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Epidemiologic Notes and Reports

AIDS Due to HIV-2 Infection — New Jersey

The first reported case of AIDS caused by human immunodeficiency virus type 2 (HIV-2) in the United States was diagnosed in December 1987. The patient, a West African, came to the United States in 1987. In December, the patient visited a physician because of a 3-year history of weight loss and recent onset of neurologic symptoms. A CAT scan of the head revealed mass lesions that biopsy showed to be caused by *Toxoplasma gondii*. Biopsy of a lymph node revealed acid-fast bacteria.

The patient did not give a history of sexual intercourse, use of nonsterile needles, or donation of blood while in the United States. All family members and household contacts, both in the United States and abroad, are reported to be well.

Because the diagnosis of cerebral toxoplasmosis without other underlying cause of immunodeficiency fits the CDC surveillance definition for AIDS, laboratory evidence of infection with HIV was sought. Testing of the patient's serum revealed a negative enzyme immunoassay (EIA) for antibody to HIV-1 with an indeterminate HIV-1 Western blot. However, EIA for antibodies to HIV-2 (Genetic Systems Corporation, Seattle, Washington [research test kit]) was repeatedly reactive and HIV-2 Western blot revealed bands for antibodies to *gag* (p26), *pol* (p34), and *env* (gp140) proteins. DNA amplification by the polymerase chain reaction technique with HIV-1-specific and HIV-2-specific DNA probes (*1*) revealed HIV-2 DNA but not HIV-1 DNA in the patient's lymphocytes and confirmed the diagnosis of HIV-2 infection.

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Editorial Note: This patient represents the only documented case of HIV-2 infection in the United States. HIV-2 is closely related to HIV-1 and was first reported to be associated with AIDS in 1986 in West Africa, where the virus is believed to be endemic (*2-8*). Several well-documented cases of HIV-2 infection have also been reported among Europeans and among West Africans residing in Europe (*3,4,8*). The spectrum of disease and modes of transmission of HIV-2 are similar to those of HIV-1 (*2-5*). These modes of transmission include sexual intercourse; however, infected

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persons present no risk to nonsexual household contacts (*9*). The present case undoubtedly represents infection acquired in West Africa since illness began before the patient's arrival in the United States. The patient has had no known activities that would have exposed others in this country to HIV-2.

Because of the reports of HIV-2 infection in West Africa and Europe, CDC and the Food and Drug Administration (FDA) initiated surveillance for HIV-2 in the United States in January 1987. To date, CDC, FDA, and collaborating investigators have screened 22,699 serum samples with anti-HIV-2 EIA (*10*). Of these specimens, 14,196 (63%) were from individuals whose activities placed them at increased risk for HIV-1 infection and who would, therefore, potentially be at risk for HIV-2 infection. The remaining 8,503 were from asymptomatic blood donors randomly selected from three areas of the United States, two of which have reported large numbers of AIDS patients. Overall, 35 (0.2%) of the serum samples were reactive by anti-HIV EIA using HIV-2 antigens but not by anti-HIV EIA using HIV-1 antigens. However, none of these EIAs could be confirmed when tested by HIV-2-specific Western blot. An additional 70 (0.3%) of the samples were reactive by Western blot with *gag*, *pol*, and *env* antigens of both HIV-1 and HIV-2. All of the dually reactive specimens were from individuals whose activities placed them at increased risk for HIV-1 infection. None were from the randomly selected blood donors. Sera from these dually reactive subjects were studied for the presence of type-specific neutralizing antibody to HIV-1 or HIV-2, antibody to synthetic peptides specific for HIV-1 or HIV-2 (Genetic Systems Corporation, Seattle, Washington [research test kit]), or HIV-1 and HIV-2 DNA by DNA amplification (*1*). Sixty of the subjects were shown to be infected with HIV-1 but not HIV-2. Ten are still under investigation.

It is reassuring that HIV-2-specific tests on sera from 22,699 persons, including 8,503 randomly selected U.S. blood donors, failed to reveal HIV-2 infection. However, the occasional presence of this virus in the United States, as in Europe, should be anticipated. The anti-HIV-1 EIA tests currently used for screening all U.S. blood donors are estimated to detect 42% to 92% of HIV-2 infections (*4,11*). Surveillance for HIV-2 in the United States is being continued to monitor the frequency of infection. Because the modes of transmission of HIV-1 and HIV-2 are similar, preventive measures for these related viruses are the same (*12*).

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Current Trends

Continuing Increase in Infectious Syphilis — United States

Through the first 46 weeks of 1987, 31,323 cases of infectious (primary and secondary) syphilis were reported to CDC through the *MMWR* Morbidity Surveillance System. This total exceeds the number of cases reported for the same period in 1986 by 32%. The projected annual incidence of infectious syphilis for 1987 is 14.7/100,000, which would be the highest rate since 1950. While 56% of all cases and 83% of the increase were reported from Florida, New York City (NYC), and California, 25 of the other 49 reporting areas also had increases. Nine areas had absolute increases of over 100 cases; in two of these areas, the relative increases were over 100% (Table 1). With the exception of Oregon and Connecticut, areas with high incidence rates experienced the greatest increases. Texas, with a 22% decrease in reported cases, and Louisiana, with a 9% decrease, were notable exceptions to the overall pattern of increase.

Fourteen areas reporting increases and five reporting decreases during the first 8 months of 1987 were asked to provide data on patients' race, sex, and sexual preference for further analysis. Overall, the areas providing this supplementary information contain 51% of the U.S. population and 79% of the syphilis cases reported through the first 46 weeks of 1987.

In the 14 areas reporting increases (13 states and NYC), relative increases were greatest for females and heterosexual males of all racial/ethnic backgrounds (Table 2). The greatest absolute increases occurred among blacks. The increase for males occurred among heterosexual males, and the decrease among homosexual/bisexual males occurred primarily among white males (*1*). Exceptions to this overall

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pattern occurred in Connecticut and Georgia. In Connecticut, the relative and absolute increases were greatest among white heterosexual males. In Georgia, increases occurred only among white and black males, and a substantial portion of the increase appeared to be among homosexual/bisexual males.

In the five states reporting decreases, the only exception to the overall pattern of decrease occurred among white females. The number of reported cases increased by 51% (20 cases) in this group.

The pattern of increase differed among reporting areas. In some areas, such as Philadelphia and Los Angeles, the increase appears to have plateaued in the middle of 1987. However, in other areas, such as NYC, Florida, and Oregon, the increase continued to climb. In still others, such as Pennsylvania (excluding Philadelphia), the increase began during this period.

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Editorial note: These increases in infectious syphilis not only reverse the downward trend of the past 4 years, they also suggest an important shift in the epidemiology of the disease in the United States. As infectious syphilis has decreased among homosexual and bisexual males, largely because of changes in sexual behavior due to AIDS, a sizeable increase has occurred among heterosexuals. A similar shift was documented earlier in two small outbreaks (*2,3*).

While the cause of this increase is unknown, several hypotheses have been proposed. First, anecdotal reports from persons interviewing syphilis patients and their sexual partners indicate that prostitution in which nonintravenous drugs (especially "crack" cocaine) are exchanged for sex may be partially responsible for outbreaks of syphilis as well as other sexually transmitted diseases. A review of

TABLE 1. Reporting areas with the largest absolute increases in infectious syphilis — United States, weeks 1-46, 1987

State	Number of Cases		Increase		1987 Rate*
	1986	1987	Absolute	(%)	
Florida	3,747	6,674	2,927	(78)	65.9
New York City	1,870	4,327	2,457	(131)	67.8
California	4,837	6,533	1,696	(35)	27.8
North Carolina	461	650	189	(41)	11.7
Georgia	1,333	1,506	173	(13)	28.3
Oregon	103	269	166	(161)	11.2
Maryland	403	556	153	(38)	14.2
Connecticut	147	282	135	(92)	10.0
Tennessee	566	672	106	(19)	15.8
Washington, D.C.	268	353	85	(32)	63.3
Mississippi	486	564	78	(16)	24.2
Nevada	91	142	51	(56)	17.0
New York State	173	223	50	(29)	2.4
Arizona	219	268	49	(22)	9.4
South Carolina	619	662	43	(7)	22.2

*Per 100,000; based on 1985 Bureau of the Census projections.

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records of interviews in Philadelphia showed that the proportion of patients associated with both prostitution and drug use increased significantly between 1985 and 1987 (*4*).

Second, some investigators have suggested that routine use of spectinomycin (which does not appear to cure incubating syphilis [*5,6*]) in areas where a sizeable proportion of gonorrhea infections are caused by β-lactamase-producing organisms may explain the increase in infectious syphilis.* Events in NYC, Florida, and Los Angeles are compatible with this theory; however, for several other areas† with sizeable increases in reported syphilis, spectinomycin was not in common use before the increases began. While this mechanism may play a role in some areas, it alone cannot account for the nationwide increase.

Third, a decrease in the resources available for syphilis control programs has been suggested as a contributing factor. Twenty reporting areas provided data on the number of staff available for syphilis control during 1985 and 1986. Ten of these areas

*Parenteral penicillin regimens used to treat gonorrhea have been shown to cure incubating syphilis acquired at the same time as gonorrhea infection (*7*).
†Arizona, Baltimore, Connecticut, North Carolina, Oregon, and Philadelphia.

TABLE 2. Cases of infectious syphilis from 14 reporting areas,* by race, sex, and sexual preference — United States, January-August, 1987

Category	Number of Cases		Change	
	1986	1987	Absolute	(%)
Heterosexual Males†				
Total	**5,503**	**9,727**	**+4,224**	**(+77)**
White	647	940	+293	(+45)
Black	3,461	6,436	+2,975	(+86)
Hispanic	1,200	1,874	+674	(+56)
Other	195	477	+282	(+145)
Homosexual/Bisexual Males†				
Total	**1,691**	**1,441**	**−250**	**(−15)**
White	650	430	−220	(−34)
Black	750	795	+45	(+6)
Hispanic	158	161	+3	(+2)
Other	133	55	−78	(−59)
Females				
Total	**3,302**	**5,761**	**+2,459**	**(+75)**
White	376	629	+253	(+67)
Black	2,480	4,317	+1,837	(+74)
Hispanic	332	580	+248	(+75)
Other	114	235	+121	(+106)

*Arizona, California, Connecticut, Florida, Georgia, Maryland, Massachusetts, Mississippi, North Carolina, Oregon, Pennsylvania, South Carolina, Tennessee, and New York City. Data for California (other than Los Angeles and San Francisco) are for the first 6 months only.
†Males naming at least one male sexual partner were classified as "homosexual/bisexual"; those not naming any were classified as "heterosexual." Overall, 87% of males were interviewed in 1986 and 85%, in 1987. Over 80% of males were interviewed in all reporting areas except New York City, where 55% were interviewed in 1986 and 45%, in 1987.

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reported increases in the number of persons interviewing patients with early syphilis between 1985 and 1986; four reported no change; and six reported decreases. Areas reporting increases in total syphilis morbidity were somewhat more likely to report a decrease in the number of interviewers; however, the association was not statistically significant.

The increases in infectious syphilis among females and heterosexuals are disturbing for three reasons. First, an increase in the number of females with syphilis will likely be followed by increased morbidity and mortality from congenital syphilis. Second, the marked increase among inner-city, heterosexual minority groups suggests that high-risk sexual activity is increasing in these groups despite the risk of HIV infection, which is already elevated because of the high prevalence of intravenous drug abuse. Third, studies in Africa and in the United States suggest that genital ulcer diseases such as primary syphilis increase the risk of HIV transmission (*8,9*).

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Current Trends

Antigenic Variation of Recent Influenza A(H3N2) Viruses

Analysis of recent influenza A(H3N2) viruses indicates antigenic drift from the previously prevalent strains A/Mississippi/1/85 and A/Leningrad/360/86. One reference variant virus strain, A/Victoria/7/87, was first isolated in Australia in April of this year. A second reference variant, A/Sichuan/2/87, was first isolated in China, also in April. In hemagglutination inhibition tests with antiserum from infected ferrets, antibody to A/Victoria/7/87 reacts poorly with other strains, even though the virus itself is inhibited well by antiserum to A/Mississippi/1/85 (Table 1). Antiserum to A/Sichuan/2/87 reacts at lower titers with viruses such as A/Mississippi/1/85 and A/Leningrad/360/86, which circulated earlier, than it does with A/Sichuan/2/87 anti-

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gen. Also, A/Sichuan/2/87 is inhibited poorly by antisera to all of the viruses that circulated earlier. Analysis of about 50 recently isolated A(H3N2) viruses from Asia, Oceania, and the United States indicates a spectrum of antigenic specificity, with many isolates having reaction patterns intermediate between A/Leningrad/360/86 and A/Sichuan/2/87.

The antibody response induced by the current type A(H3N2) vaccine component is greater toward the homologous A/Leningrad/360/86 virus than toward the reference variants A/Victoria/7/87 and A/Sichuan/2/87. This response confirms the existence of antigenic variation in recent virus isolates. Vaccinees in all age groups developed titers of 40 or more to A/Leningrad/360/86 with greater frequency than they did to the new antigenic variants (Table 2). In addition, the geometric mean titers were higher to the homologous A/Leningrad/360/86 antigen than to the antigenic variants A/Sichuan/2/87 or A/Victoria/7/87.

TABLE 1. Hemagglutination-inhibition reactions* of influenza type A(H3N2) viruses

	Ferret Antisera						
Reference Antigen	A/Bangkok 1/79	A/Phil 2/82	A/Caen 1/84	A/Miss 1/85	A/Len 360/86	A/Vict 7/87	A/Sichuan 2/87
A/Bangkok/1/79	**1,280**	160	160	640	320	40	40
A/Philippines/2/82	20	**160**	40	320	160	10	80
A/Caen/1/84	20	80	**640**	640	320	20	320
A/Mississippi/1/85	160	320	320	**1,280**	640	40	320
A/Leningrad/360/86	20	160	80	320	**640**	40	160
A/Victoria/7/87	80	80	160	640	160	**640**	160
A/Sichuan/2/87	<10	10	80	160	160	40	**1,280**

*Titers are the reciprocal of antiserum dilutions; homologous titers appear in bold type. When comparing reactions of sera with different antigens, fourfold or greater differences are considered significant.

TABLE 2. Hemagglutination-inhibition serum antibody response to influenza vaccine in immunized* children and adults — United States, fall 1988

		Prevaccine Sera		Postvaccine Sera	
Age Group	Type A(H3N2) Strain	Percent with Titer ≥40	(GMT)†	Percent with Titer ≥40	(GMT)†
Children and Young Adults	A/Leningrad/360/86	22	(16)	84	(97)
	A/Sichuan/2/87	19	(16)	69	(43)
	A/Victoria/7/87	19	(13)	72	(53)
Adults	A/Leningrad/360/86	20	(14)	60	(33)
	A/Sichuan/2/87	8	(8)	30	(14)
	A/Victoria/7/87	8	(7)	33	(15)
Elderly	A/Leningrad/360/86	66	(34)	76	(47)
	A/Sichuan/2/87	38	(21)	45	(22)
	A/Victoria/7/87	46	(24)	54	(32)

*Volunteers received trivalent influenza vaccine containing 15 μg each of hemagglutinin of A/Leningrad/360/86(H3N2), A/Taiwan/1/86(H1N1), and B/Ann Arbor/1/86 viruses.
†Geometric mean titer.

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Editorial Note: In 1987, the World Health Organization Collaborating Centers for Influenza (Atlanta and London), in conjunction with National Influenza Centers in several countries in Asia and Oceania, detected antigenic variants of influenza A(H3N2). Evidence is accumulating that these viruses are infecting persons of all age groups, including high-risk elderly persons (*1*). These variants are associated with the reappearance of influenza A(H3N2) viruses after a period of quiescence during the winter of 1986/87.

Antigenic variation has always complicated influenza vaccine formulation. The occurrence of viruses that exhibit antigenic drift from the vaccine strain has on

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TABLE I. Summary — cases of specified notifiable diseases, United States

Disease	3rd Week Ending			Cumulative, 3rd Week Ending		
	Jan. 23, 1988	Jan. 24, 1987	Median 1983-1987	Jan. 23, 1988	Jan. 24, 1987	Median 1983-1987
Acquired Immunodeficiency Syndrome (AIDS)	553	43	96	1,478	525	273
Aseptic meningitis	53	81	81	183	285	275
Encephalitis: Primary (arthropod-borne & unspec)	7	14	16	29	47	47
Post-infectious	-	1	1	1	1	4
Gonorrhea: Civilian	11,843	17,412	17,412	37,223	54,299	48,058
Military	243	369	348	696	1,066	1,066
Hepatitis: Type A	480	420	420	1,050	1,099	1,094
Type B	264	369	448	885	1,106	1,116
Non A, Non B	29	53	58	84	167	164
Unspecified	25	55	83	62	149	217
Legionellosis	6	10	6	19	47	28
Leprosy	-	4	4	4	13	13
Malaria	10	2	11	21	33	31
Measles: Total*	54	17	9	74	59	25
Indigenous	53	3	4	72	43	19
Imported	1	14	4	2	16	7
Meningococcal infections	53	55	55	144	190	142
Mumps	43	269	59	145	502	180
Pertussis	9	21	18	36	80	75
Rubella (German measles)	6	16	6	7	21	21
Syphilis (Primary & Secondary): Civilian	542	571	571	1,578	1,810	1,480
Military	3	3	3	7	5	10
Toxic Shock syndrome	3	1	4	9	10	19
Tuberculosis	245	225	304	618	772	772
Tularemia	2	2	1	7	5	5
Typhoid Fever	4	7	4	8	11	11
Typhus fever, tick-borne (RMSF)	-	-	-	-	4	4
Rabies, animal	27	53	75	106	177	197

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1988		Cum. 1988
Anthrax	-	Leptospirosis	2
Botulism: Foodborne	-	Plague	-
Infant	-	Poliomyelitis, Paralytic	-
Other	-	Psittacosis (Oreg. 3)	3
Brucellosis	2	Rabies, human	-
Cholera	-	Tetanus (Ala. 1)	1
Congenital rubella syndrome	-	Trichinosis (Mo. 1)	2
Congenital syphilis, ages < 1 year	-		
Diphtheria	-		

*One of the 54 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 23, 1988 and January 24, 1987 (3rd Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	1,478	183	29	1	37,223	54,299	1,050	695	84	82	19	4
NEW ENGLAND	85	10	-	-	1,169	1,670	36	59	7	9	1	2
Maine	2	1	-	-	27	59	1	3	-	1	-	-
N.H.	3	4	-	-	31	20	2	2	1	-	-	-
Vt.	-	1	-	-	11	12	-	1	-	-	-	-
Mass.	56	1	-	-	336	568	24	48	5	8	1	2
R.I.	4	2	-	-	100	122	8	4	1	-	-	-
Conn.	20	1	-	-	664	889	1	1	-	-	-	-
MID. ATLANTIC	222	21	1	-	3,120	9,103	45	68	7	2	6	1
Upstate N.Y.	88	12	1	-	535	795	31	15	2	-	6	-
N.Y. City	87	-	-	-	1,800	5,594	3	29	-	2	-	1
N.J.	47	9	-	-	665	847	11	24	5	-	-	-
Pa.	-	-	-	-	120	1,867	-	-	-	-	-	-
E.N. CENTRAL	167	38	4	-	6,169	7,018	265	97	4	8	6	-
Ohio	1	16	3	-	1,268	2,024	231	29	-	-	-	-
Ind.	1	4	-	-	539	366	1	1	-	1	-	-
Ill.	91	-	-	-	1,970	2,057	3	1	-	-	-	-
Mich.	63	18	1	-	2,172	1,966	30	64	4	7	5	-
Wis.	11	-	-	-	220	605	-	2	-	-	1	-
W.N. CENTRAL	50	9	2	-	1,475	1,900	49	19	2	-	3	-
Minn.	15	3	-	-	184	353	2	3	-	-	-	-
Iowa	2	-	2	-	138	198	1	9	1	-	1	-
Mo.	16	-	-	-	964	1,016	14	4	-	-	-	-
N. Dak.	-	-	-	-	7	20	-	-	-	-	-	-
S. Dak.	1	4	-	-	28	47	-	-	-	-	-	-
Nebr.	7	-	-	-	34	33	7	-	-	-	2	-
Kans.	9	2	-	-	120	233	25	3	1	-	-	-
S. ATLANTIC	161	30	-	-	9,239	14,476	31	124	4	2	1	-
Del.	2	1	-	-	171	165	-	4	-	-	-	-
Md.	-	3	-	-	675	1,129	-	7	-	-	-	-
D.C.	6	1	-	-	614	864	-	-	-	-	-	-
Va.	2	4	-	-	980	1,225	7	9	-	-	-	-
W. Va.	3	3	-	-	68	72	-	5	-	1	-	-
N.C.	26	2	-	-	1,161	2,357	6	28	2	-	-	-
S.C.	12	-	-	-	510	1,714	2	52	2	-	-	-
Ga.	28	1	-	-	1,732	2,077	6	3	-	-	-	-
Fla.	82	15	-	-	3,328	4,873	10	16	-	1	1	-
E.S. CENTRAL	44	11	2	-	3,276	3,722	38	36	8	1	2	-
Ky.	-	3	1	-	269	349	31	6	3	-	-	-
Tenn.	31	2	-	-	972	1,226	5	19	4	-	1	-
Ala.	5	4	1	-	1,283	1,269	-	11	1	1	1	-
Miss.	8	2	-	-	752	878	2	-	-	-	-	-
W.S. CENTRAL	246	1	-	-	6,245	6,698	18	10	2	2	-	-
Ark.	3	-	-	-	381	687	-	1	-	-	-	-
La.	22	-	-	-	2,139	657	-	-	-	-	-	-
Okla.	10	1	-	-	279	582	13	4	1	2	-	-
Tex.	211	-	-	-	3,446	4,772	5	5	1	-	-	-
MOUNTAIN	69	6	3	-	831	1,293	151	83	9	12	-	-
Mont.	2	-	-	-	24	26	4	5	1	-	-	-
Idaho	-	-	-	-	21	30	8	7	-	-	-	-
Wyo.	-	-	-	-	5	14	-	-	-	-	-	-
Colo.	1	4	1	-	222	303	8	12	1	3	-	-
N. Mex.	4	-	-	-	92	128	37	13	-	-	-	-
Ariz.	45	-	1	-	251	418	61	29	5	5	-	-
Utah	10	2	1	-	39	53	27	9	2	4	-	-
Nev.	7	-	-	-	177	321	6	8	-	-	-	-
PACIFIC	434	57	17	1	5,699	8,419	417	199	41	46	-	1
Wash.	1	-	-	-	345	517	14	2	1	-	-	-
Oreg.	20	-	-	-	185	318	94	33	5	2	-	-
Calif.	404	51	16	1	5,048	7,332	291	161	35	44	-	1
Alaska	2	3	-	-	76	170	18	3	-	-	-	-
Hawaii	7	3	1	-	45	82	-	-	-	-	-	-
Guam	-	-	-	-	7	19	-	-	-	-	-	-
P.R.	11	2	1	-	97	110	-	18	2	2	-	-
V.I.	-	-	-	-	15	20	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	22	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	3	10	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 23, 1988 and January 24, 1987 (3rd Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	1988	Cum. 1988	Cum. 1987
UNITED STATES	21	53	72	1	2	59	144	43	145	9	36	80	6	7	21
NEW ENGLAND	3	1	1	-	-	5	20	-	2	-	2	1	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	1	-	2	-	2	1	-	-	-
Vt.	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
Mass.	2	1	1	-	-	-	12	-	-	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Conn.	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-
MID. ATLANTIC	2	2	2	-	-	11	14	3	7	-	-	11	-	-	-
Upstate N.Y.	-	-	-	-	-	-	7	-	-	-	-	9	-	-	-
N.Y. City	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.J.	-	-	-	-	-	1	7	1	5	-	-	-	-	-	-
Pa.	-	2	2	-	-	10	-	2	2	-	-	2	-	-	-
E.N. CENTRAL	1	-	-	-	-	20	20	15	42	-	1	15	-	-	2
Ohio	-	-	-	-	-	-	10	-	-	-	-	7	-	-	-
Ind.	-	-	-	-	-	-	1	5	6	-	-	-	-	-	-
Ill.	-	-	-	-	-	1	-	1	1	-	-	-	-	-	1
Mich.	1	-	-	-	-	19	9	9	32	-	1	1	-	-	1
Wis.	-	-	-	-	-	-	-	-	3	-	-	7	-	-	-
W.N. CENTRAL	-	-	-	-	-	-	4	13	17	1	5	12	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	7	8	-	1	2	-	-	-
Mo.	-	-	-	-	-	-	4	3	4	-	-	5	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	3	4	1	1	4	-	-	-
S. ATLANTIC	2	-	-	1	2	-	11	-	3	2	6	16	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Md.	-	-	-	1†	1	-	1	-	-	-	-	-	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	-	-	-	-	-	-	2	-	1	-	1	5	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	†
N.C.	-	-	-	-	1	-	-	-	2	2	4	9	-	-	-
S.C.	2	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Fla.	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
E.S. CENTRAL	-	-	-	-	-	-	10	3	36	-	2	1	-	-	2
Ky.	-	-	-	-	-	-	2	-	1	-	-	-	-	-	2
Tenn.	-	-	-	-	-	-	6	2	34	-	2	-	-	-	-
Ala.	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-
Miss.	-	-	-	-	-	-	-	N	N	-	-	1	-	-	-
W.S. CENTRAL	1	-	-	-	-	-	4	1	11	-	-	-	-	-	-
Ark.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Okla.	1	-	-	-	-	-	-	-	6	-	-	-	-	-	-
Tex.	-	-	-	-	-	-	4	1	3	-	-	-	-	-	-
MOUNTAIN	1	7	12	-	-	-	5	-	4	-	3	3	-	-	1
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-
Colo.	-	7	12	-	-	-	4	-	2	-	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	1	N	N	-	-	1	-	-	-
Ariz.	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
Utah	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1
Nev.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	11	43	57	-	-	23	56	8	23	6	17	21	6	7	16
Wash.	1	-	-	-	-	-	2	1	3	1	1	1	-	-	-
Oreg.	2	29	29	-	-	1	6	N	N	2	2	6	-	-	1
Calif.	7	14	28	-	-	22	47	6	18	3	6	13	6	7	14
Alaska	1	-	-	-	-	-	1	1	2	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	8	1	-	-	1
Guam	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
P.R.	1	-	-	-	-	-	-	-	2	-	-	1	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 23, 1988 and January 24, 1987 (3rd Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	1,578	1,810	9	618	772	7	6	-	106
NEW ENGLAND	39	23	2	4	13	-	2	-	1
Maine	2	-	1	-	-	-	-	-	-
N.H.	1	-	1	-	-	-	-	-	1
Vt.	-	-	-	-	1	-	-	-	-
Mass.	19	16	-	2	3	-	2	-	-
R.I.	-	-	-	1	-	-	-	-	-
Conn.	17	7	-	1	9	-	-	-	-
MID. ATLANTIC	271	197	-	153	154	-	-	-	13
Upstate N.Y.	10	3	-	17	42	-	-	-	-
N.Y. City	230	127	-	76	82	-	-	-	-
N.J.	30	25	-	28	22	-	-	-	-
Pa.	1	42	-	32	8	-	-	-	13
E.N. CENTRAL	33	56	-	100	118	1	-	-	3
Ohio	-	1	-	22	22	-	-	-	-
Ind.	7	1	-	2	1	-	-	-	-
Ill.	21	45	-	44	65	-	-	-	1
Mich.	5	1	-	27	27	1	-	-	-
Wis.	-	8	-	5	3	-	-	-	2
W.N. CENTRAL	5	8	3	19	27	3	-	-	16
Minn.	1	4	-	4	6	-	-	-	-
Iowa	1	-	1	3	5	-	-	-	10
Mo.	1	4	1	5	13	2	-	-	1
N. Dak.	-	-	-	-	1	-	-	-	4
S. Dak.	-	-	-	7	2	-	-	-	-
Nebr.	2	-	1	-	-	1	-	-	1
Kans.	-	-	-	-	-	-	-	-	-
S. ATLANTIC	582	617	-	133	140	1	-	-	25
Del.	3	5	-	-	-	1	-	-	-
Md.	19	32	-	17	6	-	-	-	10
D.C.	18	4	-	4	6	-	-	-	-
Va.	20	16	-	16	16	-	-	-	6
W. Va.	-	-	-	4	8	-	-	-	3
N.C.	33	42	-	9	22	-	-	-	-
S.C.	15	47	-	25	28	-	-	-	-
Ga.	97	96	-	3	4	-	-	-	6
Fla.	377	375	-	55	50	-	-	-	-
E.S. CENTRAL	90	110	2	59	89	1	-	-	4
Ky.	-	-	1	25	5	1	-	-	1
Tenn.	11	68	-	-	-	-	-	-	-
Ala.	49	42	1	30	38	-	-	-	3
Miss.	30	-	-	4	46	-	-	-	-
W.S. CENTRAL	208	252	-	13	20	-	-	-	18
Ark.	-	11	-	-	1	-	-	-	7
La.	21	34	-	-	-	-	-	-	-
Okla.	13	12	-	7	3	-	-	-	2
Tex.	174	195	-	6	16	-	-	-	9
MOUNTAIN	12	15	1	13	13	1	1	-	13
Mont.	-	2	-	-	-	-	-	-	10
Idaho	-	1	1	-	2	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	2
Colo.	12	6	-	1	-	1	1	-	-
N. Mex.	-	-	-	4	1	-	-	-	-
Ariz.	-	6	-	6	8	-	-	-	1
Utah	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	2	2	-	-	-	-
PACIFIC	338	532	1	124	198	-	3	-	13
Wash.	-	9	-	8	8	-	-	-	-
Oreg.	8	12	-	9	6	-	-	-	-
Calif.	327	510	1	94	162	-	3	-	13
Alaska	-	-	-	3	7	-	-	-	-
Hawaii	3	1	-	10	15	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	36	34	-	6	8	-	-	-	4
V.I.	1	2	-	-	1	-	-	-	-
Amer. Samoa	-	1	-	-	2	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 23, 1988 (3rd Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	687	485	130	44	15	13	65
Boston, Mass.	173	112	37	9	7	8	22
Bridgeport, Conn.	38	31	4	2	1	-	3
Cambridge, Mass.	23	18	5	-	-	-	3
Fall River, Mass.	30	25	4	-	1	-	1
Hartford, Conn.	68	42	16	9	-	1	1
Lowell, Mass.	38	31	6	1	-	-	3
Lynn, Mass.	15	14	1	-	-	-	-
New Bedford, Mass.	21	16	4	1	-	-	1
New Haven, Conn.	50	34	8	5	1	2	2
Providence, R.I.	48	33	9	4	1	1	2
Somerville, Mass.	8	8	-	-	-	-	-
Springfield, Mass.	50	33	11	4	1	1	7
Waterbury, Conn.	39	27	8	2	2	-	9
Worcester, Mass.	86	61	17	7	1	-	11
MID. ATLANTIC	3,185	2,098	616	299	94	78	152
Albany, N.Y.	63	45	7	2	7	2	2
Allentown, Pa.	21	13	5	3	-	-	-
Buffalo, N.Y.§	103	75	19	7	-	2	5
Camden, N.J.	56	30	14	9	3	-	1
Elizabeth, N.J.	29	17	9	1	2	-	1
Erie, Pa.†	45	33	10	1	-	1	4
Jersey City, N.J.	56	35	9	9	1	2	2
N.Y. City, N.Y.	1,774	1,141	345	197	55	36	83
Newark, N.J.	98	43	27	16	10	2	-
Paterson, N.J.	40	18	12	4	1	5	2
Philadelphia, Pa.	398	283	67	29	8	11	22
Pittsburgh, Pa.†	87	61	17	5	1	3	1
Reading, Pa.	34	28	4	1	-	1	1
Rochester, N.Y.	123	96	19	1	2	5	18
Schenectady, N.Y.	36	30	3	3	-	-	-
Scranton, Pa.†	28	20	7	1	-	-	-
Syracuse, N.Y.	100	65	23	5	2	5	6
Trenton, N.J.	44	26	13	2	2	1	1
Utica, N.Y.	25	23	1	1	-	-	-
Yonkers, N.Y.	25	16	5	2	-	2	3
E.N. CENTRAL	2,367	1,569	514	149	61	73	105
Akron, Ohio	35	24	7	-	1	3	-
Canton, Ohio	36	28	7	1	-	-	2
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	139	94	29	9	4	3	12
Cleveland, Ohio	175	109	44	11	3	8	1
Columbus, Ohio	80	41	22	6	5	6	1
Dayton, Ohio	115	74	25	12	3	1	2
Detroit, Mich.	232	139	53	21	8	10	9
Evansville, Ind.	57	44	12	-	1	-	4
Fort Wayne, Ind.	61	47	9	2	2	1	4
Gary, Ind.	15	10	1	1	2	1	2
Grand Rapids, Mich.	79	54	12	5	6	2	10
Indianapolis, Ind.	215	143	46	17	5	4	1
Madison, Wis.	41	25	11	1	2	2	4
Milwaukee, Wis.	161	107	38	8	5	3	10
Peoria, Ill.	57	42	14	-	1	-	4
Rockford, Ill.	51	37	9	2	-	3	5
South Bend, Ind.	74	57	15	1	1	-	7
Toledo, Ohio	116	85	22	4	2	3	11
Youngstown, Ohio	64	47	13	3	-	1	-
W.N. CENTRAL	876	600	169	54	31	22	58
Des Moines, Iowa	72	46	15	6	4	1	7
Duluth, Minn.	28	24	3	1	-	-	-
Kansas City, Kans.	38	26	7	1	2	2	-
Kansas City, Mo.	123	83	28	6	4	2	9
Lincoln, Nebr.	36	28	6	-	1	1	3
Minneapolis, Minn.	190	135	26	12	6	11	17
Omaha, Nebr.	88	62	16	5	4	1	9
St. Louis, Mo.	174	106	43	18	5	2	5
St. Paul, Minn.	53	42	10	1	-	-	1
Wichita, Kans.	74	48	15	4	5	2	7
S. ATLANTIC	1,376	852	334	108	46	34	65
Atlanta, Ga.	184	104	45	18	12	5	4
Baltimore, Md.	260	163	76	11	6	4	10
Charlotte, N.C.	117	73	29	8	5	2	12
Jacksonville, Fla.	94	63	17	7	6	1	6
Miami, Fla.	92	47	27	14	3	1	-
Norfolk, Va.	65	41	16	4	2	2	5
Richmond, Va.	92	55	27	4	1	5	6
Savannah, Ga.	66	48	12	5	1	-	1
St. Petersburg, Fla.	86	72	8	3	1	2	-
Tampa, Fla.	72	39	21	5	2	4	4
Washington, D.C.	215	121	52	26	7	8	8
Wilmington, Del.	33	26	4	3	-	-	-
E.S. CENTRAL	772	522	153	63	11	23	49
Birmingham, Ala.	108	73	20	9	3	3	1
Chattanooga, Tenn.	96	68	19	4	-	5	7
Knoxville, Tenn.	116	81	23	8	2	2	11
Louisville, Ky.	81	54	17	3	-	7	4
Memphis, Tenn.	112	79	22	9	1	1	8
Mobile, Ala.	37	21	14	2	-	-	3
Montgomery, Ala.	31	23	5	2	1	-	1
Nashville, Tenn.	191	123	33	26	4	5	14
W.S. CENTRAL	1,407	902	300	113	50	39	84
Austin, Tex.	79	52	13	7	3	4	10
Baton Rouge, La.	71	43	19	7	2	-	9
Corpus Christi, Tex.	46	28	5	7	2	4	-
Dallas, Tex.	230	139	48	24	9	10	8
El Paso, Tex.	69	49	14	3	2	1	7
Fort Worth, Tex	108	78	15	9	2	4	6
Houston, Tex.§	308	176	74	34	13	11	7
Little Rock, Ark.	66	44	12	3	3	1	7
New Orleans, La.	113	65	29	10	8	1	-
San Antonio, Tex.	207	148	49	5	5	-	21
Shreveport, La.	33	21	8	2	-	2	1
Tulsa, Okla.	77	59	14	2	1	1	8
MOUNTAIN	724	499	133	45	23	23	57
Albuquerque, N. Mex.	94	66	14	10	1	2	6
Colo. Springs, Colo.	50	34	12	3	1	-	9
Denver, Colo.	113	86	16	4	3	4	7
Las Vegas, Nev.	133	86	29	11	5	2	11
Ogden, Utah	30	26	3	1	-	-	7
Phoenix, Ariz.	114	70	21	7	6	10	8
Pueblo, Colo.	27	19	7	-	1	-	4
Salt Lake City, Utah	59	39	14	2	1	3	-
Tucson, Ariz.	104	73	17	7	5	2	5
PACIFIC	1,933	1,307	376	144	48	45	139
Berkeley, Calif.	17	12	3	1	1	-	2
Fresno, Calif.	67	43	11	5	2	6	10
Glendale, Calif.	19	16	2	1	-	-	2
Honolulu, Hawaii	76	50	17	5	2	2	11
Long Beach, Calif.	133	89	27	8	3	6	21
Los Angeles Calif.	441	287	87	34	13	7	15
Oakland, Calif.	62	37	16	7	1	1	4
Pasadena, Calif.	37	29	4	3	1	-	-
Portland, Oreg.	88	62	15	5	2	4	6
Sacramento, Calif.	151	107	31	11	-	2	17
San Diego, Calif.	135	92	19	15	7	2	17
San Francisco, Calif.	159	108	32	17	-	2	8
San Jose, Calif.	167	108	40	10	2	7	14
Seattle, Wash.	285	194	56	19	13	3	3
Spokane, Wash.	47	37	7	2	1	-	6
Tacoma, Wash.	49	36	9	1	-	3	3
TOTAL	13,327††	8,834	2,725	1,019	379	350	774

*Mortality data in this table are voluntarily reported from 121 cities in the United states, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

TABLE V. Estimated years of potential life lost (YPLL) before age 65* and cause-specific mortality, by cause of death – United States, 1986

Cause of Mortality (ICD, 9th Revision)	YPLL for Persons Dying in 1985	YPLL for Persons Dying in 1986	Cause-Specific Mortality,1986† (Rate/100,000)
All Causes (Total)	11,858,619	12,054,242	870.8
Unintentional Injuries§ (E800-E949)	2,279,211	2,371,024	39.7
Malignant Neoplasms (140-208)	1,833,900	1,821,682	193.3
Diseases of the Heart (390-398, 402, 404-429)	1,576,689	1,534,607	318.7
Suicide/Homicide (E950-E978)	1,267,906	1,342,693	22.0
Congenital Anomalies (740-759)	678,058	651,523	5.1
Prematurity¶ (765-769)	448,146	438,351	2.8
Sudden Infant Death Syndrome (798)	342,818	313,555	2.0
Acquired Immunodeficiency Syndrome**	160,038	246,823	3.6
Cerebrovascular Disease (430-438)	250,593	232,583	61.3
Chronic Liver Diseases and Cirrhosis (571)	239,053	225,028	10.9
Pneumonia and Influenza (480-487)	169,881	166,389	29.2
Chronic Obstructive Pulmonary Diseases (490-496)	128,011	127,889	31.3
Diabetes Mellitus (250)	114,848	126,652	15.1

*For details of calculation, see *MMWR* Supplement, *Premature Mortality in the United States*, December 19, 1986, Vol. 35, No. 2S. Cause-specific mortality rates for 1986 were obtained from the National Center for Health Statistics, *Monthly Vital Statistics Report (MVSR)*, Vol. 35, No. 13, August 24, 1987. Cause-specific deaths for 1985 were obtained from the *MVSR*, Vol. 36, No. 5, Supplement, August 28, 1987. Age-specific population estimates for 1985 and 1986 were obtained from the Bureau of the Census, *Estimates of the Population of the United States by Age, Sex, and Race: 1980 to 1986*, Series P-25, No. 1000.

†Cause-specific mortality rates as reported in the National Center for Health Statistics' *Monthly Vital Statistics Report* are compiled from a 10% sample of all deaths.

§Equivalent to accidents and adverse effects.

¶Category derived from disorders relating to short gestation and respiratory distress syndrome.

**Reflects CDC surveillance data.

Antigenic Variation — Continued

occasion resulted in diminished vaccine efficacy, such as the failure of A/Port Chalmers/1/73 to protect against A/Victoria/3/75 (*2*). However, reduced vaccine efficacy has not always occurred in such situations. In 1972, vaccine containing A/Aichi/2/68 reduced cases of influenza by 60% in an outbreak caused by the antigenic drift variant A/England/42/72 (*3*), and, in 1977, A/Victoria/3/75 vaccine protected adults from A/Texas/1/77 infection with 80% efficacy (*4*). The mechanism of such cross (heterovariant) protection is not precisely known. Although antigenic variants differ in some epitopes on the hemagglutinin, they also share other common hemagglutinin epitopes. Because type A(H3N2) viruses have circulated since 1968, most of the population has been primed by previously circulating strains and is, therefore, more responsive to heterovariant immunization. In addition, the antigenic changes described occurred in the hemagglutinin surface glycoprotein. Significant protection from illness may also be induced by the neuraminidase surface glycoprotein (*5,6*), which has shown less evidence of antigenic drift. Still other factors, such as the capacity of a strain to spread in the population, can emerge independently from changes in the antigenic properties of the hemagglutinin. Therefore, vaccine efficacy cannot be determined until placebo-controlled double-blind trials have been completed.

Nevertheless, laboratory studies, as well as preliminary observations during outbreaks of influenza A(H3N2) among high-risk residents of nursing homes, suggest that the A/Leningrad/360/86 component of the current vaccine may not provide optimal protection against presently circulating strains. These findings emphasize the need for health-care providers to be aware of the recommendations for use of the antiviral drug amantadine for controlling outbreaks and for prophylaxis or treatment of unprotected patients (*7*). Because amantadine, which is a prescription drug, must be given before exposure to prevent infection or within the first 1 or 2 days after onset of illness for treatment, contingency plans for its rapid use are needed. These plans include obtaining a physician's order to give the drug to high-risk patients at the first signs of influenza illness, knowing the precautions concerning dosage of the drug (particularly for persons with known renal insufficiency or with presumed reduced renal function, such as those over 64 years of age), and arranging for an adequate supply of the drug.

A fact sheet on amantadine, directed particularly at use in institutions caring for high-risk persons, is available through the Office of Public Inquiries, Centers for Disease Control, 1600 Clifton Road, NE, Atlanta, Georgia 30333.

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Antigenic Variation — Continued

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Current Trends

Changes in Premature Mortality — United States, 1979-1986

Premature mortality in the United States, as measured in total years of potential life lost (YPLL) before age 65 (*1*), has been analyzed for data collected annually since 1979.* The overall trend from 1979 to 1986 was toward lower YPLL and YPLL rates, even though the number and rate of YPLL increased from 1984 to 1986 (Table V, page 45).

The total number of YPLL decreased by 6.0%, and the rate of YPLL per 1,000 persons fell by 13.3% during the period 1979-1986 (Table 1). The greatest absolute rate decline from 1979 to 1986 was in YPLL due to unintentional injuries (Figure 1). The ranking of the leading causes of YPLL changed only slightly from 1979 to 1986, with the exception of the addition of the acquired immunodeficiency syndrome (AIDS) (Table 1). Fewer than five AIDS deaths were recorded in 1979; however, by 1986, AIDS had become the eighth leading cause of YPLL and accounted for 2.0% of total YPLL.

*The period for which U.S. mortality data coded according to the International Classification of Diseases, Ninth Revision, (ICD-9) are available.

TABLE 1. Ranking of leading causes of years of potential life lost (YPLL) before age 65 and percentage of change in rates — United States, 1979 and 1986

Cause of Mortality	Ranking 1979	Ranking 1986	YPLL Rate Change 1979–1986 (%)
All Causes	—	—	(−13.3)
Unintentional Injuries	1	1	(−21.3)
Malignant Neoplasms	2	2	(−6.7)
Diseases of the Heart	3	3	(−16.1)
Suicide/Homicide	4	4	(−5.7)
Congenital Anomalies	6	5	(−17.1)
Prematurity	5	6	(−45.5)
Sudden Infant Death Syndrome	7	7	(−17.2)
Acquired Immunodeficiency Syndrome	—*	8	—†
Cerebrovascular Disease	8	9	(−25.9)
Chronic Liver Diseases and Cirrhosis	9	10	(−28.1)
Pneumonia and Influenza	10	11	(−21.6)
Chronic Obstructive Pulmonary Diseases	12	12	(+8.3)
Diabetes Mellitus	11	13	(+6.2)

*Unranked.
†Not calculable.

Premature Mortality — Continued

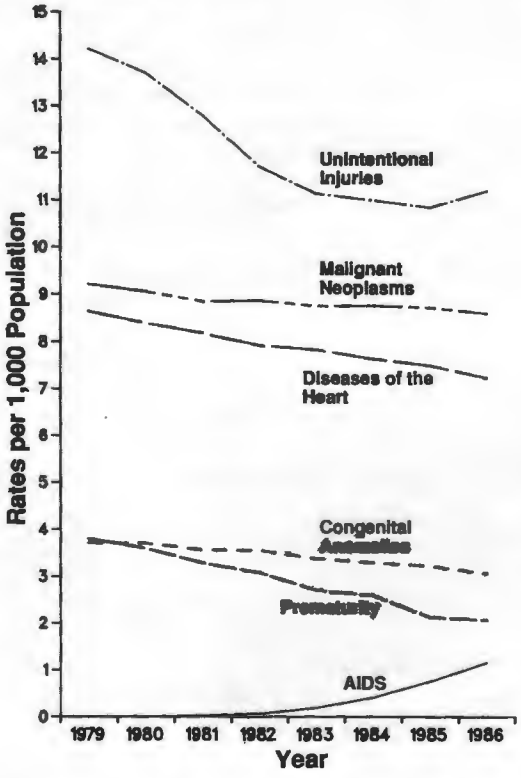
From 1979 to 1986, the rate of YPLL decreased for ten of the leading causes of death and increased for three. Unintentional injuries accounted for the largest portion of the decrease (30.0%) among the causes of death with rate decreases. Most of the decline in injuries occurred between 1980 and 1982 and is attributable to a decrease in motor vehicle-related deaths in the 15- to 24-year age group. Prematurity (respiratory distress syndrome and disorders relating to short gestation and unspecified low birthweight) had the largest relative decline in rate of YPLL per 1,000 persons. In large part, this decline was due to a greater than one-third reduction in the rate of infant deaths due to respiratory distress syndrome. Prematurity (−17.4%) and diseases of the heart (−14.0%) followed injuries in contributing to the overall decline in YPLL rates from 1979 to 1986.

Reported by: Epidemiologic Studies Br, Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, CDC.

Reference

1. Centers for Disease Control. Premature mortality in the United States: public health issues in the use of years of potential life lost. MMWR 1986;35(suppl 2S).

FIGURE 1. Rates of years of potenital life lost (YPLL) for causes with rate changes ≥0.5, by year — United States, 1979-1986



Epidemiologic Notes and Reports

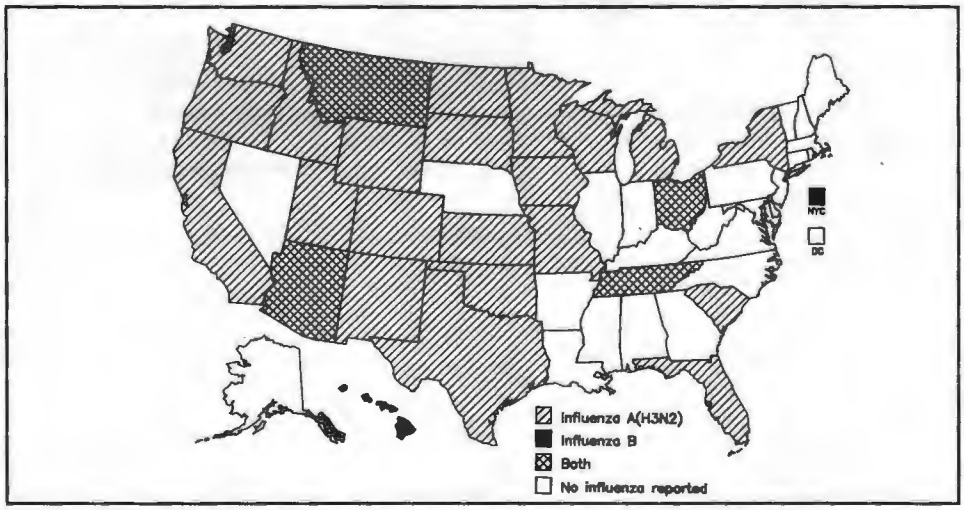
Update: Influenza Activity — United States

Indicators of influenza activity are increasing throughout the United States. For the week ending January 23, 1988, 2 states* reported widespread outbreaks of influenza-like activity, and 10 states† reported regional influenza-like activity. This is the second week with reports of widespread influenza-like activity. For the report week ending January 16, 1988, physicians§ reported that 6% of their outpatients were diagnosed as having influenza-like illness. While this level is the highest reported so far this year, it is below the usually observed peak of 10%-12%.

Influenza A(H3N2), the predominant type this season, has now been identified in 25 states¶ (Figure 1). Eight states have reported isolates of influenza A, subtype pending.** Outbreaks of influenza A(H3N2) have now been documented in nursing homes in Minnesota, New York, and Wisconsin. In addition, an outbreak of influenza-like illness began during late December and continued into January in a facility for the mentally handicapped in South Dakota; both residents and staff were affected. South Dakota also reported an abrupt increase in school absenteeism due to influenza-like illness among students and staff. Sporadically occurring cases of Influenza B

*Hawaii and South Dakota.
†Idaho, Kentucky, Mississippi, Missouri, Montana, Nebraska, Texas, Utah, Washington, and Wisconsin.
§Reported by approximately 160 physician members of the American Academy of Family Physicians. A patient with a temperature ≥37.8 °C (100 °F) and at least cough or sore throat was considered to have influenza-like illness.
¶Arizona, California, Colorado, Florida, Idaho, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Washington, Wisconsin, and Wyoming.
**Hawaii, Indiana, Kentucky, Louisiana, Nebraska, Mississippi, North Carolina, and Virginia.

FIGURE 1. States reporting isolates of influenza, by type — United States, October 19, 1987–January 25, 1988



Update: Influenza Activity -- Continued

occurring cases of influenza B have been reported from 6 states;[††] however, influenza B has not been associated with any outbreaks.

In the 121 cities reporting regularly to CDC, 5.9% of deaths were associated with pneumonia and influenza (P&I) for the week ending January 16, 1988. This percentage does not exceeded the epidemic threshold[§§] for the influenza season to date (Figure 2).

Reported by: Participating State and Territorial Epidemiologists and State Laboratory Directors. Sentinel Physicians of the American Academy of Family Physicians. WHO Collaborating Laboratories. WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

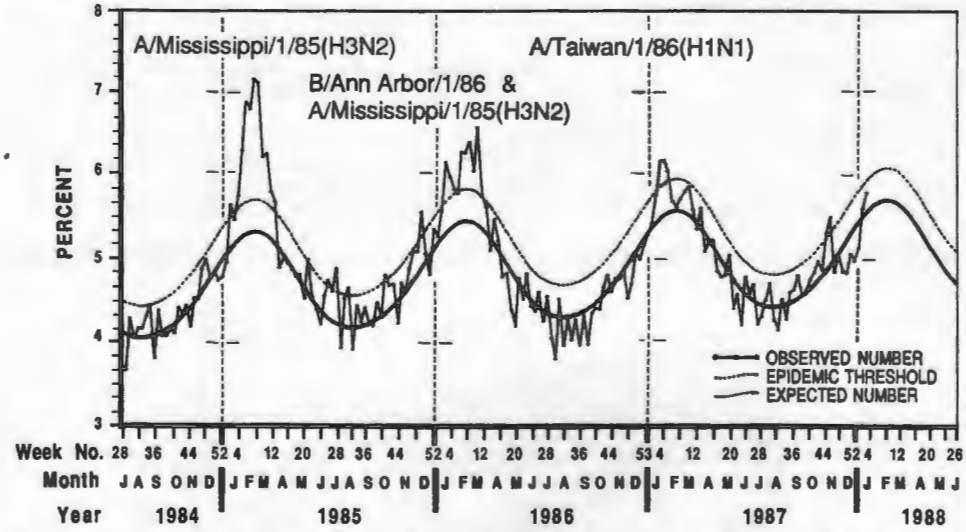
Reference

1. Lui K-J, Kendal AP. Impact of influenza epidemics on mortality in the United States from October 1972 to May 1985. Am J Public Health 1987;77:712-6.

[††]Arizona, Hawaii, Montana, New York, Ohio, and Tennessee.

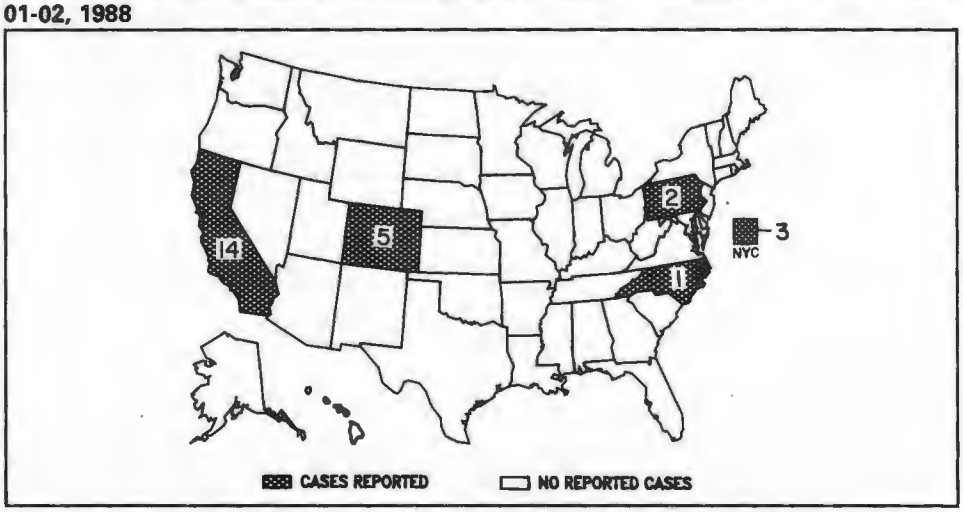
[§§]The epidemic threshold for the 1987/88 influenza season was estimated at 1.645 standard deviations above the values projected on the basis of a periodic regression model applied to observed P&I deaths for the previous 5-year period, but excluding the observations during influenza outbreaks (*1*).

FIGURE 2. Pneumonia and influenza deaths as a percentage of total deaths* -- United States, July 1984-January 16, 1988



*Reported to CDC from 121 cities in the United States. Pneumonia and influenza deaths include all deaths for which penumonia is listed as a primary or underlying cause or for which influenza is listed on the death certificate.

FIGURE I. Reported measles cases — United States, weeks 51-52, 1987 and weeks 01-02, 1988



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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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AIDS Knowledge and Attitudes for September 1987

Provisional Data From the National Health Interview Survey

by Deborah A. Dawson, Ph.D., Marcie Cynamon, M.A.,
and Joseph E. Fitti, M.S.P.H., Division of Health Interview Statistics

Introduction

The National Center for Health Statistics has introduced a special set of supplemental questions on the adult population's knowledge and attitudes about acquired immunodeficiency syndrome (AIDS) in the National Health Interview Survey (NHIS). This report presents provisional findings for September, the second month of data collection with the AIDS questionnaire. Data for August 1987 have been published in NCHS *Advance Data From Vital and Health Statistics,* No. 146.

The AIDS questionnaire was designed to provide baseline estimates of public knowledge and attitudes about AIDS transmission and prevention of AIDS virus infection and to measure changes in knowledge and attitudes over time. The data also were needed as input for the planning and development of AIDS educational campaigns and for evaluation of major educational efforts.

The AIDS questionnaire was developed by the National Center for Health Statistics and interagency working groups established by the Information, Education and Risk Factor Reduction Subcommittee of the Public Health Service Executive Task Force on AIDS. The working groups included representatives from the Centers for Disease Control; the National Institutes of Health; the Alcohol, Drug Abuse and Mental Health Administration; and the Health Resources and Services Administration.

The questionnaire includes items on self-assessment of knowledge about AIDS; sources of information about AIDS; knowledge about AIDS and AIDS-related risk factors, modes of transmission, and blood tests for the AIDS virus; plans to take such a test; recent experience with blood donation; self-assessment of chances of getting AIDS; personal knowledge of people with AIDS or the AIDS virus; and finally, willingness of respondents to take part in a proposed national seroprevalence study.

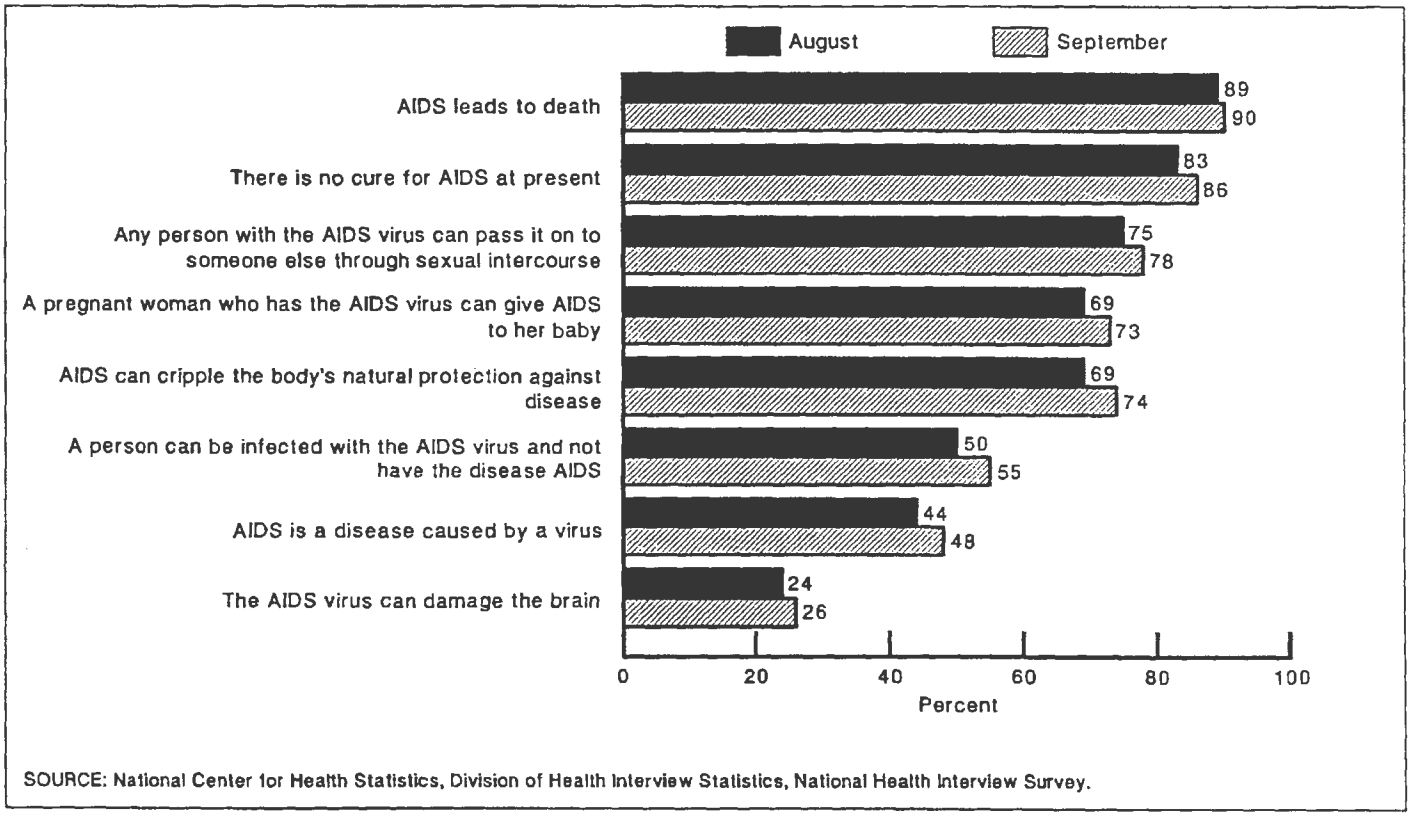
This report presents provisional data for all AIDS questionnaire items. Table 1 displays percent distributions of persons 18 years of age and over by response categories according to age, sex, race, and marital status. In most cases, the actual question asked of the respondent is reproduced verbatim in table 1, along with the response categories. In a few cases, questions or response categories have been rephrased or combined. Refusals and other nonresponses are excluded from the denominator in the calculation of estimates, but responses of "don't know" are included.

Selected findings

There are signs that the U.S. public's knowledge about AIDS increased slightly between August and September 1987, especially in the areas of general information concerning the characteristics of the disease and its modes of transmission. The following highlights describe the September data, noting any topic areas where the results are significantly different from those obtained in August.

Awareness of AIDS—Virtually everyone (more than 99 percent) has heard of AIDS. More than three-fourths (77 percent) of adults last saw, heard, or read something about AIDS within 3 days of the NHIS interview, an increase from 74 percent in August.

Self-perceived knowledge—Twenty percent of adults 18 years of age and over feel that they know a lot about AIDS compared to most people; 43 percent feel they know some; 28 percent feel they know a little; and 9 percent feel they know nothing about AIDS. As was the case in August, adults 50 years and over are more likely than younger



SOURCE: National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey.

Figure 1. Provisional estimates of percent of adults 18 years of age and over who think selected statements about AIDS are definitely true: United States, August and September, 1987

adults to state that they know nothing about AIDS and less likely to think that they know a lot. Black individuals are more than twice as likely as white individuals to state that they know nothing about AIDS (20 percent compared to 8 percent).

General knowledge—Figure 1 shows the percents of adults answering "definitely true" to selected knowledge questions. For a number of these questions, there were small but statistically significant increases between August and September in the proportions of adults answering correctly. The majority of respondents (90 percent) continue to be certain that AIDS leads to death. Increased proportions think it is definitely true that there is no cure for AIDS at present (86 percent compared to 83 percent in August), that anyone with the AIDS virus can transmit it to other individuals through sexual intercourse (78 percent, up from 75 percent in August), and that a pregnant woman can transmit AIDS to her baby (73 percent, up from 69 percent). There also were increases between August and September in the percent of adults who think it is definitely true that AIDS can cripple the body's natural protection against disease (74 percent compared to 69 percent), that a person can be infected with the AIDS virus and not have the disease AIDS (55 versus 50 percent), and that AIDS is caused by a virus (48 versus 44 percent). Another indication of improved public knowledge lies in the increased proportions of adults who think it is definitely false that AIDS is especially common in older people (69 percent in September compared to 65 percent in August), that you can tell if a person has AIDS just by looking at them (71 compared to 65 percent), and that there is a vaccine to prevent the AIDS virus (69 percent compared to 65 percent).

Despite these areas of improvement, there continues to be a great deal of uncertainty about the causes of AIDS and about the relationship between the AIDS virus and the disease AIDS. For the most part, the lowest levels of general knowledge are found among adults 50 years of age and over, confirming their own self-assessment that they know relatively little about the disease.

Transmission of the AIDS virus—Most Americans are aware of the ways in which the AIDS virus is most likely to be transmitted. More than 9 out of 10 adults say it is very likely that a person will get AIDS from having sex with a person who has AIDS (94 percent) or from sharing needles for drug use with someone who has AIDS (93 percent). The level of misinformation about modes of transmission, particularly from casual contact, continues to be high; however, there is some evidence of improvement in this area. Donating blood is still considered a likely way of getting the AIDS virus by one-fourth (26 percent) of adults, but the percent who think it is definitely not possible to transmit the virus by blood donation has increased from 18 to 21 percent. There also have been increases in the proportions of adults who think it is impossible to transmit the virus by working near someone with AIDS (21 percent in September compared to 18 percent in August), by shaking hands with or touching someone with AIDS (26 compared to 22 percent), by kissing on the cheek someone with AIDS (23 compared to 19 percent), and by attending

school with a child who has AIDS (24 compared to 20 percent).

Black adults continue to be more likely than white adults to perceive a threat of AIDS virus infection from many sources of casual contact. There are few differences by age, sex, and marital status in knowledge or misinformation about the transmission of AIDS.

Blood test for the AIDS virus—A number of questions were asked about blood tests for the AIDS virus. Overall, 72 percent of adults have heard of the blood test, about the same as in August (70 percent). Persons 30-49 years of age are most likely (82 percent) and persons 50 years of age and over least likely (57 percent) to have heard of the test. Although there is widespread awareness that a blood test for the AIDS virus is available, there appears to be some misunderstanding about the purpose of the test. Forty percent of adults (56 percent of those who have heard of the test) erroneously believe that the blood test results tell whether a person has the disease AIDS.

As was the case in August, 7 percent of respondents report having had their blood tested for the AIDS virus, including 2 percent who voluntarily said that they were tested because of a blood donation or transfusion. (On the other hand, about 12 percent report having given blood since January 1985, the approximate date when routine testing of donated blood began.) These provisional data indicate that adults under age 30 are almost four times as likely to have had the AIDS blood test as persons 50 years of age and over. In addition, 11 percent of all adults have thought about having the AIDS test, and 5 percent say they plan to be tested in the next 12 months. Thirteen percent of Americans age 18 years and over know someone who has had the AIDS blood test.

Risk of getting AIDS—Most adults believe that they (and the people that they know) are at little or no risk of AIDS infection. Nine in 10 feel that there is no chance (60 percent) or a low chance (31 percent) of getting AIDS themselves. More than 6 in 10 say that the chance of someone they know getting AIDS is low (38 percent, up from 34 percent in August) or nonexistent (26 percent). Seven percent of adults report personally knowing someone with the AIDS virus.

AIDS prevention—Almost 9 out of 10 Americans realize that both celibacy and restricting sexual activity to a monogamous relationship with a person who does not have the AIDS virus are very effective ways to avoid infection with the virus. One-third (33 percent) think that using condoms is a very effective way to avoid the virus, and an additional 49 percent consider this method somewhat effective. Fifty-nine percent of the adults in the United States think that using a diaphragm is not an effective way to avoid getting the AIDS virus, an increase over the August estimate of 56 percent. An equal proportion (59 percent compared to 54 percent in August) feel that using spermicides is ineffective in AIDS prevention.

AIDS discussion and education—Two-thirds of adults (68 percent) have discussed AIDS with friends or relatives. Persons age 50 and over are the least likely to have done so. Of adults with children between the ages of 10 and 17, 61 percent have talked with their children about AIDS (14 percent of all adults). Forty-two percent of those with children in this age range report that their children have received instruction about AIDS at school, an increase over the August estimate of 35 percent.

Symbols

-	Quantity zero
0	Quantity more than zero but less than 0.5

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
Total	100	100	100	100	100	100	100	100	100	100
1. Have you ever heard of AIDS? When was the last time you saw, heard, or read something about AIDS?										
0-3 days ago	77	69	79	81	78	76	79	71	79	73
4-7 days ago	13	16	13	10	12	13	13	15	13	13
8-14 days ago	3	4	3	2	2	3	2	4	3	3
15-31 days ago	3	5	3	2	3	3	3	4	2	4
More than 31 days ago	2	3	1	1	2	2	1	3	1	3
Never heard of AIDS	0	1	0	0	1	0	0	1	0	1
Don't know	3	2	2	4	2	3	2	3	2	4
2. Compared to most people, how much would you say you know about AIDS?										
A lot	20	22	26	13	23	18	21	13	20	21
Some	43	49	47	33	40	45	43	37	44	40
Little	28	25	23	35	27	28	27	30	28	28
Nothing	9	4	4	19	10	9	8	20	8	11
Don't know	0	–	–	0	0	0	0	0	0	0
3a. AIDS is a disease caused by a virus.										
Definitely true	48	58	53	34	53	44	48	49	46	52
Probably true	28	27	29	27	26	29	28	22	29	25
Probably false	4	3	2	5	3	4	4	2	4	3
Definitely false	4	3	4	6	4	5	4	6	5	3
Don't know	17	9	12	28	15	18	16	21	17	17
3b. AIDS can cripple the body's natural protection against disease.										
Definitely true	74	78	81	63	77	72	76	60	76	71
Probably true	15	14	12	20	14	16	15	17	14	17
Probably false	1	1	1	1	1	1	1	2	1	1
Definitely false	1	2	1	1	1	1	1	3	1	1
Don't know	9	5	5	15	8	9	7	19	8	9
3c. AIDS is especially common in older people.										
Definitely true	0	1	0	1	0	1	0	3	0	1
Probably true	1	2	1	1	1	1	1	3	1	2
Probably false	21	25	18	21	20	22	21	19	20	24
Definitely false	69	65	75	64	69	69	70	59	72	63
Don't know	9	7	6	13	9	8	7	16	8	11
3d. The AIDS virus can damage the brain.										
Definitely true	26	23	25	30	27	26	26	30	27	26
Probably true	32	33	31	34	32	33	32	31	32	34
Probably false	8	9	10	5	9	7	8	6	8	8
Definitely false	6	7	9	2	7	5	6	4	6	5
Don't know	27	27	25	30	26	28	27	29	28	26
3e. AIDS usually leads to heart disease.										
Definitely true	7	6	6	9	7	7	7	10	7	7
Probably true	22	20	21	24	20	23	21	27	21	22
Probably false	18	21	22	12	21	16	19	13	18	18
Definitely false	14	16	18	8	15	13	14	11	14	13
Don't know	39	37	34	48	36	42	40	39	39	40
3f. AIDS leads to death.										
Definitely true	90	92	91	89	88	92	91	89	90	91
Probably true	8	7	7	8	9	6	8	7	8	7
Probably false	0	0	0	0	0	0	0	–	0	0
Definitely false	0	0	0	–	0	0	0	0	0	0
Don't know	2	0	1	3	2	1	1	3	1	2
4a. Where do you get most of your information about AIDS?[2]										
Television	82	81	80	86	82	83	82	86	83	81
Newspapers	60	46	63	68	65	56	63	41	65	52
Magazines	28	28	31	25	22	33	29	19	28	27
Radio	8	6	9	9	10	6	8	8	9	6
Relatives and friends	7	8	8	4	7	6	7	4	6	8
Brochures/fliers/pamphlets	7	8	8	5	7	7	6	12	7	8
Doctor/HMO/clinic	5	5	7	4	5	6	5	9	5	7
Other	15	20	18	8	17	14	15	15	15	17
Don't know	0	0	0	0	1	0	0	0	0	0
4b. Of the sources you just told me, from which one do you get the most information?										
Television	56	60	51	58	55	57	55	66	56	55
Newspapers	21	14	21	26	23	18	22	10	22	18
Magazines	9	9	11	7	7	11	9	6	9	9
Brochures/fliers/pamphlets	2	3	2	2	2	2	2	2	2	2
Doctor/HMO/clinic	2	2	3	1	2	2	2	5	2	3
Other	10	13	12	5	11	9	9	10	9	11
Don't know	1	0	1	1	1	1	1	0	1	1

See footnotes at end of table.

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987—Con.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
5a. If you wanted more specific information about AIDS, where would you get it?[2]										
Doctor/HMO/clinic	57	57	60	55	55	60	58	50	60	53
Public health department	17	14	19	17	18	16	17	15	17	16
Library	12	17	14	6	11	13	12	13	13	12
AIDS hot line	8	10	8	5	7	8	8	8	6	10
Other	26	28	29	21	28	24	25	30	25	28
Don't know	12	10	8	19	13	12	12	12	12	13
5b. Which one source would you most likely use?										
Doctor/HMO/clinic	46	46	46	48	44	48	47	42	48	43
Public health department	12	10	13	13	14	11	13	10	12	12
Library	8	12	10	4	7	9	8	10	8	8
AIDS hot line	6	7	6	4	5	6	6	7	5	8
Other	15	15	16	13	17	13	14	18	14	15
Don't know	13	10	9	19	13	12	12	13	12	14
6a. A person can be infected with the AIDS virus and not have the disease AIDS.										
Definitely true	55	54	63	45	53	56	57	40	57	50
Probably true	25	23	23	27	27	23	25	24	24	25
Probably false	3	5	3	3	4	3	3	7	3	4
Definitely false	4	7	3	2	4	4	3	8	3	5
Don't know	14	11	8	22	13	14	12	21	13	15
6b. You can tell if people have the AIDS virus just by looking at them.										
Definitely true	1	1	1	1	1	1	1	1	1	1
Probably true	4	5	2	5	3	5	4	5	3	5
Probably false	15	13	15	17	16	15	15	16	15	15
Definitely false	71	75	75	61	71	70	72	65	72	67
Don't know	10	6	6	16	9	10	9	14	8	12
6c. Any person with the AIDS virus can pass it on to someone else during sexual intercourse.										
Definitely true	78	81	79	75	76	80	78	75	79	77
Probably true	17	15	17	18	19	15	17	15	17	17
Probably false	0	0	1	1	1	0	0	0	1	0
Definitely false	1	1	1	0	1	1	1	2	0	1
Don't know	4	3	3	7	4	4	3	8	4	5
6d. A pregnant woman who has the AIDS virus can give AIDS to her baby.										
Definitely true	73	76	77	67	69	77	73	73	74	71
Probably true	19	18	16	24	23	16	20	16	18	21
Probably false	0	0	1	0	0	0	0	1	0	1
Definitely false	0	0	0	0	0	0	0	1	0	0
Don't know	7	6	6	9	8	6	7	9	7	7
6e. There is a vaccine available to the public that protects a person from getting the AIDS virus.										
Definitely true	1	1	1	2	1	1	1	2	1	1
Probably true	3	4	3	3	3	3	2	9	3	4
Probably false	11	14	9	10	11	11	10	13	10	12
Definitely false	69	70	77	60	72	67	72	51	71	66
Don't know	15	12	10	25	13	18	14	25	15	16
6f. There is no cure for AIDS at present.										
Definitely true	86	86	88	83	85	86	87	76	87	84
Probably true	8	7	7	10	9	8	8	11	7	9
Probably false	1	1	1	1	1	1	1	1	1	1
Definitely false	2	2	2	1	2	2	1	4	1	2
Don't know	4	3	3	5	4	4	3	8	4	4
7. How likely do you think it is that a person will get the AIDS virus from—										
7a. Receiving a blood transfusion?										
Very likely	36	36	31	40	33	38	32	54	34	38
Somewhat likely	32	31	32	33	30	33	33	29	32	31
Somewhat unlikely	13	15	15	8	13	12	14	5	13	12
Very unlikely	15	15	18	11	19	11	17	4	16	13
Definitely not possible	1	1	1	0	1	1	1	1	0	1
Don't know	4	3	3	7	4	4	4	7	4	4
7b. Donating or giving blood?										
Very likely	10	10	9	11	10	10	8	24	9	11
Somewhat likely	16	19	13	17	16	16	15	23	15	17
Somewhat unlikely	13	14	11	13	13	13	13	13	12	14
Very unlikely	34	35	38	30	35	33	36	21	36	31
Definitely not possible	21	19	26	19	21	21	23	10	22	20
Don't know	6	3	3	11	5	7	5	9	5	7

See footnotes at end of table.

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987—Con.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
7c. Living near a hospital or home for AIDS patients?										
Very likely	1	2	1	1	2	1	1	3	1	2
Somewhat likely	5	5	5	4	5	5	4	7	5	5
Somewhat unlikely	10	11	10	10	11	9	10	15	10	11
Very unlikely	40	44	41	37	43	38	41	40	41	40
Definitely not possible	36	34	38	36	33	39	38	25	37	35
Don't know	7	4	5	11	6	7	6	10	7	7
7d. Working near someone with AIDS?										
Very likely	3	3	3	4	3	4	3	7	3	3
Somewhat likely	15	15	15	16	15	15	15	18	15	16
Somewhat unlikely	16	17	16	13	17	15	15	15	16	14
Very unlikely	36	38	38	33	39	34	37	31	37	36
Definitely not possible	21	22	21	20	18	23	22	16	20	22
Don't know	9	5	6	14	7	10	8	13	9	9
7e. Eating in a restaurant where the cook has AIDS?										
Very likely	10	11	10	10	10	11	9	19	10	12
Somewhat likely	26	26	24	28	27	25	27	20	27	24
Somewhat unlikely	16	18	16	13	16	15	16	9	15	16
Very unlikely	26	25	29	22	26	25	26	23	26	24
Definitely not possible	11	12	12	10	10	12	11	10	11	11
Don't know	11	8	9	16	11	12	10	20	11	12
7f. Kissing—with exchange of saliva—a person who has AIDS?										
Very likely	35	36	33	36	36	34	34	45	35	35
Somewhat likely	34	34	34	35	34	35	35	28	35	34
Somewhat unlikely	10	11	12	7	12	9	10	8	9	11
Very unlikely	9	10	11	7	9	9	9	6	9	8
Definitely not possible	2	3	2	2	2	2	2	2	2	3
Don't know	9	7	8	13	8	11	9	10	9	9
7g. Shaking hands with or touching someone who has AIDS?										
Very likely	2	2	2	3	2	2	2	4	2	2
Somewhat likely	11	11	11	11	12	10	11	14	11	11
Somewhat unlikely	17	18	16	18	18	16	17	18	17	17
Very unlikely	38	39	41	33	39	37	38	32	39	34
Definitely not possible	26	27	27	23	24	27	26	20	25	28
Don't know	6	4	4	11	5	7	6	11	6	8
7h. Sharing plates, forks, or glasses with someone who has AIDS?										
Very likely	15	15	14	15	14	15	14	23	15	15
Somewhat likely	32	33	31	33	33	31	32	30	33	31
Somewhat unlikely	14	16	15	12	15	14	15	11	14	15
Very unlikely	19	17	23	17	20	19	20	13	20	19
Definitely not possible	10	10	11	9	8	11	10	8	10	10
Don't know	10	8	7	14	9	10	9	14	9	10
7i. Using public toilets?										
Very likely	9	11	7	11	7	11	8	17	9	10
Somewhat likely	22	22	20	25	22	22	22	26	22	22
Somewhat unlikely	16	18	17	12	17	15	16	12	15	16
Very unlikely	27	24	32	23	30	24	28	20	28	24
Definitely not possible	16	18	17	13	15	17	16	12	16	16
Don't know	10	7	8	15	8	12	9	14	10	11
7j. Sharing needles for drug use with someone who has AIDS?										
Very likely	93	95	94	89	92	93	93	87	93	93
Somewhat likely	5	4	4	6	5	4	4	6	5	5
Somewhat unlikely	0	0	–	0	–	0	0	–	0	0
Very unlikely	0	0	0	1	0	0	0	0	0	0
Definitely not possible	0	0	0	0	0	0	0	1	0	0
Don't know	2	1	1	4	2	2	2	5	2	2
7k. Kissing on the cheek a person who has AIDS?										
Very likely	4	3	4	5	4	4	3	9	4	3
Somewhat likely	14	16	12	15	16	13	14	20	14	15
Somewhat unlikely	19	21	20	17	21	18	19	19	19	21
Very unlikely	33	32	35	31	34	32	34	24	34	29
Definitely not possible	23	25	25	19	21	25	23	16	22	24
Don't know	7	4	5	13	6	9	6	12	7	7
7l. Being coughed or sneezed on by someone who has AIDS?										
Very likely	11	11	11	12	11	12	11	18	11	12
Somewhat likely	29	29	24	34	30	28	29	27	29	29
Somewhat unlikely	17	17	19	14	19	15	17	15	17	16
Very unlikely	22	23	25	17	23	21	23	17	23	21
Definitely not possible	10	11	11	8	9	11	10	9	9	11
Don't know	12	9	9	16	10	13	11	15	12	11

See footnotes at end of table.

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987—Con.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
7m. Attending school with a child who has AIDS?										
Very likely	2	2	2	3	2	2	2	5	2	3
Somewhat likely	12	12	12	12	13	11	11	15	12	12
Somewhat unlikely	17	17	18	15	17	17	16	17	17	16
Very unlikely	36	37	38	33	39	34	38	30	37	35
Definitely not possible	24	26	24	22	22	26	25	18	23	26
Don't know	9	6	6	14	8	10	8	15	9	9
7n. Mosquitoes or other insects?										
Very likely	10	13	9	9	11	9	9	18	9	12
Somewhat likely	25	27	25	24	26	24	24	30	26	24
Somewhat unlikely	12	15	13	9	13	12	12	11	12	12
Very unlikely	21	20	22	18	22	19	22	11	21	19
Definitely not possible	12	10	12	12	8	14	12	8	12	11
Don't know	21	15	18	28	19	22	21	22	20	22
7o. Pets or animals?										
Very likely	3	4	3	3	3	3	2	8	2	4
Somewhat likely	10	13	8	11	11	9	10	14	11	10
Somewhat unlikely	11	14	13	7	13	9	11	12	11	12
Very unlikely	30	31	33	25	31	29	31	21	32	26
Definitely not possible	23	21	26	23	21	26	24	17	24	22
Don't know	22	18	18	31	21	24	21	27	20	26
7p. Having sex with a person who has AIDS?										
Very likely	94	96	93	92	92	95	94	92	94	94
Somewhat likely	4	3	5	3	5	3	4	3	4	4
Somewhat unlikely	0	0	1	0	1	0	0	–	0	0
Very unlikely	0	–	0	0	0	0	0	0	0	0
Definitely not possible	0	0	0	–	0	0	0	0	0	0
Don't know	2	1	1	4	2	2	1	5	2	2
8. Have you ever heard of a blood test for infection with the AIDS virus?										
Yes	72	77	82	57	73	72	73	61	73	70
No	25	21	16	38	24	25	24	35	24	27
Don't know	3	2	2	5	3	3	3	5	3	3
9. Does this test tell whether a person has the disease AIDS?										
Yes	40	44	43	33	40	40	40	39	40	40
No	22	23	29	14	23	21	23	12	24	19
Don't know	10	10	9	10	9	10	10	10	9	10
Never heard of test (no/don't know to q. 8)	28	23	18	43	27	28	27	39	27	30
10. If a person has a positive blood test for infection with the AIDS virus, does this mean that they can give someone else the AIDS virus through sexual intercourse?										
Yes	63	69	74	47	64	63	65	52	64	62
No	3	3	3	2	3	3	3	4	3	3
Don't know	6	6	5	7	5	6	6	4	6	5
Never heard of test (no/don't know to q. 8)	28	23	18	43	28	29	27	39	27	30
11. Have you ever had your blood tested for infection with the AIDS virus?										
Yes	5	7	5	2	6	4	4	8	4	6
Yes, in blood donation/transfusion	2	3	3	1	3	2	2	2	2	3
No	63	65	72	52	62	64	65	49	65	60
Don't know	2	2	1	2	2	2	2	2	2	2
Never heard of test (no/don't know to q. 8)	28	23	18	43	28	29	27	39	27	30
12a. Have you ever thought about having this blood test?										
Already had test	7	10	9	3	9	6	7	10	6	9
Yes	11	15	15	5	12	11	11	19	9	15
No	53	52	57	48	52	54	55	31	57	46
Don't know	–	–	–	–	–	–	–	–	–	–
Never heard of test (no/don't know to q. 8)	29	23	19	44	28	29	27	40	28	30
12b. Do you plan to be tested in the next 12 months?										
Already had test	7	10	9	3	9	6	7	10	6	9
Yes	5	7	5	1	5	4	4	11	3	7
No	5	5	6	2	5	5	5	3	4	5
Don't know	2	3	3	1	2	3	2	4	2	3
Never heard of test or thought about having test (no/don't know to q. 8 or q. 12a)	81	75	76	92	80	83	83	71	84	76

See footnotes at end of table.

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987—Con.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
13. Where would you go to have a blood test for the AIDS virus infection?[3]										
Nowhere/wouldn't take test	–	–	–	–	–	–	–	–	–	–
AIDS clinic	3	4	3	2	5	1	2	5	1	5
Other clinic	25	27	23	24	25	24	24	25	24	26
Doctor/HMO	49	45	50	56	44	54	51	48	52	46
Red Cross/blood bank	2	3	1	3	1	2	2	2	1	2
Other	16	16	19	7	20	13	16	17	16	16
Don't know	5	5	4	8	4	6	5	3	5	5
14. Where would you go to find out where to have this blood test?[2,4]										
AIDS hot line	3	–	7	–	–	5	4	–	–	6
AIDS clinic	–	–	–	–	–	–	–	–	–	–
Other clinic	14	24	15	–	29	4	13	24	15	13
Doctor/HMO	40	12	39	76	44	37	45	–	26	54
Friends	–	–	–	–	–	–	–	–	–	–
Public health department	17	10	33	–	9	23	11	76	14	20
Other	6	10	7	–	–	10	4	–	–	13
Nowhere/wouldn't take test	–	–	–	–	–	–	–	–	–	–
Don't know	29	44	21	24	19	36	34	–	45	13
15. Have you donated blood since 1985?										
Yes	12	16	14	5	15	9	12	8	11	13
No	88	84	85	95	85	91	88	91	89	87
Don't know	0	0	0	–	0	0	0	0	0	0
16. Have you ever personally known anyone who had the blood test for the AIDS virus infection?										
Yes	13	18	17	5	13	13	4	10	12	15
No	85	81	82	93	85	85	85	87	86	83
Don't know	1	1	1	2	1	2		2	1	2
17. What are the chances of someone you know getting the AIDS virus?										
High	9	10	12	5	9	9	9	11	9	10
Medium	17	23	17	11	17	16	16	20	15	19
Low	38	38	43	32	42	35	40	24	41	33
None	26	23	21	33	23	28	25	27	26	25
Refused	0	–	0	–	0	–	0	–	0	–
Don't know	11	6	7	19	9	12	10	18	10	13
18. What are your chances of getting the AIDS virus?										
High	1	1	1	1	1	1	1	2	1	1
Medium	4	4	4	3	4	4	4	4	4	4
Low	31	36	36	21	35	27	31	27	29	34
None	60	56	56	68	57	63	60	60	62	56
Refused	0	0	0	–	0	0	0	–	0	0
Don't know	4	2	3	7	4	5	4	8	4	5
19. Here are methods some people use to prevent getting the AIDS virus through sexual activity. How effective is—										
19a. Using a diaphragm?										
Very effective	2	3	1	2	2	2	1	5	2	2
Somewhat effective	11	13	9	11	10	11	10	13	9	13
Not at all effective	59	58	69	48	59	58	61	43	62	53
Don't know how effective	21	18	16	29	20	21	21	25	21	21
Don't know method	8	8	5	11	9	7	7	14	6	10
19b. Using a condom?										
Very effective	33	37	35	27	33	33	34	27	33	33
Somewhat effective	49	48	53	45	49	48	50	40	50	46
Not at all effective	6	6	5	7	6	6	5	10	5	7
Don't know how effective	9	6	5	17	9	9	8	16	9	9
Don't know method	3	2	2	5	2	4	3	6	2	5
19c. Using a spermicidal jelly, foam, or cream?										
Very effective	1	2	1	1	1	2	1	4	1	2
Somewhat effective	12	12	13	11	12	13	12	16	11	14
Not at all effective	59	61	67	47	59	58	61	44	61	53
Don't know how effective	20	18	14	29	21	19	19	25	20	20
Don't know method	8	7	5	11	7	8	7	12	6	10
19d. Being celibate, that is, not having sex at all?										
Very effective	90	93	92	86	90	90	91	84	90	90
Somewhat effective	4	3	4	5	4	4	4	5	4	4
Not at all effective	1	1	1	1	1	1	1	2	1	1
Don't know how effective	3	2	2	6	3	4	3	8	4	3
Don't know method	1	0	1	2	1	2	1	2	1	2

See footnotes at end of table.

Table 1. Provisional estimates of the percent of persons 18 years of age and over with selected AIDS knowledge and attitudes from the 1987 National Health Interview Survey, by selected characteristics: United States, September 1987—Con.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in technical notes]

AIDS knowledge or attitude	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
	Percent distribution[1]									
19e. Two people who do not have the AIDS virus having a completely monogamous relationship, that is, having sex only with each other?										
Very effective	85	87	90	79	86	85	87	77	87	83
Somewhat effective	7	8	6	9	7	8	7	10	7	9
Not at all effective	2	3	1	2	2	2	1	3	1	2
Don't know how effective	4	2	3	7	4	5	3	8	4	4
Don't know method	1	1	1	3	1	2	1	2	1	2
20. Have you ever discussed AIDS with a friend or relative?										
Yes	68	77	77	52	64	72	69	67	68	68
No	31	23	23	47	35	28	31	33	31	32
Don't know	0	–	0	1	0	0	0	0	1	0
21. When was the last time you discussed AIDS with a friend or relative?										
0-3 days ago	20	21	23	17	19	21	20	21	21	18
4-7 days ago	18	19	22	13	18	18	18	18	18	18
8-14 days ago	8	10	9	5	7	9	8	6	8	8
15-31 days ago	11	15	12	6	11	11	11	8	11	11
More than 31 days ago	7	9	7	5	6	7	7	7	6	8
Never discussed (no/don't know to q. 20)	33	24	24	50	37	29	33	35	33	33
Don't know	3	3	2	5	3	3	3	4	3	3
24. Have you ever discussed AIDS with [any of your children age 10-17]?										
Yes	14	1	32	3	12	15	13	16	18	7
No	9	2	19	3	12	6	8	14	11	5
Don't know	–	–	–	–	–	–	–	–	–	–
No children 10-17 years of age[5]	77	97	49	94	76	78	78	71	71	89
25. Have your children had any instruction at school about AIDS?										
Yes	10	1	22	3	10	10	9	14	13	4
No	5	1	12	1	5	6	6	4	7	3
Don't know	8	1	17	2	9	6	7	10	9	5
No children 10-17 years of age[5]	77	97	49	94	76	78	78	71	71	89
26. Have you ever personally known anyone with the AIDS virus?										
Yes	7	7	9	4	7	7	7	9	6	8
No	91	92	89	94	91	92	92	87	92	90
Don't know	2	1	2	1	2	2	1	3	1	2
27. Have you ever personally known anyone with AIDS?										
Yes	7	6	9	4	6	7	6	10	6	8
No	92	93	89	95	92	92	92	88	93	90
Don't know	1	1	2	1	1	1	1	2	1	2
28. The U.S. Public Health Service has said that AIDS is one of the major health problems in the country but exactly how many people it affects is not known. The Surgeon General has proposed that a study be conducted and blood samples be taken to help find out how widespread the problem is. If you were selected in this national sample of people to have their blood tested with assurances of privacy of test results, would you have the test?										
Yes	71	74	74	66	73	69	72	67	73	69
No	20	16	18	24	19	20	19	21	19	20
Other	3	3	3	3	2	4	3	2	3	3
Don't know	6	6	6	7	5	7	6	9	5	8
29. Would you want to know the results of the blood test?[6]										
Yes	97	98	97	97	97	97	97	97	97	98
No	2	2	2	2	2	2	2	3	2	1
Don't know	1	1	1	1	1	1	1	1	1	1

[1] Excludes persons for whom no response was recorded or who refused to respond. For question 2 through 27, total also excludes persons who never heard of AIDS.
[2] Multiple responses may sum to more than 100 percent.
[3] Based on persons answering yes to question 12a.
[4] Based on persons answering don't know to question 13.
[5] Based on question 22, Do you have any children aged 10-17? Question 23 was, How many do you have?
[6] Based on persons answering yes to question 28.

NOTE: Total, age, sex, and marital status include persons of other and unknown race not shown separately under race.

Technical notes

The National Health Interview Survey (NHIS) is a continuous, cross-sectional household interview survey. Each week, a probability sample of the civilian noninstitutionalized population is interviewed by personnel of the U.S. Bureau of the Census to obtain information on the health and other characteristics of each member of the household. Supplemental information is collected for all or a sample of household members. The AIDS knowledge and attitudes questions were asked of a single randomly chosen adult 18 years of age or over in each household. The estimates in this report are based on completed interviews with 3,097 persons, or about 85 percent of eligible respondents.

Table I. Sample size for the National Health Interview Survey of AIDS Knowledge and Attitudes and estimated adult population 18 years of age and over, by selected characteristics: United States, September 1987

Characteristic	Sample size	Estimated population in thousands
All adults	3,097	174,528
Age		
18-29 years	770	47,725
30-49 years	1,196	66,109
50 years and over	1,131	60,695
Sex		
Male	1,273	82,703
Female	1,343	91,825
Race		
White	2,545	151,003
Black	461	19,107
Marital status		
Currently married	1,670	110,968
Unmarried	1,423	63,102

Table I contains the estimated population size of each of the demographic subgroups included in table 1 to allow readers to derive provisional estimates of the number of people in the United States with a given characteristic, for example, the number of men who have heard of AIDS. The population figures in table I are based on first-quarter 1987 data from the NHIS; they are not official population estimates. Table II shows approximate standard errors of estimates presented in table 1. Both the estimates in table 1 and the standard errors in table II are provisional. They may differ slightly from estimates made using the final data file because they were calculated using a simplified weighting procedure that does not adjust for all the factors used in weighting the final data file. The final data file covering the entire 5-month period of data collection, August through December 1987, will be available in 1988.

Table II. Standard errors, expressed in percentage points, of estimated percents from the National Health Interview Survey of AIDS Knowledge and Attitudes, by selected characteristics: United States, September 1987

Estimated percent	Total	Age			Sex		Race		Marital status	
		18-29 years	30-49 years	50 years and over	Male	Female	White	Black	Married	Unmarried
5 or 95	0.5	1.0	0.8	0.8	0.7	0.6	0.5	1.2	0.6	0.7
10 or 90	0.7	1.3	1.0	1.1	1.0	0.9	0.7	1.7	0.9	1.0
15 or 85	0.8	1.6	1.2	1.3	1.2	1.0	0.9	2.0	1.1	1.2
20 or 80	0.9	1.8	1.4	1.5	1.4	1.1	1.0	2.3	1.2	1.3
25 or 75	0.9	1.9	1.5	1.6	1.5	1.2	1.0	2.5	1.3	1.4
30 or 70	1.0	2.0	1.6	1.7	1.6	1.3	1.1	2.6	1.4	1.5
35 or 65	1.0	2.1	1.7	1.7	1.6	1.4	1.1	2.7	1.4	1.6
40 or 60	1.1	2.1	1.7	1.8	1.7	1.4	1.2	2.8	1.5	1.6
45 or 55	1.1	2.2	1.7	1.8	1.7	1.4	1.2	2.8	1.5	1.6
50	1.1	2.2	1.7	1.8	1.7	1.4	1.2	2.9	1.5	1.6

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