

# MORBIDITY AND MORTALITY WEEKLY REPORT

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- Epidemiologic Notes and Reports**
- 373 Hepatitis B — New Bern, North Carolina
  - 376 Multi-State Outbreak Involving a Religious School System  
Current Trends
  - 374 Rubella — United States, 1977-1979  
Surveillance Summary
  - 381 Abortion Surveillance  
United States, 1977

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### Epidemiologic Notes and Reports

AUG 17 1979

### Hepatitis B — New Bern, North Carolina **BDC LIBRARY** ATLANTA, GA. 30333

Since July 12, 9 persons with hepatitis B have been hospitalized in New Bern, North Carolina, a town of 18,000 people in eastern North Carolina. Six of the patients have died.

All but 1 of the patients were male; they ranged in age from 18 to 26 years. All were hepatitis B surface antigen (HBsAg) positive. Four were subtypable; all 4 were subtype ayw.

Five of the 6 deaths occurred during the first week of hospitalization as a result of fulminant hepatitis. The sixth death occurred after 25 days of hospitalization, during which the patient manifested hepatic coma requiring intensive supportive care, including assisted ventilation. Autopsies performed on fatal cases revealed complete hepatic necrosis with little or no normal hepatic tissue visible on histologic sections. Significant abnormal pathologic findings were limited to the liver.

All 9 patients admitted to using or were reported to use illicit drugs intravenously. The drug use among patients varied from occasional to regular. None of the patients was an addict, and none used known hepatotoxic drugs. The intravenous drugs most commonly used were MDA (3, 4 methylene dioxamphetamine) and cocaine.

The outbreak occurred among 2 groups of friends who socially gathered at separate locations in New Bern. There were rare social interactions between the 2 groups.

To define the extent of hepatitis in the communities of social and household contacts of the cases, over 300 individuals have been tested for liver enzyme (alanine aminotransferase [ALT]) elevations and serologic evidence of infection with hepatitis B virus, namely, HBsAg, antibody to the hepatitis B surface antigen (anti-HBs), and antibody to the hepatitis B core antigen (anti-HBc). Seven individuals were identified with ALT values 2 times the upper limit of normal. One of these was HBsAg positive, and 2 others were anti-HBc positive. Fifteen additional people with normal ALT values had serologic evidence of infection with hepatitis B surface antigen: 9 had anti-HBs, 3 had anti-HBc, and 3 had both anti-HBs and anti-HBc.

*Reported by V Barefoot, MD, B Golec, RN, Craven County Health Dept, New Bern; J Overby, MD, JP Mahaney, MD, J Burnett, MD, Craven County Hospital, New Bern; JN MacCormack, MD, MP Hines, DVM, State Epidemiologist, P Hudson, MD, H Tilson, MD, PhD, North Carolina Division of Health Services; H Fales, MD, National Heart and Lung Institute, Bethesda, Maryland; Field Services Div, Chronic Diseases Div, and Hepatitis Laboratories Div, Bur of Epidemiology, Clinical Chemistry Div, Bur of Laboratories, CDC.*

**Editorial Note:** Hepatitis B is usually a relatively mild disease. Most patients are not hospitalized; of those that are, the mortality rate is generally 1%. The usual cause of death is fulminant hepatitis. It is not yet clear why there was such a high mortality associated with this outbreak. It may have been caused by a particularly virulent strain of the virus, although this seems unlikely since the mortality from hepatitis B has been quite constant worldwide. Another possibility is that there was some potentiating factor. There has been

*Hepatitis B – Continued*

1 previous report of a hepatitis B outbreak with a high mortality rate (37%); it occurred among psychiatric patients who were taking multiple drugs (1). Intensive epidemiologic and laboratory investigations are continuing.

*Reference*

1. Dougherty WJ, Altman R: Viral hepatitis in New Jersey, 1960-1961. *Am J Med* 32:704-716, 1962

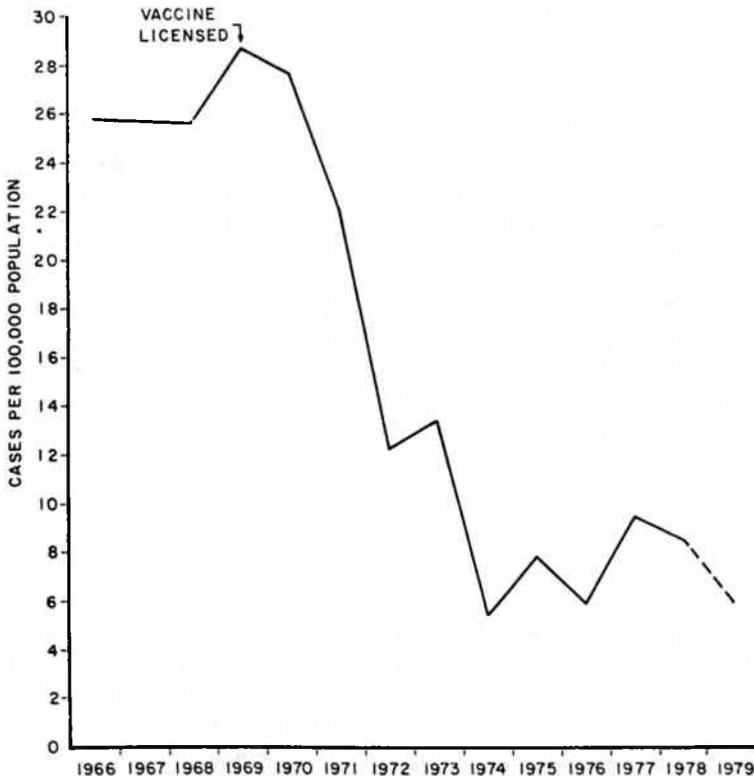
Current Trends

**Rubella – United States, 1977-1979**

As of August 4, 1979, 10,342 cases of rubella were reported to CDC compared to 16,021 cases reported in the same 31-week period in 1978. This 36.1% decrease in rubella activity represents a continuation of the decline noted in 1978 (Figure 1).

The provisional 1978 total of 18,243 cases was 10.6% less than the 1977 total of 20,395 (Table 1). Age data were available for 10,277 (56.3%) of the reported 1978 cases. That year, the proportion of cases and the risk of disease declined in those less than 20 years of age, when compared to 1977. Fifteen- to nineteen-year-olds continued to

**FIGURE 1. Reported rubella, by year, United States, 1966-1979\***



\*1979 annual incidence rate for rubella was extrapolated from the number of cases for the first 31 weeks of 1979. The 1978 figure is provisional.

## Rubella - Continued

account for the greatest percentage of reported cases and had the highest incidence rate (7). However, the rate in this age group did decrease by 18.7% from 1977 to 1978 and was only 3.8% greater than the rate for 1975 (36.8 per 100,000), the first year in which reporting by age became available from a large number of states. The 1978 rates in those less than 5, 5-9, and 10-14 years old were less than those for 1975 by 28.9%, 41.3%, and 18.5%, respectively.

Individuals 20 years of age and older made up a greater proportion of reported cases of known age in 1978 (32.0%) as compared to both 1977 (21.9%) and 1975 (15.7%). Only the 20- to 24-year age group, which alone accounted for 24.7% of such cases, experienced an increased risk (36.7%) of acquiring rubella between 1977 and 1978. However, the risk of rubella for those 20 years and older is still greater than that in 1975: almost 2.5 times as great for those 20-24 years old, and approximately 1.5 times as great for those 25 years of age and older.

Reported by Surveillance and Assessment Br, Immunization Div, Bur of State Services, CDC.

**Editorial Note:** Reported rubella activity fluctuates, but at a level approximately 70% less than that reported in prevaccine years (1). If the currently observed reduction in reported rubella cases continues throughout 1979, not only will the number of rubella cases have declined for 2 consecutive years, but also the total will approach the lowest number of cases ever recorded—11,917, in 1974.

A continuous reduction in rubella from 1975 to 1978 occurred only in those less than 15 years of age. It is clear that there must be more effective vaccination of older individuals, especially childbearing-aged females, to decrease further their risk of rubella infection (1,2).

## References

1. MMWR 27:495-497, 1978
2. Advisory Committee on Immunization Practices: Rubella vaccine. MMWR 27:451-454, 1978

TABLE 1. Percent distribution of reported rubella cases and incidence rate,\* by age group, United States, 1977-1978

Age (years)	1977			1978†			Percent change 1977-1978	
	Number	Percent	Rate	Number	Percent	Rate	Percent	Rate
<1-4	941	7.8	10.4	781	7.6	9.1	-2.6	-12.5
5-9	1,012	8.4	10.0	616	6.0	6.4	-28.6	-36.0
10-14	1,610	13.3	14.2	1,047	10.2	9.7	-23.6	-31.7
15-19	5,867	48.6	47.0	4,542	44.2	38.2	-9.1	-18.7
20-24	1,950	16.1	16.6	2,538	24.7	22.7	+53.4	+36.7
25-29	346	2.9	4.0	362	3.5	3.6	+20.7	-10.0
30+	352	2.9	0.6	391	3.8	0.6	+31.0	0.0
Total with known age	12,078	59.2	—	10,277	56.3	—	—	—
Unknown age	8,317	40.8	—	7,966	43.7	—	—	—
TOTAL	20,395	100.0	9.4	18,243	100.0	8.4	—	-10.6

\*Incidence rate = cases per 100,000 population (1977 U.S. census) extrapolated from the age distribution of cases from 40 reporting areas.

†Provisional total.

## Epidemiologic Notes and Reports

### Multi-State Measles Outbreak Involving a Religious School System

From January through May 1979, an outbreak of measles involving 40 cases occurred among students in Seventh Day Adventist (SDA) schools in 4 states (Tennessee, Alabama, Mississippi, and Florida). Close cooperation between the states involved and the SDA Conference helped bring the outbreak under control.

The outbreak began in an SDA College near Chattanooga, Tennessee, where 22 cases occurred from January 21 through April 1. One student, who was apparently incubating measles, visited relatives in Bryant, Alabama, in late March and developed a measles rash during that trip. Subsequently, 11 cases of measles occurred in Bryant during late March and April. One of these 11 patients developed clinical measles while attending a song festival at an SDA high school in Lumberton, Mississippi, on April 13-14, exposing approximately 130 other students attending from Alabama, Florida, and Mississippi. All states involved subsequently undertook increased surveillance and control measures.

As a result of the exposure in Mississippi, 7 cases occurred among SDA students in Alabama, 1 case in Florida, and 4 cases in Mississippi. An additional outbreak in the general community in Blount County, Alabama, involving 27 cases, is also believed to be linked to the song festival. In all of the SDA schools with reported cases, complete record checks were conducted, and measles immunization clinics were held.

(Continued on page 381)

**TABLE I. Summary — cases of specified notifiable diseases, United States**  
(Cumulative totals include revised and delayed reports through previous weeks.)

DISEASE	32nd WEEK ENDING		MEDIAN 1974-1978**	CUMULATIVE, FIRST 32 WEEKS		
	August 11, 1979	August 12, 1978*		August 11, 1979	August 12, 1978*	MEDIAN 1974-1978**
Aseptic meningitis	295	222	116	2,708	2,266	1,591
Brucellosis	3	3	3	87	111	126
Chickenpox	581	386	395	169,995	122,848	122,848
Diphtheria	-	-	1	62	49	123
Encephalitis: Primary (arthropod-borne & unsp.)	32	38	29	406	520	520
Post-infectious	5	4	7	157	140	173
Hepatitis, Viral: Type B	304	262	248	8,719	9,242	9,098
Type A	517	587	587	17,758	17,472	21,172
Type unspecified	200	217	172	6,485	4,988	5,149
Malaria	13	31	13	389	451	263
Measles (rubeola)	214	310	203	11,711	23,086	23,086
Meningococcal infections: Total	50	36	20	1,821	1,671	1,077
Civilian	50	36	20	1,812	1,649	1,061
Military	-	-	-	9	22	21
Mumps	102	89	214	11,136	13,005	31,973
Pertussis	43	51	51	820	1,248	846
Rubella (German measles)	79	106	81	10,421	16,295	14,533
Tetanus	2	4	3	38	50	49
Tuberculosis	572	666	626	17,430	17,971	18,810
Tularemia	6	4	4	113	72	86
Typhoid fever	10	5	7	277	315	231
Typhus fever, tick-borne (Rky. Mt. spotted)	51	61	54	643	691	569
Veneral diseases:						
Gonorrhea: Civilian	21,887	22,031	22,031	596,080	596,334	596,334
Military	565	411	445	16,616	15,862	16,586
Syphilis, primary & secondary: Civilian	441	429	429	14,535	12,732	12,732
Military	5	3	4	181	178	186
Rabies in animals	135	71	70	2,997	1,930	1,800

**TABLE II. Notifiable diseases of low frequency, United States**

	CUM. 1978		CUM. 1979
Anthrax	-	Poliomyelitis: Total	23
Botulism (Tex. 1)	15	Paralytic (Nebr. 1, Calif. 1)	20
Congenital rubella syndrome (Mich. 1)	34	Rabies in man†	69
Leprosy (NYC 2)	105	Trichinosis (Alaska 2)	1
Leptospirosis (Tex. 3, Hawaii 1)	25	Typhus fever, flea-borne (endemic, murine) (Fla. 1, Tex. 2)	80
Plague	9		33

\* Delayed reports received for calendar year 1978 are used to update last year's weekly and cumulative totals.

\*\* Medians for gonorrhea and syphilis are based on data for 1976-1978.

† Delayed report: Rabies in man: Tex. +1 imported (1978)

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 11, 1979, and August 12, 1978 (32nd week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
	1979	1978	1978	1978	CUM. 1978	Primary		Post-infectious	B	A	Unspecified	1978	CUM. 1978
						1978	1978*	1978	1978	1978	1978		
UNITED STATES	295	3	581	-	62	32	38	5	304	517	200	13	309
NEW ENGLAND	47	-	100	-	-	-	-	-	9	6	8	-	22
Maine	2	-	2	-	-	-	-	-	-	-	-	-	1
N.H.†	2	-	-	-	-	-	-	-	-	1	-	-	-
Vt.	-	-	1	-	-	-	-	-	-	2	-	-	-
Mass.	4	-	70	-	-	-	-	-	-	1	8	-	4
R.I.	18	-	7	-	-	-	-	-	2	-	-	-	6
Conn.	21	-	20	-	-	-	-	-	7	2	-	-	11
MID. ATLANTIC	45	-	137	-	-	3	7	1	63	52	13	6	54
Upper N.Y.	8	-	116	-	-	3	5	-	16	21	3	2	11
N.Y. City	5	-	20	-	-	-	1	-	12	4	-	1	26
N.J.†	29	-	NN	-	-	-	-	-	35	27	10	3	9
Pa.	3	-	1	-	-	-	1	1	NA	NA	NA	-	8
E.N. CENTRAL	32	-	199	-	2	8	12	-	40	57	12	2	29
Ohio	-	-	15	-	-	1	1	-	4	13	-	-	6
Ind.	6	-	25	-	1	3	-	-	7	-	4	-	1
Ill.	3	-	24	-	-	-	5	-	9	19	1	2	12
Mich.	21	-	69	-	-	4	2	-	16	19	6	-	8
Wis.†	2	-	66	-	1	-	4	-	4	6	1	-	2
W.N. CENTRAL	8	-	19	-	1	11	4	-	13	15	6	-	12
Minn.†	-	-	-	-	-	1	1	-	3	4	-	-	3
Iowa	3	-	7	-	-	11	3	-	4	2	-	-	2
Mo.	-	-	8	-	-	-	-	-	2	2	4	-	3
N. Dak.†	-	-	1	-	1	-	-	-	-	-	-	-	-
S. Dak.†	-	-	1	-	-	-	-	-	-	-	-	-	-
Nebr.	2	-	2	-	-	-	-	-	1	-	-	-	2
Kans.	3	-	-	-	-	-	-	-	3	7	2	-	2
S. ATLANTIC	32	2	41	-	1	1	4	1	67	79	26	-	50
Del.†	-	-	1	-	-	-	-	-	1	-	-	-	1
Md.	13	-	6	-	-	-	1	-	15	16	3	-	8
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	5
Va.	6	-	5	-	1	1	3	-	14	4	4	-	16
W. Va.†	-	-	8	-	-	-	-	-	2	10	-	-	2
N.C.†	8	-	NN	-	-	-	-	-	9	18	6	-	3
S.C.	-	-	1	-	-	-	-	-	4	5	2	-	1
Ga.	-	-	-	-	-	-	-	-	6	1	-	-	2
Fla.	5	2	20	-	-	-	1	1	16	25	11	-	12
E.S. CENTRAL	4	-	12	-	-	4	2	-	16	18	5	-	7
Ky.	-	-	7	-	-	-	2	-	6	3	2	-	-
Tenn.	2	-	NN	-	-	3	-	-	8	11	2	-	-
Ala.†	2	-	3	-	-	1	-	-	2	1	1	-	3
Miss.†	-	-	2	-	-	-	-	-	-	3	-	-	4
W.S. CENTRAL	58	-	28	-	-	5	3	1	31	100	54	1	23
Ark.†	1	-	-	-	-	-	-	-	1	5	2	-	-
La.	2	-	NN	-	-	-	1	-	2	1	4	-	2
Okla.†	11	-	-	-	-	1	1	-	9	11	3	-	3
Tex.†	44	-	28	-	-	4	1	1	19	83	45	1	18
MOUNTAIN	29	-	9	-	1	-	4	-	8	89	34	-	11
Mont.	-	-	2	-	-	-	1	-	1	3	-	-	1
Idaho	-	-	-	-	-	-	-	-	1	6	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	1	-	1
Colo.	-	-	-	-	-	-	-	-	-	-	1	-	-
N. Mex.	21	-	7	-	-	-	-	-	4	14	1	-	5
Ariz.	7	-	-	-	-	-	3	-	-	19	-	-	-
Utah	-	-	NN	-	1	-	-	-	-	40	28	-	4
Nev.	1	-	-	-	-	-	-	-	-	7	3	-	-
PACIFIC	40	1	36	-	57	-	2	2	57	101	42	4	181
Wash.	9	-	21	-	55	-	-	-	5	20	2	-	9
Oreg.	6	-	2	-	-	-	1	1	2	7	4	-	9
Calif.†	22	1	-	-	2	-	1	1	47	73	36	4	161
Alaska	3	-	3	-	-	-	-	-	3	-	-	-	-
Hawaii	-	-	10	-	-	-	-	-	-	1	-	-	2
Guam †	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R.	13	-	33	-	-	-	-	-	2	1	3	-	1
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: N.J. +3, Wis. +11, N.C. -1, Ark. +3, Okla. -1, Tex. -2; Bruc: Ark. -1; Chickenpox: Ala. +9, Ark. -34, Calif. +9, Guam +7; Enceph. prim: N.J. +1, Ark. -1; Enceph. post: Minn. +1, Ark. +2; Hep. B: W.Va. +2, Miss. +1, Ark. +20, Tex. -2; Hep. A: N.H. +1, N.J. +1, Wis. -1, N.Dak. +4, S. Dak. +4, W.Va. -2, Ark. +23, Tex. -17, Guam +5; Hep. unsp.: N.J. -1, N.C. -1, Ark. -48, Tex. -8, Guam +1; Malaria: N.J. -1, Minn. +1.

TABLE III (Cont. 'd). Cases of specified notifiable diseases, United States, weeks ending August 11, 1979, and August 12, 1978 (32nd week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	1979	1979	CUM. 1979	CUM. 1979
UNITED STATES	214	11,711	23,086	50	1,821	1,671	102	11,136	43	79	10,421	38
NEW ENGLAND	2	295	1,946	2	91	96	5	379	2	8	1,420	4
Maine	-	17	1,312	-	5	5	-	132	-	-	61	-
N.H.	1	41	45	-	9	7	-	4	-	-	119	-
Vt.	1	117	25	-	6	2	-	7	-	1	397	-
Mass.	-	13	237	2	27	42	1	34	2	4	500	3
R.I.t	-	103	8	-	8	15	1	26	-	3	91	-
Conn.	-	4	319	-	36	25	3	176	-	-	252	1
MID. ATLANTIC	11	1,430	2,111	14	270	264	13	1,062	7	11	1,867	7
Upstate N.Y.	1	632	1,352	5	95	86	2	155	2	10	1,035	2
N.Y. City	9	701	331	3	67	63	2	111	4	-	250	3
N.J.t	1	54	73	2	65	51	6	523	-	1	319	1
Pa.	-	43	355	4	43	66	3	273	1	-	263	1
E.N. CENTRAL	21	3,046	10,401	1	170	218	63	4,742	10	15	2,430	3
Ohio.t	-	245	470	-	63	55	36	1,722	-	1	134	2
Ind.t	-	194	176	-	38	34	5	264	1	3	705	-
Ill.	9	1,359	1,044	1	8	69	2	837	6	3	173	-
Mich.	7	804	7,270	-	47	49	5	878	2	4	1,814	1
Wis.t	5	444	1,441	-	14	11	15	1,041	1	4	234	-
W.N. CENTRAL	117	1,656	380	1	51	59	-	638	1	2	424	-
Minn.	117	1,148	36	-	10	13	-	9	1	-	35	-
Iowa	-	16	54	-	9	9	-	225	-	1	52	-
Mo.	-	413	9	1	24	23	-	189	-	-	41	-
N. Dak.t	-	18	191	-	1	3	-	2	-	-	8	-
S. Dak.	-	1	-	-	2	2	-	5	-	-	4	-
Nebr.	-	-	5	-	-	-	-	7	-	1	200	-
Kans.	-	60	85	-	5	9	-	201	-	-	84	-
S. ATLANTIC	45	1,725	4,861	14	456	388	6	516	8	12	1,198	7
Del.	-	1	5	-	3	2	2	35	-	-	4	-
Md.	-	13	47	2	42	23	-	137	-	-	28	-
D.C.	-	1	48	-	2	1	-	1	-	-	1	-
Va.	3	253	2,797	1	65	52	1	81	-	2	196	1
W. Va.	1	52	1,028	-	8	9	1	93	1	-	102	-
N.C.	2	110	116	4	67	78	2	64	2	6	526	3
S.C.	-	151	194	3	57	23	-	3	-	-	59	-
Ga.	35	398	17	1	68	46	-	3	5	-	9	-
Fla.	4	746	609	3	144	154	-	99	-	4	273	3
E.S. CENTRAL	2	185	1,384	4	139	133	1	1,305	4	12	269	7
Ky.	-	37	117	-	29	27	1	1,078	-	3	67	-
Tenn.	2	50	933	-	38	32	-	93	4	9	91	-
Ala.t	-	79	101	4	37	41	-	20	-	-	41	5
Miss.t	-	19	233	-	35	33	-	114	-	-	70	2
W.S. CENTRAL	1	894	983	6	309	249	7	1,602	9	4	214	9
Ark.t	1	8	14	-	28	20	-	755	2	-	6	2
La.	-	245	329	2	125	99	-	37	-	-	26	2
Okla.	-	22	12	-	23	16	-	-	-	-	22	-
Tex.t	-	619	628	4	133	114	7	810	7	4	160	5
MOUNTAIN	2	302	248	3	72	36	-	249	1	2	500	-
Mont.	-	57	106	1	7	2	-	10	1	2	67	-
Idaho	-	18	1	-	5	3	-	8	-	-	199	-
Wyo.	-	36	-	-	1	-	-	-	-	-	-	-
Colo.t	2	58	30	-	5	2	-	70	-	-	64	-
N. Mex.	-	35	-	-	4	7	-	12	-	-	10	-
Ariz.	-	72	50	-	31	13	-	48	-	-	126	-
Utah	-	15	44	-	8	5	-	90	-	-	32	-
Nev.	-	11	17	2	11	4	-	11	-	-	2	-
PACIFIC	13	2,178	772	5	263	226	7	643	1	13	2,099	1
Wash.	-	1,119	143	1	43	39	-	185	-	1	171	-
Oreg.t	2	65	142	2	17	22	2	67	-	1	91	-
Calif.	11	912	480	2	190	156	1	291	1	11	1,817	1
Alaska.t	-	18	-	-	5	6	-	9	-	-	2	-
Hawaii	-	64	7	-	8	3	4	91	-	-	18	-
Guam.t	NA	3	25	-	1	-	NA	8	NA	NA	3	-
P.R.	1	317	214	-	2	3	8	516	-	-	33	8
V.I.	-	4	6	-	3	1	-	15	-	-	-	-
Pac. Trust Terr.	NA	6	568	-	1	2	NA	26	NA	NA	1	-

NA: Not available.

\*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

tThe following delayed reports will be reflected in next week's cumulative totals: Measles: R.I. -1, Ohio +1, Ind. -1, N. Dak. +2, Ala. +4, Miss. +1, Ark. +1, Tex. -14, Colo. +1, Ore. -7, Alaska -1; Men. Inf.: R.I. -2, N.J. +1 civ. +1 mil., Wis. +1, Ark. -3, Tex. -1; Mumps: Ark. -276, Ore. +1; Pertussis: Tex. -1; Rubella: Miss. +21, Tex. +2, Alaska +1, Guam +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 11, 1979, and August 12, 1978 (32nd week)

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)				RABIES (in Animals)			
								GONORRHEA		SYPHILIS (Pri. & Sec.)					
	1979	CUM. 1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	CUM. 1978*	1979		CUM. 1979	CUM. 1978*	CUM. 1979
UNITED STATES	572	17,430	113	10	277	51	643	21,887	596,080	596,334	441	14,535	12,732	2,997	
NEW ENGLAND	17	473	1	-	177	-	6	495	14,997	15,504	13	282	367	34	
Maine	1	35	-	-	1	-	-	43	1,048	1,184	-	7	7	22	
N.H.†	-	8	-	-	-	-	-	13	547	711	-	14	5	3	
Vt.	-	21	-	-	-	-	-	12	358	355	-	1	3	-	
Mass.	15	263	1	-	10	-	3	228	5,980	6,045	4	162	224	8	
R.I.†	-	41	-	-	2	-	-	30	1,232	1,108	-	9	16	-	
Conn.	1	105	-	-	4	-	3	169	5,832	5,301	9	89	112	1	
MID. ATLANTIC	92	2,743	1	1	43	3	25	2,436	64,473	63,576	64	2,243	1,696	40	
Upstate N.Y.†	36	508	1	-	7	3	20	442	10,585	10,680	5	160	126	27	
N.Y. City	30	1,006	-	1	19	-	1	1,091	25,454	24,856	48	1,528	1,191	-	
N.J.	14	501	-	-	11	-	4	399	11,737	11,597	6	294	188	5	
Pa.	12	728	-	-	6	-	-	504	16,697	16,443	5	261	191	8	
E.N. CENTRAL	97	2,552	-	1	22	7	37	3,722	91,523	89,777	51	1,964	1,390	251	
Ohio	16	463	-	-	3	-	9	1,463	25,707	23,418	18	377	261	18	
Ind.	8	332	-	-	-	-	2	198	8,243	9,337	3	131	86	52	
Ill.	41	1,004	-	1	7	7	22	903	27,612	28,182	20	1,103	863	125	
Mich.	19	637	-	-	10	-	3	819	21,754	20,764	5	294	135	5	
Wis.†	13	116	-	-	2	-	1	339	8,207	8,076	5	59	45	51	
W.N. CENTRAL	20	586	17	-	10	-	34	1,063	29,094	30,023	15	200	287	606	
Minn.	10	95	-	-	2	-	2	127	4,842	5,197	2	51	124	113	
Iowa	-	47	-	-	2	-	13	141	3,572	3,362	1	26	27	113	
Mo.	10	319	14	-	4	-	11	485	12,598	12,881	10	92	75	191	
N. Dak.†	-	14	-	-	-	-	-	11	490	552	-	2	2	43	
S. Dak.†	-	37	2	-	-	-	-	36	976	1,071	-	1	2	66	
Nebr.	-	3	1	-	1	-	1	71	2,021	2,242	-	2	9	-	
Kans.†	-	71	-	-	1	-	7	192	4,595	4,718	2	26	48	80	
S. ATLANTIC	124	3,979	8	1	31	23	352	4,851	144,850	145,986	120	3,531	3,364	402	
Del.	1	33	-	-	-	-	3	108	2,399	1,993	-	18	6	-	
Md.	12	525	-	-	7	-	31	569	17,608	18,552	10	232	258	9	
D.C.	-	202	2	-	1	-	2	411	9,386	9,473	5	273	253	-	
Va.†	9	450	1	-	4	3	63	274	13,656	13,762	3	299	281	9	
W. Va.	2	150	-	-	2	-	8	50	2,003	2,060	-	41	9	-	
N.C.†	24	619	-	-	-	14	135	787	20,738	20,859	11	292	345	6	
S.C.†	2	293	1	-	3	6	56	421	13,600	14,235	7	174	173	124	
Ga.	29	623	4	-	-	-	52	960	27,728	28,124	38	979	824	213	
Fla.†	45	1,084	-	1	14	-	2	1,271	37,732	36,928	46	1,223	1,215	41	
E.S. CENTRAL	60	1,632	12	-	12	13	97	1,803	51,517	51,504	40	970	649	210	
Ky.	22	423	2	-	5	3	13	262	6,811	6,393	1	102	85	89	
Tenn.	11	464	10	-	2	7	60	511	18,389	18,993	27	416	216	74	
Ala.	17	375	-	-	5	3	16	641	15,322	14,688	8	181	104	46	
Miss.†	10	370	-	-	-	-	8	389	10,995	11,430	4	271	244	1	
W.S. CENTRAL	65	2,104	44	-	41	3	76	2,967	77,425	81,585	89	2,628	2,002	1,174	
Ark.†	-	175	28	-	1	1	23	264	6,080	6,160	1	93	47	242	
La.	7	444	4	-	3	-	1	507	13,676	13,329	24	620	418	19	
Okla.	5	225	7	-	-	2	40	332	7,271	7,674	-	55	58	186	
Tex.†	53	1,260	5	-	37	-	12	1,864	50,398	54,422	64	1,860	1,479	727	
MOUNTAIN	21	524	26	-	21	1	13	1,090	23,409	22,367	6	283	251	71	
Mont.	-	22	7	-	-	-	3	46	1,094	1,321	-	6	7	8	
Idaho	2	8	-	-	1	-	2	74	1,039	850	-	19	7	3	
Wyo.	-	4	-	-	1	-	-	24	615	528	-	5	5	-	
Colo.	5	74	10	-	12	-	4	231	6,230	6,209	1	61	71	18	
N. Mex.	2	91	2	-	2	-	1	171	3,016	3,234	1	53	60	26	
Ariz.	9	264	-	-	3	-	-	395	6,566	5,733	-	84	58	15	
Utah	2	21	5	-	-	-	-	40	1,206	1,194	-	3	11	1	
Nev.	1	40	2	-	2	-	1	3	109	3,643	3,298	4	52	32	-
PACIFIC	76	2,837	4	7	80	1	3	3,460	98,792	96,012	43	2,434	2,726	209	
Wash.	14	171	3	-	2	-	-	344	8,550	7,610	NA	133	133	-	
Oreg.†	1	122	-	-	1	-	-	218	6,391	6,716	1	108	90	3	
Calif.	55	2,298	1	7	69	1	3	2,722	78,849	76,856	40	2,111	2,470	204	
Alaska†	-	52	-	-	1	-	-	77	3,165	3,044	-	16	7	2	
Hawaii	6	194	-	-	7	-	-	99	1,837	1,786	2	66	26	-	
Guam †	NA	36	-	NA	-	NA	-	NA	50	77	NA	-	-	-	
P.R.	10	199	-	-	3	-	-	24	1,211	1,383	3	296	278	15	
V.I.	-	3	-	-	1	-	-	4	109	133	-	6	12	-	
Pac. Trust Terr.	NA	18	-	NA	-	NA	-	NA	242	301	NA	1	-	-	

NA: Not available.

\*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: R.I. -3, Kans. -2, Va. +1, N.C. -1, S.C. -1, Miss. +8, Ore. -1, Guam +5; Tularemia: Ark. +7; RMSF: Ark. -8; GC: N.H. -1 civ., R.I. -1 civ., Wis. +305 civ., S. Dak. +3 civ., Fla. +13 mil., Miss. +103 civ., Ark. +57 civ., Ore. -158 civ., Alaska +1 civ. -1 mil., Guam +9 civ. +9 mil.; Syphilis: R.I. +1, Fla. -3, Ark. -1, Tex. +4, Oreg. -1; An. rabies: Ups. N.Y. +2, N. Dak. +1.

TABLE IV. Deaths in 121 U.S. cities,\* week ending  
August 11, 1979 (32nd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
<b>NEW ENGLAND</b>	675	445	142	41	19	31	<b>S. ATLANTIC</b>	1,216	651	339	101	63	48
Boston, Mass.	205	124	42	18	11	11	Atlanta, Ga.	106	49	37	12	1	3
Bridgport, Conn.	43	23	10	7	2	—	Baltimore, Md.	266	148	70	26	12	15
Cambridge, Mass.	28	24	4	—	—	2	Charlotte, N.C.	68	32	15	7	7	2
Fall River, Mass.	25	22	3	—	—	2	Charlottesville, Va.	87	48	19	4	9	3
Hartford, Conn.	42	25	9	4	1	—	Miami, Fla.	122	66	32	8	10	6
Lowell, Mass.	30	19	9	2	—	1	Norfolk, Va.	55	28	15	5	6	1
Lynn, Mass.	18	10	6	1	—	—	Richmond, Va.	76	38	24	5	6	3
New Bedford, Mass.	20	19	—	—	—	—	Savannah, Ga.	40	21	9	5	2	3
New Haven, Conn.	46	24	15	2	1	—	St. Petersburg, Fla.	66	55	4	3	1	—
Providence, R.I.	63	42	16	2	2	4	Tampa, Fla.	53	32	14	2	2	4
Somerville, Mass.	6	6	—	—	—	1	Washington, D.C.	230	107	86	21	5	7
Springfield, Mass.	59	42	10	1	1	2	Wilmington, Del.	47	27	14	3	2	1
Waterbury, Conn.	34	27	4	2	—	4							
Worcester, Mass.	56	38	14	2	1	4							
<b>MID. ATLANTIC</b>	2,497	1,571	571	174	77	98	<b>E.S. CENTRAL</b>	616	366	159	37	20	14
Albany, N.Y.	57	35	6	3	7	—	Birmingham, Ala.	104	60	25	4	8	—
Allentown, Pa.	16	11	3	2	—	—	Chattanooga, Tenn.	53	33	11	2	3	2
Buffalo, N.Y.	110	62	30	9	3	10	Knoxville, Tenn.	23	19	3	—	—	—
Camden, N.J.	36	31	5	—	—	1	Louisville, Ky.	107	59	37	5	3	3
Elizabeth, N.J.	23	13	9	1	—	1	Memphis, Tenn.	135	89	31	9	1	1
Erie, Pa.†	36	20	9	3	—	1	Mobile, Ala.	43	23	11	5	—	1
Jersey City, N.J.	48	35	10	1	1	—	Montgomery, Ala.	39	21	13	1	1	2
Newark, N.J.	67	28	19	8	8	1	Nashville, Tenn.	112	62	28	11	4	5
N.Y. City, N.Y.††	1,261	801	274	99	33	43							
Paterson, N.J.	30	18	9	1	2	3	<b>W.S. CENTRAL</b>	1,086	640	309	102	60	43
Philadelphia, Pa.†	387	226	104	29	10	17	Austin, Tex.	35	19	9	4	2	4
Pittsburgh, Pa.†	43	26	15	1	1	2	Baton Rouge, La.	30	19	5	3	2	1
Reading, Pa.	34	25	8	—	—	3	Corpus Christi, Tex.	40	17	7	2	8	2
Rochester, N.Y.	110	79	19	6	3	7	Dallas, Tex.	168	94	44	17	8	5
Schenectady, N.Y.	26	17	8	—	1	2	El Paso, Tex.	52	31	9	2	3	3
Scranton, Pa.†	32	25	6	1	—	2	Fort Worth, Tex.	72	39	18	7	1	3
Syracuse, N.Y.	94	60	18	4	7	1	Houston, Tex.	289	131	88	36	9	4
Trenton, N.J.	34	18	9	4	1	1	Little Rock, Ark.	63	38	16	2	5	3
Utica, N.Y.	25	18	5	2	—	3	New Orleans, La.	162	83	51	10	14	3
Yonkers, N.Y.	28	23	5	—	—	—	San Antonio, Tex.	130	77	33	6	4	1
							Shreveport, La.	64	40	15	6	1	4
							Tulsa, Okla.	81	52	14	7	3	10
<b>E.N. CENTRAL</b>	2,064	1,186	586	138	77	50	<b>MOUNTAIN</b>	480	274	117	47	26	19
Akron, Ohio	58	35	15	3	4	—	Albuquerque, N. Mex.	50	28	14	6	—	5
Canton, Ohio	29	18	9	—	1	1	Colo. Springs, Colo.	27	22	4	—	1	7
Chicago, Ill.	533	290	163	44	19	10	Denver, Colo.	91	48	22	9	6	1
Cincinnati, Ohio	102	63	24	6	4	1	Las Vegas, Nev.	47	21	18	5	2	2
Cleveland, Ohio	170	90	54	15	1	5	Ogden, Utah	18	12	3	2	—	1
Columbus, Ohio	88	49	23	8	5	5	Phoenix, Ariz.	123	65	33	15	7	—
Dayton, Ohio	107	62	33	6	4	1	Pueblo, Colo.	17	11	2	2	1	—
Detroit, Mich.	271	142	86	16	11	4	Salt Lake City, Utah	49	23	12	6	7	2
Evansville, Ind.	35	20	11	2	1	2	Tucson, Ariz.	58	44	9	2	2	—
Fort Wayne, Ind.	30	22	6	1	—	2							
Gary, Ind.	19	11	5	3	—	—							
Grand Rapids, Mich.	46	36	7	—	2	3	<b>PACIFIC</b>	1,571	964	366	119	43	32
Indianapolis, Ind.	145	81	39	12	6	2	Berkeley, Calif.	12	5	3	4	—	—
Madison, Wis.	29	20	2	2	3	—	Fresno, Calif.	68	33	15	7	4	1
Milwaukee, Wis.	135	91	33	5	5	4	Glendale, Calif.	25	21	3	1	—	—
Peoria, Ill.	37	18	12	3	2	4	Honolulu, Hawaii	59	36	14	2	5	1
Rockford, Ill.	49	23	13	4	6	3	Long Beach, Calif.	65	39	17	8	—	2
South Bend, Ind.	33	23	8	1	1	—	Los Angeles, Calif.	408	240	90	41	11	7
Toledo, Ohio	97	61	27	5	—	2	Oakland, Calif.	88	46	29	5	3	3
Youngstown, Ohio	51	31	16	2	—	1	Pasadena, Calif.	26	20	2	3	1	—
							Portland, Ore.	138	94	30	4	3	1
							Sacramento, Calif.	65	36	19	3	4	2
<b>W.N. CENTRAL</b>	720	456	158	50	33	27	San Diego, Calif.	152	93	40	10	2	2
Des Moines, Iowa	48	29	14	3	2	—	San Francisco, Calif.	135	90	29	8	3	6
Duluth, Minn.	42	27	8	1	3	2	San Jose, Calif.	124	77	31	8	2	1
Kansas City, Kans.	35	19	5	3	5	1	Seattle, Wash.	121	83	21	8	2	3
Kansas City, Mo.	111	70	20	10	5	—	Spokane, Wash.	47	26	16	4	1	2
Lincoln, Neb.	33	20	7	5	—	3	Tacoma, Wash.	38	25	7	3	2	—
Minneapolis, Minn.	88	54	25	3	5	3							
Omaha, Neb.	74	55	10	2	4	—							
St. Louis, Mo.	162	97	44	12	6	12							
St. Paul, Minn.	53	33	9	7	3	1							
Wichita, Kans.	74	52	16	4	—	8	<b>TOTAL</b>	<b>11,025</b>	<b>6,553</b>	<b>2,747</b>	<b>809</b>	<b>418</b>	<b>362</b>

\*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 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Data not available this week. Figures are estimates based on average percent of regional totals.

*Measles - Continued*

On April 29-30, another SDA function was held in Lumberton, Mississippi; it was attended by students from 7 states. Because of the previous measles activity on campus, follow-up of all the students, coordinated by the Immunization Program of the Alabama State Health Department, was undertaken by all of the involved states. No new cases of measles were found in association with this second gathering, and 10 weeks have now elapsed since the last reported case associated with the 2 SDA gatherings.

*Reported by J Herman, Floral Crest School, Bryant; G Kovalski, Alabama-Mississippi Conference, SDA, Montgomery; S Morris, MD, Tri-County District Health Dept; R Henderson, MD, Jackson County; J Bynum, T Chester, Jr, MD, State Epidemiologist, W Harris, F Kennamer, B Logan, L Wallace, Alabama Dept of Public Health; G Pitts, Bass Memorial Academy, Lumberton; DL Blakey, MD, State Epidemiologist, Mississippi State Board of Health; RH Hutcheson, Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; CT Caraway, DVM, State Epidemiologist, Louisiana State Dept of Health and Human Resources; PC White, Jr, MD, State Epidemiologist, Arkansas State Dept of Health; Disease Control Staff, RM Yeller, MD, Acting State Epidemiologist, Florida State Dept of Health and Rehabilitative Services; Field Services Div, Bur of Epidemiology, and Immunization Div, Bur of State Services, CDC.*

**Editorial Note:** This episode demonstrates the ability of measles virus to cause significant outbreaks in relatively isolated populations that either have refused measles vaccination or have been overlooked in past immunization campaigns. Rather than being confined to a single geographic area, the outbreak may spread rapidly across state lines once susceptibles are exposed during social and educational gatherings. The general population may be put at substantial risk as well. Interstate cooperation is essential to effectively control such an outbreak.

*Surveillance Summary***Abortion Surveillance - United States, 1977**

In 1977, the 50 states and the District of Columbia reported 1,079,430 abortions to CDC, a 9% increase over 1976. The national abortion ratio rose by 4% from 312 per 1,000 live births in 1976 to 325 per 1,000 live births in 1977, or almost 1 abortion for every 3 live births. The trend toward redistribution of abortions into states which had restrictive abortion laws before 1973 appears to have leveled off; the same proportion of women (10%) obtained procedures out of state as in 1976.

As in previous years, women who obtained abortions in 1977 were most often young, white, unmarried, and of low parity. Sixty-five percent were less than 25 years of age; 66% were white, and 34% were of black-and-other races (Table 2). Seventy-six percent of all women obtaining abortions were unmarried at the time of the procedure, and 53% had no living children.

Curetage continued to be the most widely used procedure for reported legal abortions, accounting for 94% of abortions performed in 1977. Women continued to seek abortions at earlier gestational ages; over half (51%) of all abortions were performed at  $\leq 8$  menstrual weeks of pregnancy, and 92% of abortions were induced within the first 12 weeks. Compared with 1976, after 12 weeks' gestation the percentage of dilatation and evacuation and hypertonic saline instillation procedures decreased, while prostaglandin and other instillation procedures increased.

*Reported by the Abortion Surveillance Br, Family Planning Evaluation Div, Bur of Epidemiology, CDC.*

**Editorial Note:** Although the number of legal abortions and the abortion ratio both increased in 1977, the increase was less than in previous years. This slowdown in the percentage increase may reflect several factors: 1) more effective use of contraception by reproductive-age women, 2) increasing use of sterilization, thus placing fewer women at

*Abortion Surveillance — Continued*

risk of an unwanted pregnancy, 3) the nearly complete replacement of non-physician (illegal) procedures by physician (legal) procedures, 4) improvements in sex education and changes in attitude of reproductive-age women and men, 5) changes in public funding policy for abortion services (7), or 6) decreases in reporting in the most recent years.

The number of abortions reported to CDC was probably less than the number actually performed in 1977. The degree of underreporting can be estimated by comparing the total number of abortions reported to CDC with the total number obtained through the Alan Guttmacher Institute (AGI) nationwide survey of abortion facilities (2). For 1977, as in previous years, CDC's total was approximately 16% lower than the AGI total. This underreporting could produce some biases in the CDC data. Abortions performed in physicians' offices are probably underreported more often than those performed in hospitals or facilities. Because physicians probably perform abortions in their offices at earlier gestational ages of pregnancy than other facilities do, the underreporting of these data may bias the gestational-age distributions toward the later states of pregnancy.

The general availability of abortion services since 1973 has allowed more women to obtain abortions within their state of residence. From 1973 through 1975, many states

**TABLE 2. Characteristics of women receiving abortions, United States, 1972-1977**

Characteristics	Percent Distribution*					
	1972	1973	1974	1975	1976	1977
<b>Residence</b>						
Abortion in state	56.2	74.8	86.6	89.2	90.0	90.0
Abortion out of state	43.8	25.2	13.4	10.8	10.0	10.0
<b>Age</b>						
≤19	32.6	32.7	32.7	33.1	32.1	30.8
20-24	32.5	32.0	31.8	31.9	33.3	34.5
≥25	34.9	35.3	35.6	35.0	34.6	34.7
<b>Race</b>						
White	77.0	72.5	69.7	67.8	66.6	66.4
Black and others	23.0	27.5	30.3	32.2	33.4	33.6
<b>Marital status</b>						
Married	29.7	27.4	27.4	26.1	24.6	24.3
Unmarried	70.3	72.6	72.6	73.9	75.4	75.7
<b>Number of living children</b>						
0	49.4	48.6	47.8	47.1	47.7	53.4
1	18.2	18.8	19.6	20.2	20.7	19.1
2	13.3	14.2	14.8	15.5	15.4	14.4
3	8.7	8.7	8.7	8.7	8.3	7.0
4	5.0	4.8	4.5	4.4	4.1	3.3
≥5	5.4	4.9	4.5	4.2	3.8	2.9
<b>Type of procedure</b>						
Curettage	88.6	88.4	89.7	90.9	92.8	93.8
Intrauterine instillation	10.4	10.4	7.8	6.2	6.0	5.4
Hysterotomy/hysterectomy	0.6	0.7	0.6	0.4	0.2	0.2
Other	0.5	0.6	1.9	2.4	0.9	0.7
<b>Weeks of gestation</b>						
≤8	34.0	36.1	42.6	44.6	47.0	51.2
9-10	30.7	29.4	28.7	28.4	28.0	27.2
11-12	17.5	17.9	15.4	14.9	14.4	13.1
13-15	8.4	6.9	5.5	5.0	4.5	3.4
16-20	8.2	8.0	6.5	6.1	5.1	4.3
>21	1.3	1.7	1.2	1.0	0.9	0.9

\*Excludes reported abortions for which no data were available.

*Abortion Surveillance – Continued*

that performed abortions before 1973 reported decreases in the number of abortions performed for non-residents, while those states that began performing abortions after the Supreme Court decisions of January 22, 1973, have gradually reported more abortions for state residents. Thus, in 1976 and 1977, 90% of women who obtained induced abortions had the procedure in their state of residence. Obtaining abortions close to one's residence has 2 advantages: the procedure can usually be performed at earlier gestational ages and the patient can benefit from the abortion facility's follow-up services.

The age distribution of women obtaining abortions has not changed markedly since 1973. In 1977, as in earlier years, women under the age of 15 had more abortions than live births. In 1977 women in the 25- to 29-year-old age group continued to have the lowest legal abortion ratio, indicating that pregnancies in this age group were more likely to be planned and therefore carried to term.

Women of black-and-other races again obtained abortions proportionately more frequently than white women; in 1977 there was a larger percentage increase in the abortion ratio for this group than that reported for white women. This may be due to at least 2 factors: 1) women of minority racial groups may have unwanted pregnancies proportionately more often than white women; this may reflect the need for increased family planning services for minority racial groups; 2) women of minority racial groups may be more likely to obtain their abortions in those facilities reporting the information by race; for example, underreporting of abortions performed in physicians' offices may disproportionately represent the number of abortions obtained by white women.

In 1977, the trend toward women seeking abortions at earlier gestational ages continued; this should have a favorable health impact in terms of decreasing the morbidity and mortality associated with the abortion procedure.

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