CENTERS FOR DISEASE CONTROL

September 10, 1982 / Vol. 31 / No. 35

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

477 Rubella Vaccination During Pregnancy — United States, 1971-1981
481 Cholera, 1981
488 State Action to Prevent Motor Vehicle Deaths and Injuries among Children and Adolescents
491 Subscription to *MMWR*

Countdown toward the elimination of measles in the United States

Year	Week 35	Weeks 1-35
1982	4	1,188
1981	7	2,562
1970	157	39,365
1960	1,234	399,852

Current Trends

Rubella Vaccination During Pregnancy — United States, 1971-1981

Since 1971, CDC has maintained a register of women who received rubella vaccine within the 3 months before or after conception, and who were prospectively followed to quantitate the risk of fetal abnormalities following exposure to the vaccine.

From January 1971 to December 1981, 730 pregnant women who received rubella vaccine either within 3 months before or within 3 months after their presumed dates of conception were reported to CDC. Five hundred thirty-eight of these women received either Cendehill* or HPV-77† vaccines; 189 received RA 27/3§ vaccine, and three received rubella vaccine of an unknown type. At the time of vaccination, 215 women (29%) were known susceptible to rubella (no detectable rubella-specific antibodies); 42 (6%) were immune (presence of detectable rubella-specific antibodies), and 473 (65%) were of unknown immune status.

Exposure to Cendehill and HPV-77 vaccines (HPV-77:DE-5 and HPV-77:DK-12): The outcome of conception (live birth, stillbirth, spontaneous or induced abortion) was known for 500 of the 538 recipients of Cendehill or HPV-77 vaccines. Two hundred ninety (58%) of the vaccinees had full-term pregnancies (Table 1). None of the newborns had abnormalities com-

*Distribution discontinued in the United States in December 1976

†Distribution discontinued in the United States in January 1979

§Distribution begun in the United States in January 1979

Rubella – Continued

patible with congenital rubella syndrome (CRS)¶. Eight infants born to susceptible mothers or to mothers whose immune status was unknown showed evidence of infection by detection of rubella-specific IgM in cord blood, by the persistence of rubella-specific hemagglutination inhibition (HI) antibodies beyond 6 months of age, or by the isolation of rubella virus. All eight children, who are now 2 to 7 years of age, are growing and developing normally with no demonstrated signs or symptoms of CRS.

Rubella virus was isolated from the products of conception in 17 of 85 (20%) susceptible women who had received Cendehill or HPV-77 vaccines and who elected to have abortions. Six spontaneous abortions were reported among the 100 susceptible women who had received these vaccines and whose pregnancies proceeded without intervention.

The dates of vaccination and the estimated dates of conception (DOC) were available for 87 of the 94 susceptible women who had full-term pregnancies (Figure 1). Of these, 33 (38%) were vaccinated within 1 week before to 4 weeks after conception. All women who carried their pregnancies to term gave birth to infants who did not have any malformations compatible with the CRS, regardless of interval between vaccination and conception.

Exposure to RA 27/3 vaccine: The outcome of pregnancy was known for 177 of the 189 recipients of the RA 27/3 vaccine. One hundred fifty-three (86%) of the vaccinees had full-term pregnancies (Table 2). None of the resulting newborns had abnormalities compatible with CRS. Serologic evaluation (rubella HI titers and specific IgM on cord or neonatal blood specimens) was performed for 44 of the 49 infants whose mothers were susceptible, and for 76 of the 89 infants whose mothers were of unknown immune status. One infant born to a susceptible woman had a rubella-specific IgM antibody titer of 8 in the cord blood. Both mother and infant had HI titers of 128 at the time of birth; the infant's HI titer decreased to 16 at 2 months of age. The infant had no evidence of malformations either at birth or at the 6 month followup examination.

Rubella virus was isolated from the products of conception in only 1 of 25 (4%) susceptible women studied who had received RA 27/3 vaccine within 3 months of conception (12 cases

¶Defined as any two complications listed in A or 1 from A and 1 from B

A. *Cataracts/congenital glaucoma* (either or both count as 1), *congenital heart disease, loss of hearing, pigmentary retinopathy.*

B. *Purpura, splenomegaly, jaundice* (with onset beginning 24 hours after birth), *microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease.*

TABLE 1. Pregnancy outcomes for 538 recipients of Cendehill or HPV-77 vaccine – United States, through December 31, 1981*

Prevaccination immunity status	Total cases	Live births		Spontaneous abortions and stillbirths		Induced abortions		Outcome unknown	
		No.	%	No.	%	No.	%	No.	%
Susceptible	149	94	17.5	6	1.1	43	8.0	6	1.1
Immune	25	22	4.1	0	–	3	0.5	0	–
Unknown	364	174	32.3	18	3.4	140	26.0	32	6.0
TOTAL	538	290	53.9	24	4.5	186	34.5	38	7.1

*No women entered on the register during 1981 were vaccinated with Cendehill or HPV-77 vaccine.

Rubella – Continued

reported to CDC and 13 from the literature) (*1-3*). No spontaneous abortions were reported among the 49 susceptible women who had received RA 27/3 vaccine and whose pregnancies proceeded without intervention.

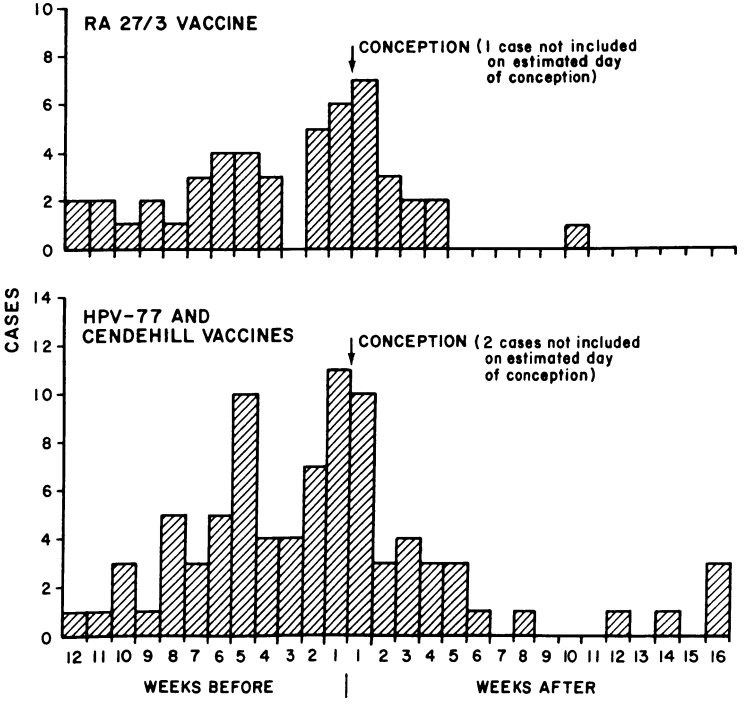
The dates of vaccination and estimated DOC were available for all of the 49 susceptible women who had full-term pregnancies (Figure 1). Twenty-one women (43%) were vaccinated within 1 week before to 4 weeks after conception. All women who had full-term pregnancies gave birth to infants who had no malformations compatible with CRS, regardless of interval between vaccination and conception.

Reported by Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Since the licensure of live rubella virus vaccine in 1969, there has been concern that the attenuated vaccine virus poses teratogenic risks to the fetuses of pregnant recipients. A CDC register was set up to evaluate the risk; from that register, data are obtained through reports from physicians and state and local health departments, as well as directly from women vaccinated either within 3 months before or 3 months after conception. The patients are followed prospectively to determine the outcomes of the pregnancies.

During the highest risk period for viremia and fetal defects (1 week before to 4 weeks after conception) (*4,5*), 54 of the 143 (38%) susceptible mothers were vaccinated with one of the four vaccines. Neither these infants nor any of the others were born with CRS; therefore, the ob-

FIGURE 1. Rubella vaccination of susceptible women, by estimated date of conception (DOC)* and vaccine type, 1971-1981



*DOC estimated to be 14 days after first day of last menstrual period.

Rubella – Continued

served CRS risk to date is zero. The theoretical maximum risk for the occurrence of CRS in this group of children, based on the 95% confidence limits of the binomial distribution, may be as high as 3%. This overall maximum theoretical risk is far less than the 20% or greater risk associated with maternal infection with wild rubella virus during the first trimester of pregnancy (*6*).

In 1979, when RA 27/3 rubella vaccine replaced the other rubella vaccines, concern was raised that it might be more teratogenic than earlier rubella vaccines. Data from the CDC-maintained register thus far show no evidence that the RA 27/3 vaccine can cause defects compatible with CRS.

The 4% rubella virus isolation rate from products of conception for RA 27/3 vaccine is substantially lower than the 20% rate for the Cendehill and HPV-77 vaccines. Although limited, these data suggest there is probably no greater risk of placental or fetal infection from RA 27/3 vaccine than from Cendehill or HPV-77 vaccines (*7*).

Based on an earlier review of the data, the Immunization Practices Advisory Committee (ACIP) has stated that the risk of CRS following vaccination within 3 months of conception is so small as to be negligible (*8*). The additional data collected in 1981 support this statement. Rubella vaccination of a pregnant female should not in itself indicate abortion. A final decision, however, should rest with the patient and her physician.

Nevertheless, rubella vaccine should not be administered to pregnant females. Reasonable precautions before administering rubella vaccine to women of childbearing age include determining whether females are pregnant and excluding those who are. Non-pregnant women are advised not to become pregnant for 3 months after vaccination.

CDC encourages the reporting of all cases of rubella vaccination occurring within 3 months of conception so that the risks involved may be more completely defined for the presently licensed RA 27/3 vaccine. Laboratory services for serologic determination and for culture of abortion specimens are available at CDC for women who are entered on the register. Immunization Division personnel are available to discuss individual situations in detail.

References

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3. Bernstein DI, Ogra PL. Fetomaternal aspects of immunization with RA27/3 live attenuated rubella virus vaccine during pregnancy. J Pediatr 1980;97:467-70.
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TABLE 2. Pregnancy outcomes for 189 recipients of RA27/3 vaccine – through December 31, 1981

Prevaccination immunity status	Total cases	Live births		Spontaneous abortions and stillbirths		Induced abortions		Outcome unknown	
		No.	%	No.	%	No.	%	No.	%
Susceptible	65	49	25.9	0	—	10	5.3	6	3.2
Immune	16	15	7.9	0	—	0	—	1	0.5
Unknown	108	89	47.1	2	1.1	12	6.3	5	2.7
TOTAL	189	153	80.9	2	1.1	22	11.6	12	6.4

Rubella – Continued

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7. Preblud SR, Stetler HC, Frank JA Jr, Greaves WL, Hinman AR, Herrmann KL. Fetal risk associated with rubella vaccine. JAMA 1981;246:1413-7.
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International Notes

Cholera, 1981

As of April 5, 1982, a provisional total of 36,840 cholera cases had been reported worldwide for 1981, as compared with 42,614 in 1980. Altogether, 34 countries were infected, the same number as in 1980, and an additional eight countries reported only imported cases (Table 3). Only one new country was infected.

TABLE 3. Cases of cholera reported to WHO, 1981

Countries and areas	Total	
AFRICA		
Benin	2	
Burundi*	468	
Cameroon, United Republic of*	209	
Gabon	2	
Kenya	2,424	
Liberia	1,477	
Mozambique	1,753	
Niger	7†	
Nigeria	107	
Rwanda	20	
South Africa	4,180	
Swaziland	238	
Tanzania, United Republic of	4,241	
Zaire	2,379	
Zambia	14	
TOTAL	17,521	(7†)
AMERICA		
United States of America	21	(4†)
TOTAL	21	(4†)
ASIA		
Burma	28	
Gaza Strip	161	
Hong Kong	3†	
India	4,681	
Indonesia*	5,980	
Iran	6,034	
Japan	19	(14†)
ASIA (Cont'd)		
Jordon	870	
Kuwait	8†	
Malaysia	469	
Nepal	24	
Pakistan	4	
Philippines*	150	
Saudi Arabia	13	(4†)
Singapore	34	(2†)
Sri Lanka	574	
Thailand	39	
Viet Nam	157	
West Bank	7	(2†)
TOTAL	19,255	(33†)
EUROPE		
Austria	2†	
France	20	(19†)
Germany, Federal Republic of	4†	
Netherlands	2†	
Poland	1†	
United Kingdom	12†	
TOTAL	41	(40†)
OCEANIA		
Australia	2	
TOTAL	2	

*incomplete figures
†imported cases

Cholera — Continued

In Africa, the total number of countries with cholera declined from 16 in 1980 to 14 in 1981. A total of 17,521 cases were reported, as compared with 18,731 in 1980. However, the disease appeared to be more widespread in countries in southeastern Africa, and Swaziland reported infection for the first time during the present pandemic.

Seventeen countries in Asia reported cholera infection in 1981, as compared with 15 in 1980; the total number of cases was 19,255 (23,851 in 1980). There was a noticeable recrudescence of cholera in the Eastern Mediterranean area where six countries were infected, four more than in the previous year; the most severely affected were Iran and Jordan.

Cholera was again observed on the Gulf Coast of the United States, where 19 cases occurred, including an outbreak of 17 cases among employees of an oil rig in the coastal region of Texas. The outbreak was considered due to contamination of unchlorinated drinking water with drilling water and sewage containing *V. cholerae* 01 shed by the index case; the source of infection for the index case could not be determined. All the strains from the 31 cases occurring along the Gulf Coast since 1973 appear to be essentially identical, suggesting that the toxigenic *V. cholerae* 01 has persisted in this region for at least the last 8 years.

Oceania remained free of cholera in 1981, with the exception of two cases in Australia (at Lismore in New South Wales).

Apart from one isolated case in France, no indigenous cases were reported from Europe. There was, however, a significantly larger number of imported cases than in previous years.

Reported by WHO Weekly Epidemiologic Record 1982;57:131.

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

Disease	35th Week Ending			Cumulative, First 35 Weeks		
	September 4, 1982	September 5, 1981	Median 1977-1981	September 4, 1982	September 5, 1981	Median 1977-1981
Aseptic meningitis	266	465	372	4,490	5,242	3,902
Brucellosis	2	8	1	104	103	117
Encephalitis: Primary (arthropod-borne & unspec.)	36	55	54	703	770	596
Post-infectious	-	-	2	49	66	150
Gonorrhea: Civilian	15,505	21,407	20,833	628,537	671,094	659,399
Military	402	701	631	16,707	19,585	18,272
Hepatitis: Type A	281	453	540	14,503	16,983	19,190
Type B	302	384	337	13,868	13,679	11,102
Non A, Non B	21	N	N	1,428	N	N
Unspecified	137	210	206	5,956	7,323	6,731
Legionellosis	14	N	N	316	N	N
Leprosy	4	1	5	132	176	115
Malaria	24	28	25	680	967	499
Measles (rubeola)	4	7	68	1,188	2,562	12,789
Meningococcal infections: Total	44	39	32	2,096	2,535	1,930
Civilian	44	39	32	2,084	2,526	1,914
Military	-	-	-	12	9	14
Mumps	16	23	65	4,096	3,155	11,049
Pertussis	58	31	32	938	803	935
Rubella (German measles)	8	18	44	1,965	1,724	10,606
Syphilis (Primary & Secondary): Civilian	445	703	513	21,796	20,357	16,210
Military	9	10	9	281	250	206
Tuberculosis	317	541	541	16,969	17,943	18,673
Tularemia	9	12	9	159	168	139
Typhoid fever	9	5	14	264	344	320
Typhus fever, tick-borne (RMSF)	36	44	44	792	987	886
Rabies, animal	98	136	86	4,220	5,192	3,408

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	3
Botulism	54	Paralytic	3
Cholera	-	Psittacosis	84
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus (La. 1)	54
Leptospirosis (Ark. 1, Tex. 3)	38	Trichinosis (Ohio 2, Mich. 1)	69
Plague (Oreg. 1)	11	Typhus fever, flea-borne (endemic, murine)	24

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Aseptic Meningitis	Brucellosis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1982	Cum. 1981	1982	1982	1982	1982	1982	Cum. 1982
UNITED STATES	266	104	703	49	628,537	671,094	281	302	21	137	14	132
NEW ENGLAND	15	3	31	5	15,282	16,626	3	16	-	14	1	1
Maine	1	-	-	-	772	860	1	2	-	-	1	-
N.H.	2	-	5	-	448	597	-	1	-	1	-	-
Vt.	-	-	-	-	289	277	1	-	-	-	-	-
Mass.	4	-	12	-	6,932	6,977	1	5	-	13	-	-
R.I.	3	-	-	1	1,041	925	-	1	-	-	-	-
Conn.	5	3	14	4	5,800	6,990	-	7	-	-	-	1
MID. ATLANTIC	27	3	76	13	78,865	79,720	28	75	7	14	5	4
Upstate N.Y.	13	3	25	3	13,052	13,212	5	9	-	1	-	1
N.Y. City	4	-	14	-	32,776	33,055	16	49	-	7	-	1
N.J.	7	-	13	-	14,109	15,438	7	17	7	6	-	1
Pa.	3	-	24	10	18,928	18,015	U	U	U	U	5	1
E.N. CENTRAL	56	1	155	10	85,076	101,080	71	42	-	11	1	3
Ohio	27	1	62	4	24,581	32,328	25	11	-	3	1	-
Ind.	6	-	33	3	10,812	8,650	22	9	-	4	-	-
Ill.	-	-	9	1	19,607	28,894	5	4	-	-	-	3
Mich.	23	-	46	-	21,806	22,023	19	18	-	4	-	-
Wis.	-	-	5	2	8,270	9,185	-	-	-	-	-	-
W.N. CENTRAL	13	14	56	3	29,868	31,657	18	7	1	4	4	3
Minn.	-	1	20	1	4,314	4,846	2	1	-	-	1	1
Iowa	3	3	23	1	3,133	3,478	9	-	1	1	2	-
Mo.	2	4	6	-	14,235	14,655	6	-	-	3	1	1
N. Dak.	-	-	-	-	400	415	-	-	-	-	-	-
S. Dak.	-	1	-	1	825	877	-	1	-	-	-	1
Nebr.	4	2	4	-	1,836	2,436	1	2	-	-	-	-
Kans.	4	3	3	-	5,125	4,950	-	3	-	-	-	-
S. ATLANTIC	72	20	112	7	165,225	166,254	62	100	5	19	1	9
Del.	-	-	-	-	2,666	2,676	1	2	-	-	-	-
Md.	5	-	17	-	21,086	19,090	3	24	1	1	-	3
D.C.	-	-	-	-	9,321	9,620	-	1	-	-	-	-
Va.	15	7	23	1	13,127	15,250	-	15	-	1	-	1
W. Va.	1	-	7	-	1,857	2,503	4	-	-	-	-	-
N.C.	15	-	13	1	26,565	25,622	5	7	-	3	-	-
S.C.	1	2	-	-	16,178	16,143	13	10	1	4	-	-
Ga.	13	1	8	-	30,544	34,665	8	12	1	1	-	1
Fla.	22	10	44	5	43,881	40,685	28	29	2	9	1	4
E.S. CENTRAL	7	11	36	2	55,273	56,189	9	13	1	-	-	-
Ky.	2	-	-	-	7,484	6,954	4	2	-	-	-	-
Tenn.	4	6	16	-	21,681	21,227	2	5	1	-	-	-
Ala.	1	4	15	2	16,389	17,261	1	4	-	-	-	-
Miss.	-	1	5	-	9,719	10,747	2	2	-	-	-	-
W.S. CENTRAL	41	28	113	1	88,352	88,129	71	31	4	70	1	22
Ark.	7	5	8	-	7,264	6,594	2	1	-	7	-	-
La.	3	6	14	-	16,597	15,177	10	10	1	1	-	-
Okla.	3	4	18	-	9,711	9,583	3	3	3	2	1	-
Tex.	28	13	73	1	54,780	56,775	56	17	-	60	-	22
MOUNTAIN	17	-	20	3	21,510	26,117	13	14	2	3	-	2
Mont.	1	-	-	-	876	947	1	-	-	-	-	-
Idaho	-	-	-	-	993	1,165	2	-	-	-	-	1
Wyo.	-	-	-	-	629	606	-	-	-	-	-	-
Colo.	5	-	10	1	5,866	7,098	7	6	1	1	-	-
N. Mex.	1	-	-	-	2,790	2,789	2	-	1	-	-	-
Ariz.	U	-	6	-	5,655	7,836	U	U	U	U	U	-
Utah	10	-	-	2	1,032	1,264	-	1	-	-	-	1
Nev.	-	-	4	-	3,669	4,412	1	7	-	2	-	-
PACIFIC	18	24	104	5	89,086	105,322	6	4	1	2	1	88
Wash.	5	1	10	-	7,516	8,754	-	-	-	2	1	7
Oreg.	-	-	3	-	5,223	6,185	6	1	1	-	-	1
Calif.	U	22	87	5	72,355	85,678	U	U	U	U	U	58
Alaska	9	1	3	-	2,253	2,635	-	3	-	-	-	1
Hawaii	4	-	1	-	1,739	2,070	-	-	-	-	-	21
Guam	U	-	-	-	85	79	U	U	U	U	U	-
P.R.	2	-	1	-	1,924	2,209	15	15	-	9	-	-
V.I.	U	-	-	-	148	139	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	245	305	U	U	U	U	U	12

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Malaria		Measles (Rubeola)			Meningococcal Infections (Total)		Mumps		Pertussis	Rubella		
	1982	Cum. 1982	1982	Cum. 1982	Cum. 1981	1982	Cum. 1982	1982	Cum. 1982	1982	1982	Cum. 1982	Cum. 1981
UNITED STATES	24	680	4	1,188	2,562	44	2,096	16	4,096	58	8	1,965	1,724
NEW ENGLAND	3	36	-	11	76	3	110	1	167	2	-	17	112
Maine	-	-	-	-	5	-	8	1	37	1	-	-	33
N.H.	-	1	-	2	6	-	15	-	12	-	-	8	44
Vt.	-	-	-	2	2	-	6	-	7	-	-	-	-
Mass.	1	22	-	4	55	1	28	-	79	1	-	5	23
R.I.	-	2	-	-	-	1	12	-	15	-	-	1	-
Conn.	2	11	-	3	8	1	41	-	17	-	-	3	12
MID. ATLANTIC	6	109	-	157	812	13	386	3	258	24	1	93	201
Upstate N.Y.	2	23	-	110	207	7	137	1	57	1	-	45	94
N.Y. City	2	38	-	39	73	3	70	1	45	4	-	31	50
N.J.	2	27	-	4	54	3	78	1	37	1	1	17	46
Pa.	-	21	-	4	478	-	101	-	119	18	-	-	11
E.N. CENTRAL	5	50	-	73	80	7	248	1	2,152	13	-	161	357
Ohio	2	11	-	1	16	1	89	-	1,556	8	-	-	3
Ind.	-	2	-	2	8	2	24	-	37	-	-	27	124
Ill.	-	11	-	23	23	1	67	1	173	5	-	57	88
Mich.	3	24	-	47	30	3	56	-	294	-	-	48	34
Wis.	-	2	-	-	3	-	12	-	92	-	-	29	108
W.N. CENTRAL	-	19	-	49	10	-	91	2	544	9	-	55	76
Minn.	-	2	-	-	3	-	22	2	418	7	-	5	7
Iowa	-	6	-	-	1	-	5	-	30	-	-	-	4
Mo.	-	5	-	2	1	-	26	-	16	1	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	1	-	1	-
Nebr.	-	3	-	3	4	-	12	-	-	-	-	-	1
Kans.	-	2	-	44	1	-	16	-	79	-	-	11	62
S. ATLANTIC	5	104	1	38	360	14	431	3	237	5	4	74	132
Del.	-	4	-	-	-	-	-	-	10	-	-	1	1
Md.	-	15	1	3	5	2	27	-	24	-	1	34	1
D.C.	-	4	-	1	1	-	2	-	-	-	-	-	-
Va.	4	32	-	14	7	3	52	-	33	-	-	13	5
W. Va.	1	7	-	3	9	1	9	-	87	-	-	1	22
N.C.	-	3	-	-	3	3	82	-	11	2	-	1	5
S.C.	-	4	-	-	2	-	51	2	15	-	-	1	8
Ga.	-	14	-	-	108	4	91	1	12	1	3	9	35
Fla.	-	21	-	17	225	1	117	-	45	2	-	14	55
E.S. CENTRAL	-	7	-	8	5	3	138	5	46	2	-	44	34
Ky.	-	4	-	1	1	-	24	-	14	-	-	26	20
Tenn.	-	-	-	6	2	2	58	3	18	1	-	2	13
Ala.	-	-	-	-	2	1	46	2	8	1	-	-	1
Miss.	-	3	-	1	-	-	10	-	6	-	-	16	-
W.S. CENTRAL	2	50	3	42	837	2	249	1	167	3	3	107	143
Ark.	-	3	-	-	1	-	12	-	6	-	-	1	3
La.	-	4	-	2	2	-	51	-	5	-	-	1	9
Okla.	-	7	3	24	5	-	25	-	-	-	-	3	-
Tex.	2	36	-	16	829	2	161	1	156	3	3	102	131
MOUNTAIN	1	18	-	8	33	-	97	-	81	-	-	75	85
Mont.	-	1	-	-	-	-	4	-	3	-	-	5	3
Idaho	-	1	-	-	1	-	6	-	3	-	-	6	4
Wyo.	-	-	-	-	-	-	5	-	2	-	-	7	9
Colo.	1	9	-	6	9	-	41	-	15	-	-	6	30
N. Mex.	-	2	-	-	8	-	14	-	-	-	-	6	5
Ariz.	U	3	U	2	5	U	17	U	33	U	U	14	19
Utah	-	2	-	-	-	-	8	-	19	-	-	20	5
Nev.	-	-	-	-	10	-	2	-	6	-	-	11	10
PACIFIC	2	287	-	802	349	2	346	-	444	-	-	1,339	584
Wash.	-	14	-	34	3	-	37	-	61	-	-	37	89
Oreg.	2	11	-	15	4	1	68	-	-	-	-	6	51
Calif.	U	260	U	748	340	U	227	U	368	U	U	1,283	429
Alaska	-	-	-	1	-	1	11	-	6	-	-	5	1
Hawaii	-	2	-	4	2	-	3	-	9	-	-	8	14
Guam	U	1	U	6	6	U	2	U	3	U	U	2	1
P.R.	-	4	2	95	264	-	7	-	53	2	-	7	3
V.I.	U	-	U	-	24	U	-	U	2	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	4	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 4, 1982 and September 5, 1981 (35th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Tuberculosis		Tula-remia	Typhoid Fever		Typhus Fever (Tick-borne) (RMSF)		Rabies, Animal
	Cum. 1982	Cum. 1981	1982	Cum. 1982	Cum. 1982	1982	Cum. 1982	1982	Cum. 1982	Cum. 1982
UNITED STATES	21,796	20,357	317	16,969	159	9	264	36	792	4,220
NEW ENGLAND	371	408	10	462	4	-	16	-	8	33
Maine	3	4	2	40	-	-	-	-	-	24
N.H.	1	12	-	15	-	-	-	-	1	-
Vt.	1	13	-	10	-	-	2	-	-	-
Mass.	248	266	4	299	4	-	12	-	4	5
R.I.	19	24	1	19	-	-	-	-	2	-
Conn.	99	89	3	79	-	-	2	-	1	4
MID. ATLANTIC	3,025	2,979	56	2,854	7	5	44	-	28	128
Upstate N.Y.	304	279	13	497	7	-	6	-	9	62
N.Y. City	1,811	1,776	32	1,103	-	-	23	-	1	-
N.J.	415	414	11	559	-	5	11	-	12	8
Pa.	495	510	U	695	-	-	4	-	6	58
E.N. CENTRAL	1,147	1,473	74	2,626	1	1	22	2	76	455
Ohio	197	196	10	446	-	1	11	2	71	65
Ind.	134	168	6	328	-	-	-	-	-	66
Ill.	538	787	32	1,089	-	-	3	-	5	238
Mich.	211	255	23	622	-	-	7	-	-	4
Wis.	67	67	3	141	1	-	1	-	-	82
W.N. CENTRAL	379	423	7	501	24	1	10	5	30	926
Minn.	76	145	-	87	-	-	5	-	-	164
Iowa	21	16	-	54	2	-	1	-	4	297
Mo.	226	228	6	242	16	1	2	1	10	88
N. Dak.	7	7	-	9	-	-	-	-	-	79
S. Dak.	1	2	1	21	1	-	-	-	4	71
Nebr.	11	5	-	20	2	-	1	1	2	104
Kans.	37	20	-	68	3	-	1	3	10	123
S. ATLANTIC	5,990	5,391	59	3,493	10	-	34	19	436	755
Del.	11	10	-	33	-	-	-	-	-	2
Md.	333	400	15	404	1	-	9	-	43	35
D.C.	331	427	1	140	-	-	-	-	-	-
Va.	408	471	4	387	2	-	2	7	69	384
W. Va.	21	16	2	106	-	-	3	-	7	37
N.C.	476	413	10	550	-	-	1	6	185	55
S.C.	354	352	7	315	6	-	3	4	94	43
Ga.	1,231	1,380	-	532	-	-	-	2	36	145
Fla.	2,825	1,922	20	1,026	1	-	16	-	2	54
E.S. CENTRAL	1,518	1,355	55	1,575	6	-	14	4	68	498
Ky.	80	74	15	415	-	-	-	-	1	102
Tenn.	411	499	21	508	4	-	2	4	45	283
Ala.	568	391	9	438	-	-	9	-	10	108
Miss.	459	391	10	214	2	-	3	-	12	5
W.S. CENTRAL	5,688	4,944	47	2,054	82	2	27	5	131	806
Ark.	142	110	5	225	51	-	3	-	22	108
La.	1,296	1,138	16	325	3	-	3	-	-	27
Okla.	119	113	-	253	24	-	2	3	68	148
Tex.	4,131	3,583	26	1,251	4	2	19	2	41	523
MOUNTAIN	558	523	5	460	19	-	11	1	10	191
Mont.	3	11	-	27	2	-	-	1	3	67
Idaho	24	17	-	23	1	-	-	-	2	8
Wyo.	15	7	-	2	2	-	-	-	1	17
Colo.	155	159	-	50	3	-	3	-	1	34
N. Mex.	137	93	1	87	1	-	-	-	1	15
Ariz.	119	123	U	197	-	U	5	U	-	35
Utah	15	21	-	25	10	-	2	-	-	12
Nev.	90	92	4	49	-	-	1	-	2	3
PACIFIC	3,120	2,861	4	2,944	6	-	86	-	5	428
Wash.	100	117	3	186	1	-	3	-	-	4
Oreg.	77	63	-	119	-	-	3	-	1	2
Calif.	2,856	2,625	U	2,375	4	U	77	U	4	345
Alaska	8	10	-	65	1	-	1	-	-	77
Hawaii	79	46	1	199	-	-	2	-	-	-
Guam	1	-	U	34	-	U	-	U	-	-
P.R.	465	449	-	254	-	-	2	-	-	36
V.I.	17	13	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	85	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending September 4, 1982 (35th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	648	411	163	36	21	17	35
Boston, Mass.	178	103	49	14	8	4	20
Bridgeport, Conn.	43	25	14	1	2	1	1
Cambridge, Mass.	26	18	7	1	-	-	1
Fall River, Mass.	25	20	5	-	-	-	-
Hartford, Conn.	50	33	12	3	-	2	2
Lowell, Mass.	34	19	13	1	1	-	1
Lynn, Mass.	25	19	3	3	-	-	-
New Bedford, Mass.	27	20	6	1	-	-	-
New Haven, Conn.	59	28	17	5	7	2	1
Providence, R.I.	52	36	8	3	1	4	4
Somerville, Mass.	6	3	3	-	-	-	1
Springfield, Mass.	49	34	9	2	-	4	2
Waterbury, Conn.	28	20	7	-	1	-	-
Worcester, Mass.	46	33	10	2	1	-	2
MID. ATLANTIC	2,352	1,540	532	152	66	62	80
Albany, N.Y.	50	34	11	1	1	3	-
Allentown, Pa.	10	8	2	-	-	-	-
Buffalo, N.Y.	115	83	24	5	3	-	6
Camden, N.J.	30	15	10	3	1	1	1
Elizabeth, N.J.	31	20	7	2	1	1	2
Erie, Pa.†	36	24	10	2	-	-	3
Jersey City, N.J.	42	27	11	3	-	1	-
N.Y. City, N.Y.	1,288	858	261	92	42	35	30
Newark, N.J.	67	34	16	10	4	3	2
Paterson, N.J.	32	19	10	-	3	-	-
Philadelphia, Pa.†	263	159	73	20	6	5	14
Pittsburgh, Pa.†	51	30	17	2	1	1	4
Reading, Pa.	33	24	5	2	-	2	3
Rochester, N.Y.	129	87	31	3	2	6	9
Schenectady, N.Y.	21	12	8	1	-	-	-
Scranton, Pa.†	20	16	3	-	1	-	-
Syracuse, N.Y.	71	47	18	3	1	2	2
Trenton, N.J.	28	17	9	2	-	-	1
Utica, N.Y.	15	13	2	-	-	-	-
Yonkers, N.Y.	20	13	4	1	-	2	3
E.N. CENTRAL	2,064	1,292	514	128	61	68	54
Akron, Ohio	79	52	12	2	5	8	-
Canton, Ohio	26	16	7	1	1	1	2
Chicago, Ill	476	278	125	37	24	12	13
Cincinnati, Ohio	127	78	43	1	3	2	10
Cleveland, Ohio	146	87	41	12	2	4	2
Columbus, Ohio	134	84	34	8	4	4	3
Dayton, Ohio	100	62	23	7	3	5	1
Detroit, Mich.	232	128	59	27	6	12	2
Evansville, Ind.	46	31	11	3	1	-	1
Fort Wayne, Ind.	42	34	4	2	-	2	-
Gary, Ind. §	10	8	-	-	1	-	-
Grand Rapids, Mich.	44	29	9	2	2	2	1
Indianapolis, Ind.	175	98	57	9	4	7	5
Madison, Wis.	41	26	8	4	1	2	4
Milwaukee, Wis.	121	87	25	3	-	6	-
Peoria, Ill.	24	16	6	2	-	-	4
Rockford, Ill. §	38	38	-	-	-	-	1
South Bend, Ind.	46	26	15	3	1	1	4
Toledo, Ohio	93	67	22	2	2	-	1
Youngstown, Ohio	64	47	13	3	1	-	-
W.N. CENTRAL	712	488	124	48	24	27	33
Des Moines, Iowa §	53	51	-	-	1	-	-
Duluth, Minn.	24	14	5	1	-	4	3
Kansas City, Kans.	32	20	6	3	1	2	-
Kansas City, Mo.	106	80	17	4	3	2	4
Lincoln, Nebr.	40	35	3	2	-	-	3
Minneapolis, Minn.	92	60	20	8	3	1	1
Omaha, Nebr.	86	56	20	2	4	4	4
St. Louis, Mo.	153	85	37	19	3	9	10
St. Paul, Minn.	68	48	9	4	4	3	1
Wichita, Kans.	58	39	7	5	5	2	7
S. ATLANTIC	1,110	652	289	89	35	42	28
Atlanta, Ga.	123	81	27	6	7	2	1
Baltimore, Md.	155	99	39	5	5	7	2
Charlotte, N.C.	49	23	16	2	2	3	3
Jacksonville, Fla.	103	62	28	6	3	4	-
Miami, Fla.	121	56	40	15	1	9	1
Norfolk, Va.	44	24	15	3	2	-	2
Richmond, Va.	76	40	25	6	2	3	5
Savannah, Ga.	30	23	6	1	-	-	-
St. Petersburg, Fla.	83	67	10	2	1	3	4
Tampa, Fla.	77	54	12	5	2	4	4
Washington, D.C.	201	102	55	33	8	3	4
Wilmington, Del.	48	21	16	5	2	4	2
E.S. CENTRAL	683	413	164	53	21	32	33
Birmingham, Ala.	88	41	19	14	4	10	2
Chattanooga, Tenn.	45	30	10	2	2	1	4
Knoxville, Tenn.	48	36	9	2	-	1	1
Louisville, Ky.	104	55	31	9	4	5	6
Memphis, Tenn.	175	106	49	10	7	3	10
Mobile, Ala.	65	38	17	6	2	2	4
Montgomery, Ala.	63	47	9	5	-	2	4
Nashville, Tenn.	95	60	20	5	2	8	2
W.S. CENTRAL	1,249	664	301	116	100	67	40
Austin, Tex.	49	23	12	9	4	1	1
Baton Rouge, La.	60	34	17	3	2	4	1
Corpus Christi, Tex.	41	23	10	3	1	4	2
Dallas, Tex.	184	109	35	20	10	10	4
El Paso, Tex.	56	35	11	3	1	5	2
Fort Worth, Tex.	90	54	16	4	8	8	8
Houston, Tex.	239	111	63	32	24	9	5
Little Rock, Ark.	90	47	29	8	2	4	6
New Orleans, La.	158	63	47	10	28	10	-
San Antonio, Tex	141	76	32	12	15	6	7
Shreveport, La.	56	37	11	4	2	2	-
Tulsa, Okla.	85	52	18	8	3	4	4
MOUNTAIN	558	344	124	45	30	15	24
Albuquerque, N.Mex.	51	35	12	2	1	1	1
Colo. Springs, Colo.	22	13	5	2	1	1	5
Denver, Colo.	111	62	26	10	9	4	5
Las Vegas, Nev.	51	29	14	5	3	-	2
Ogden, Utah	30	24	3	1	1	1	3
Phoenix, Ariz.	140	82	38	10	7	3	-
Pueblo, Colo.	13	10	2	-	1	-	2
Salt Lake City, Utah	52	34	7	4	3	4	-
Tucson, Ariz.	88	55	17	11	4	1	6
PACIFIC	1,807	1,140	420	125	63	57	79
Berkeley, Calif.	27	17	7	2	1	-	1
Fresno, Calif.	94	60	15	2	9	8	3
Glendale, Calif.	30	23	3	1	3	-	2
Honolulu, Hawaii	60	40	11	5	2	2	1
Long Beach, Calif.	102	60	30	7	2	3	4
Los Angeles, Calif.	529	317	135	44	23	9	17
Oakland, Calif.	76	50	17	8	-	1	1
Pasadena, Calif.	28	18	8	-	1	1	2
Portland, Oreg.	103	69	25	3	1	5	9
Sacramento, Calif.	64	41	15	4	3	1	3
San Diego, Calif.	115	80	22	7	2	4	12
San Francisco, Calif.	169	105	41	13	-	10	6
San Jose, Calif.	173	103	39	15	8	7	11
Seattle, Wash.	158	106	31	10	6	5	5
Spokane, Wash.	37	23	9	4	1	-	2
Tacoma, Wash.	42	28	12	-	1	1	-
TOTAL	11,183††	6,944	2,631	792	421	387	406

* 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.

†† Total includes unknown ages.

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

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality April 1982		Estimated number of physician contacts April 1982[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	170,860	899.9	97,736,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	7,560	39.8	5,131,000
Malignant neoplasms (140-208)	1,804,120	36,320	191.3	2,368,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	67,310	354.5	5,485,000
Suicides, homicides (E950-E978)	1,401,880	4,160	21.9	—
Chronic liver disease and cirrhosis (571)	301,070	2,350	12.4	142,000
Cerebrovascular diseases (430-438)	280,430	13,480	71.0	543,000
Pneumonia and influenza (480-487)	124,830	4,580	24.1	1,166,000
Diabetes mellitus (250)	117,340	2,720	14.3	2,768,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	5,700	30.0	1,920,000
Prenatal care[5]				2,340,000
Infant mortality[5]		3,500	11.9 /1,000 live births	

[1]Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2]The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 5, August 12, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 31, No. 4, July 14, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3]Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 5, August 12, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4]IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, April 1982, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5]"Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 31, No. 4, July 14, 1982, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Perspectives in Disease Prevention and Health Promotion

State Action to Prevent Motor Vehicle Deaths and Injuries among Children and Adolescents

Motor vehicle fatalities (MVF) are the leading cause of lost years of potential life, and in 1980, accounted for 54,200 deaths (*1*). The National Transportation Safety Board estimates that although fatalities on American highways decreased by 4% in 1981, reversing a 5-year upward trend, 145 persons, including 12 children, die each day in vehicular collisions (*2*).

Among children ages 1 to 14, motor vehicle collisions are a major cause of injury and disability and are responsible for 20% of all deaths in that age group. In 1980, approximately 90,000 children under 6 years of age and 800,000 children 6 to 16 years of age were injured by motor vehicles (*3*). Over half the MVF among 1 to 14 year-olds occur among pedestrians. Of the MVF among 15 to 19 year-olds, 25% involve the teenagers as passengers; in another 25%, teenaged drivers are killed (*4*).

In an effort to reduce motor vehicle accidents and deaths, states have begun passing legislation pertaining to child restraints, alcohol use, and other issues related to the prevention of motor vehicle deaths and injuries.

Child restraints: In response to statistics indicating that restrained children are 50% to 70% less likely to be injured or killed in an auto accident than unrestrained children (*5*) and that back seat passengers are less likely to be injured than front seat passengers, 21 states have enacted laws requiring the use of, or have instituted public education programs on, safety seats or belts for children. Tennessee, which passed the first such law, requires parents of children under 4 years of age to use federally approved child restraint systems. The law became effective January 1, 1978, and active enforcement and public education campaigns have increased child restraint use in large metropolitan areas from 9% in 1977 to 32% in 1981. Injury rates in Tennessee among children under 4 years of age have decreased from 440.0 injuries per 100,000 children in 1979 to 306.1/100,000 in 1981, a 30% decrease, while death rates have decreased 55% from 7.72 deaths/100,000 children in 1979 to 3.5/100,000 in 1981 (*6*).

Sixteen of those 21 states, encompassing over 40% of the American population, have passed laws requiring parents to use car restraints for their children (7). Three (California, Indiana, and Maine) have passed laws requiring state agencies to conduct public information campaigns on the importance of child passenger safety. Hawaii has enacted a state income tax credit for purchase of a child safety restraint. In other states, child restraint legislation is pending.

To prevent motor vehicle deaths and injuries among adolescents and adults, many European countries as well as Australia, Canada, and New Zealand, have implemented mandatory, comprehensive safety belt use laws. In Victoria, Australia, safety belt use increased from approximately 15% to between 80% and 90% after enactment of legislation requiring use by all automobile occupants over age 8, and both MVF and injuries decreased. Although injuries have decreased among passengers under age 17, no decrease in fatalities has been noted (*8*). Statistics indicate that sustained enforcement and education are necessary to the continued use of restraints. In Ontario, Canada, belt use increased to 80% immediately after enactment of a safety belt use law, then decreased to 50%. When the law was actively enforced, use increased to 66% (*9*). In the United States, safety belt use by adolescents and adults can reduce fatalities by 50% and injuries by 65% (*5*). Michigan has introduced legislation requiring safety belts or passive restraints for all drivers and front-seat passengers.

Motor Vehicle Deaths — Continued

Alcohol use: Half of all deaths from motor vehicle crashes and one-third of accidents in which occupants receive serious injuries involve drivers with blood-alcohol concentrations of 0.10% or higher (*10*). Other drugs, either independently or in combination with alcohol, also contribute to vehicular accidents. Studies in England have found significant associations between use of minor tranquilizers and serious accidents (*11*). Consequently, several states have raised their legal drinking ages. In the mid-1970's, when Michigan lowered its legal drinking age to 18, both the number of establishments serving drinks and their hours of operation increased, as did the number of traffic accidents and MVF among 18 to 20 year-olds (*12*). In response to these findings, Michigan raised its legal drinking age to 21. Connecticut, Maryland, and New York among others, have also raised their legal drinking ages. In addition, citizens' groups have encouraged state legislatures to pass laws restricting night driving by teenagers, imposing mandatory license suspension for driving while intoxicated, and imposing stiffer penalties for convicted offenders.

Motorcycle helmets: By 1975, as a result of a federal requirement, all but three states had enacted laws requiring helmet use for motorcyclists. In 1976 the federal requirement was repealed, and by 1982, nine states had no helmet laws and 22 had amended theirs to require helmets only for teenaged riders (*13*). Between 1976 and 1980, deaths from motorcycle accidents increased by 49%. Motorcyclists have a 7-fold greater chance of fatal injury per mile driven than automobile drivers, (*14*). Over 30% of fatal motorcycle accidents occur among persons under 20 years of age (*4*). In a recent study conducted by the Minnesota Department of Health, in conjunction with the Minnesota Department of Public Safety, the effects of helmet use were analysed using 159 head injury cases from motorcycle accidents. The protective effects of helmets were evident at all levels of injury severity, and the degree of protection increased with severity; a non-helmeted rider was twice as likely to acquire a minor head injury as a helmeted rider and approximately five times as likely to acquire a severe or critical injury (*15*).

Education: Other approaches to preventing MVF among teenagers include raising the driving age and instituting comprehensive driver education programs. In Connecticut, a person can only obtain a drivers license before age 18 if he completes an approved driver education course; by eliminating state funding for driver education, Connecticut decreased the number of adolescent drivers and thus the number of 16 and 17 year-olds involved in accidents (*16*). Programs sponsored by community, professional, and government organizations have indicated the need for research concerning the effectiveness of driver education and the methods of preventing pedestrian injuries/fatalities.

Motor vehicle accidents result not only in morbidity and mortality but also in social and economic losses—health care costs, lost school time, lost work time for parents, rehabilitation costs, and the long-term effects of permanent disability on health, educational achievement, and quality of life. The prevention of vehicular-related injuries and deaths among children and adolescents requires a combination of strategies: designing roads and automobiles to prevent accidents, improving cars and safety seats to reduce the consequences of accidents, eliminating hazards to pedestrians, preventing alcohol and drug use by drivers, and advocating use of child restraints and safety belts.

Reported by the Office of Program Planning and Evaluation, Office of the Director, CDC.

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Motor Vehicle Deaths — Continued

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The Morbidity and Mortality Weekly Report, circulation 111,104, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs 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.

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