in 7.0 percent of those with moderately severe psychosis and in less than one percent of those with mild psychosis. Further proof of the effectiveness of penicillin is the fact that among those who survived, one-third of those who had been institutionalized, and two-thirds of those who had been unable to work at time of treatment were gainfully employed 5 years later.

The total recommended dosage of penicillin for both symptomatic and asymptomatic neurosyphilis is 6,000,000 to 9,000,000 units. Any benefit from more than 10,000,000 units is doubtful and has not been demonstrated. Treatment schedules are as follows:

Benzathine penicillin G — 3,000,000 units at 7-day intervals.

PAM — 1,200,000 units at 3-day intervals.

Aqueous procaine penicillin G — 600,000 units daily.

Treatment of Gonorrhea

The treatment of gonorrhea is in a state of uncertainty although penicillin still remains the drug of choice. Some strains of the gonococcus are developing increasing resistance to penicillin, but this resistance is relative and not absolute. Treatment schedules presently recommended are as follows:

Uncomplicated gonorrhea in men: Aqueous procaine penicillin G, 2,400,000 units in one IM injection.

Uncomplicated gonorrhea in women: Aqueous procaine penicillin G, 4,800,000 units IM in two injection sites at one visit, or the combination of aqueous procaine penicillin G and procaine penicillin G in oil with 2 percent aluminum monostearate for two separate IM injections of 2,400,000 units in each site given at one visit.

Prophylactic or epidemiologic treatment for gonorrhea (male and female) is accomplished with the same treatment schedules as for uncomplicated gonorrhea.

Treatment of gonorrhea with severe complications must be individualized using large amounts of short acting penicillin.

Excluding the likelihood of reinfection, retreatment is indicated if the discharge in uncomplicated male gonorrhea persists for three or more days following initial therapy and the smear, F.A., or culture is still positive. In uncomplicated gonorrhea in the female retreatment is indicated if followup cultures or F.A. procedures remain positive for gonococci. Retreatment consists of doubling the original dosage at a single visit or in divided doses on two successive days.

Gonorrhea patients sensitive to penicillin may be treated effectively with tetracycline, erythromycin, or oleandomycin. These may be administered as a single oral dose of 1.5 grams or 0.5 gram given orally every 4-6 hours until 2-3 grams have been given.

Gonorrhea patients who are sexual contacts to infectious syphilis should be given full prophylactic therapy for syphilis (2,400,000 units of benzathine penicillin G) as well as recommended therapy for gonorrhea. While long acting forms of penicillin (such as benzathine penicillin) are ideal in syphilotherapy, they are not indicated in routine gonorrhea treatment.

Penicillin Reactions

Since penicillin is the drug of choice for the treatment of both syphilis and gonorrhea, the Venereal Disease Program is concerned with the frequency and severity of reactions to penicillin therapy. Through the cooperation of venereal disease clinics three studies at 5-year intervals (1954, 1959 and 1964) have been conducted to determine their frequency.

The 1959 and 1964 studies were patterned after the 1954 study, the single departure being a request that, if possible, patients be detained in the clinic for a 30-minute period following treatment. Reactions to penicillin were reported in 5.9/1,000 patients treated in 1954, in 9.7/1,000 treated in 1959, and in 8.0/1,000 treated in 1964. The increase over 1954 is attributed mainly to the delay in dismissing patients after treatment.

In each study, urticaria was the most frequent type of reaction, occurring in from 4-6/1,000 patients treated. Moderate to severe anaphylaxis was observed in 0.21 to 0.35/1,000 patients. The only death reported during a study period occurred in 1964.