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MORBIDITY AND MORTALITY WEEKLY REPORT

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States, September 1976

*Recommendation of the Public Health Service
Advisory Committee on Immunization Practices*

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General Recommendations on Immunization

INTRODUCTION

Certain basic principles underlie recommended immunization practices for infants, children, and adults. Most of them depend on our scientific knowledge about active and passive immunization. Others represent judgments of clinical and preventive medicine and of public health. Thus, recommendations on immunization practices represent a balancing of scientific evidence of benefits and risks in order to achieve optimal levels of protection against infectious-communicable diseases with safety, effectiveness, and efficiency.

Past recommendations from the Advisory Committee on Immunization Practices (ACIP) on individual vaccines and other biologics have incorporated what might be considered general comments and advice. In response to requests for a compilation of these general recommendations, the Committee has assembled some that apply to many of the procedures in immunization. Reference will be made to some of them in individual vaccine recommendations for emphasis.

MULTIPLE-DOSE VACCINES

Some vaccines must be given in more than 1 dose for full protection. In recommending the times and intervals for multiple doses, the Committee takes into account current risks from disease and the objective of inducing a good antibody response. Having intervals longer than those recommended between doses does not generally jeopardize final antibody levels. Therefore, it is not necessary to restart an interrupted series of vaccinations or to add extra doses.

SIMULTANEOUS ADMINISTRATION OF CERTAIN VACCINES

Experimental evidence and extensive actual experience are strengthening the scientific basis for giving certain vaccines at the same time. Furthermore, it appears that many of the widely used antigens can safely and effectively be given together. This knowledge is particularly helpful when

circumstances call for giving several vaccines at the same time — such as imminent exposure to several infectious diseases, foreign travel, or limited-time access to patients.

In general, inactivated vaccines can be administered simultaneously at separate sites. It should be noted, however, that when vaccines commonly associated with local or systemic side effects are given simultaneously — vaccines such as cholera, typhoid, and plague — the side effects could theoretically be accentuated. Persons known to be prone to experience such side effects should generally be given these vaccines on separate occasions.

An inactivated vaccine and a live, attenuated virus vaccine can be administered simultaneously at separate sites, with the precautions that apply to the individual vaccines.

It has generally been recommended that individual live virus vaccines be given at least 1 month apart whenever possible — the rationale for this being the theoretical concern that more frequent or severe side effects as well as diminished antibody responses might otherwise result. Field observations indicate, however, that with simultaneous administration of certain live virus vaccines, results of this type have been minimal or absent.

Observation of children indicates that antibody responses to trivalent oral polio vaccine (TOPV) given simultaneously with licensed combination measles-mumps-rubella vaccine are comparable to those when the same vaccines are given at different times. It is reasonable to expect equivalently good immunologic responses when other licensed combination live, attenuated virus vaccines or their component antigens are given simultaneously with TOPV.

Smallpox and yellow fever vaccines, once thought to be unsuitable for simultaneous or closely consecutive administration because of virus interference, have been given at the same time at separate sites and at varying intervals with the same effectiveness and safety as accompany administration of the individual vaccines. This finding is of special importance in assuring suitable protection for those traveling to areas where both vaccines are needed.

Immunization Recommendations — Continued

HYPERSENSITIVITY TO VACCINE COMPONENTS

Vaccine antigens produced in systems or with substrates that contain allergenic substances — for example, those antigens derived from growing microorganisms in embryonated chicken or duck eggs — may cause hypersensitivity reactions, possibly including anaphylaxis, when the final vaccine contains a significant amount of the allergen. These include antigens grown in eggs and used against such diseases as typhus, Rocky Mountain spotted fever, rabies, and yellow fever. Vaccines with such characteristics should not be given to persons known to be hypersensitive to components of the substrates. Contrary to this generalization, influenza vaccine antigens, although prepared from viruses grown in embryonated eggs, are highly purified during preparation and have only very rarely been reported to be associated with hypersensitivity reactions. Screening persons by history of ability to eat eggs without adverse effects is a reasonable way to identify those possibly at risk from influenza vaccination. If persons who are allergic to eggs need protection against influenza, a scratch test with the vaccine as antigen can be used as one screening procedure to determine whether vaccine can be safely given. Such evaluations are best done by allergists.

Live virus vaccines prepared by growing viruses in cell cultures are essentially devoid of potentially allergenic substances related to host tissues. No hypersensitivity reactions have been reported with the live, attenuated measles, mumps, and rubella vaccines prepared from viruses grown in cell culture. There is no evidence that these vaccines cannot be given safely to all who need them.

Vaccines, such as cholera, DTP, plague, and typhoid, that are derived from organisms grown in synthetic media are frequently associated with local and occasionally systemic side effects, but they do not appear to be allergenic *per se*. They should not be given, however, to patients who have experienced any serious side effects from them.

Some vaccines contain preservatives or trace amounts of antibiotics to which patients may be hypersensitive. Those giving vaccines should review the label information carefully before deciding whether patients with known hypersensitivity to such preservatives or antibiotics can be vaccinated safely.

ALTERED IMMUNITY

The virus replication following administration of live, attenuated virus vaccines can be potentiated by immune

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Table I. Summary—Cases of Specified Notifiable Diseases: United States

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	44th WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 44 WEEKS		
	November 6, 1976	November 1, 1975		November 6, 1976	November 1, 1975	MED:AN 1971-1975
Aseptic meningitis	71	166	144	2,740	3,489	3,581
Brucellosis	—	4	3	233	215	162
Chickenpox	1,559	1,375	—	152,742	122,131	—
Diphtheria	4	14	4	130	253	157
Encephalitis	31	132	45	1,124	2,103	1,303
Primary	5	2	3	233	263	244
Post-infectious	287	276	197	12,431	9,848	7,646
Hepatitis, Viral	593	793	1,094	28,272	29,633	43,633
Type A	160	253	—	7,211	6,886	—
Type unspecified	5	6	11	398	359	359
Malaria	255	115	207	35,475	21,910	24,955
Measles (rubeola)	16	29	27	1,289	1,222	1,172
Meningococcal infections, total	16	28	27	1,280	1,195	1,152
Civilian	—	1	—	9	27	28
Military	426	803	861	34,310	50,280	59,694
Mumps	15	49	—	817	1,380	—
Pertussis	115	78	140	11,097	15,399	22,613
Rubella (German measles)	3	5	2	55	85	85
Tetanus	530	761	—	28,001	28,165	—
Tuberculosis	2	—	2	115	95	128
Tularemia	9	12	11	347	303	342
Typhoid fever	4	7	5	829	783	613
Typhus, tick-borne (Rky. Mt. spotted fever)	—	—	—	—	—	—
Venereal Diseases:	20,273	19,536	—	855,293	843,002	—
Gonorrhea	651	279	—	24,958	24,639	—
Syphilis, primary and secondary	454	584	—	20,479	21,738	—
Rabies in animals	11	2	—	295	302	—
	58	31	42	2,519	2,103	2,957

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	8
Botulism: Ohio 1	27	Paralytic:	7
Congenital rubella syndrome:	19	Psittacosis: Wash 3	61
Leprosy: Hawaii 6	118	Rabies in man:	2
Leptospirosis: Upstate N.Y. 1	40	Trichinosis: Ohio 1	77
Plague:	15	Typhus, murine:	44

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending November 6, 1976 and November 1, 1975 - 44th Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1976	1975	1976	1976	1976	1976	1976	CUM. 1976
UNITED STATES	71	-	1,559	4	130	31	132	5	287	593	160	5	398
NEW ENGLAND	2	-	120	-	-	-	2	-	9	21	14	-	18
Maine	-	-	5	-	-	-	-	-	-	-	-	-	-
New Hampshire*	-	-	-	-	-	-	-	-	1	1	-	-	-
Vermont	-	-	6	-	-	-	-	-	-	-	-	-	-
Massachusetts	1	-	63	-	-	-	2	-	2	1	14	-	10
Rhode Island	1	-	25	-	-	-	-	-	3	13	-	-	3
Connecticut	-	-	21	-	-	-	-	-	3	6	-	-	5
MIDDLE ATLANTIC	13	-	103	-	-	4	8	1	62	78	30	3	88
Upstate New York	6	-	67	-	-	1	2	1	-	8	-	2	21
New York City	4	-	22	-	-	1	-	-	16	14	-	-	39
New Jersey	2	-	NN	-	-	-	1	-	31	29	27	-	14
Pennsylvania*	1	-	14	-	-	2	5	-	15	27	3	1	14
EAST NORTH CENTRAL ..	10	-	639	-	1	4	60	-	43	100	25	1	21
Ohio*	1	-	76	-	1	4	31	-	12	43	-	-	7
Indiana	1	-	87	-	-	-	28	-	1	4	10	-	-
Illinois	2	-	128	-	-	-	-	-	13	20	8	1	3
Michigan	6	-	150	-	-	-	1	-	13	26	6	-	9
Wisconsin	-	-	198	-	-	-	-	-	4	7	1	-	2
WEST NORTH CENTRAL ..	2	-	272	-	4	2	24	1	10	22	2	-	27
Minnesota	1	-	-	-	-	1	10	-	4	4	-	-	4
Iowa	-	-	143	-	-	-	7	-	-	-	-	-	-
Missouri*	1	-	-	-	1	1	3	-	4	9	2	-	9
North Dakota	-	-	14	-	-	-	-	-	-	6	-	-	1
South Dakota	-	-	-	-	3	-	1	-	-	-	-	-	3
Nebraska	-	-	15	-	-	-	-	-	-	-	-	-	5
Kansas	-	-	100	-	-	-	3	1	2	3	-	-	5
SOUTH ATLANTIC	5	-	124	1	1	2	12	-	46	127	25	1	66
Delaware	-	-	1	-	-	-	-	-	1	1	-	-	-
Maryland	-	-	44	-	-	1	2	-	7	13	4	-	12
District of Columbia ..	-	-	1	-	-	1	1	-	6	2	-	-	9
Virginia*	3	-	2	-	-	-	-	-	4	11	5	-	9
West Virginia	-	-	57	1	1	-	5	-	-	2	-	-	3
North Carolina	-	-	NN	-	-	-	2	-	2	5	1	-	6
South Carolina	-	-	3	-	-	-	-	-	-	1	1	-	1
Georgia	-	-	-	-	-	-	-	-	-	41	-	-	5
Florida*	2	-	16	-	-	-	2	-	26	51	14	1	21
EAST SOUTH CENTRAL ..	3	-	56	-	-	10	14	3	25	54	1	-	2
Kentucky	1	-	39	-	-	-	6	-	6	13	-	-	-
Tennessee	2	-	NN	-	-	5	3	-	18	33	1	-	-
Alabama	-	-	17	-	-	5	3	3	1	1	-	-	1
Mississippi*	-	-	-	-	-	-	2	-	-	7	-	-	1
WEST SOUTH CENTRAL ..	12	-	49	-	1	2	5	-	14	41	11	-	21
Arkansas	1	-	1	-	-	2	-	-	1	9	2	-	2
Louisiana*	1	-	NN	-	-	-	1	-	4	7	3	-	2
Oklahoma	1	-	19	-	-	-	1	-	5	14	4	-	3
Texas*	9	-	29	-	1	-	3	-	4	11	2	-	14
MOUNTAIN	2	-	88	-	4	-	2	-	8	18	9	-	15
Montana*	-	-	24	-	-	-	-	-	1	1	-	-	-
Idaho	-	-	6	-	-	-	-	-	1	2	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	1	-	-	-
Colorado	-	-	44	-	3	-	2	-	4	6	3	-	9
New Mexico	-	-	11	-	1	-	-	-	-	2	1	-	1
Arizona	-	-	NN	-	-	-	-	-	-	-	4	-	4
Utah	2	-	3	-	-	-	-	-	2	1	1	-	-
Nevada*	-	-	-	-	-	-	-	-	-	5	-	-	1
PACIFIC	22	-	108	3	119	7	5	-	70	132	43	-	140
Washington	1	-	100	2	112	-	1	-	5	6	5	-	2
Oregon	2	-	1	-	-	1	-	-	7	16	7	-	5
California*	17	-	-	-	1	6	4	-	58	109	31	-	132
Alaska	1	-	2	1	5	-	-	-	-	-	-	-	-
Hawaii	1	-	5	-	1	-	-	-	-	1	-	-	1
Guam*	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	8	-	1	-	-	-	-	7	-	-	1
Virgin Islands	-	-	1	-	-	-	-	-	-	-	-	-	-

NN: Not notifiable

*Delayed reports: Asep. Meng: Pa. delete 1, Fla. add 1, La. delete 1; Brucellosis: Va. delete 1; Chickenpox: Fla. add 2, Mont. add 15, Calif. add 1, Guam add 2; Enceph: Ohio delete 2, Mo. add 2, Miss. add 99; Hep. B: Ohio add 1, Fla. delete 15, La. delete 1, Tex. add 63, Mont. add 1; Hep. A: N. Hamp. add 1, Ohio delete 1, Va. delete 1, Fla. delete 38, La. delete 3, Tex. add 236, Nev. add 2; Hep. unsp.: La. delete 1, Tex. add 20, Mont delete 1

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending November 6, 1976 and November 1, 1975 — 44th Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE		1976	CUMULATIVE		1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
		1976	1975		1976	1975						
UNITED STATES	255	35,475	21,910	16	1,289	1,222	426	34,310	15	115	11,097	55
NEW ENGLAND	18	438	321	3	61	69	29	1,409	2	2	296	2
Maine	1	9	16	-	1	6	4	123	-	-	10	-
New Hampshire	-	9	22	-	5	3	-	27	-	-	11	-
Vermont	15	84	51	-	3	2	5	38	-	-	5	-
Massachusetts	2	38	111	1	18	25	2	166	-	-	141	1
Rhode Island	-	15	3	1	7	3	5	472	-	-	5	-
Connecticut	-	283	118	1	27	30	13	583	2	2	124	1
MIDDLE ATLANTIC	21	7,112	1,850	1	189	122	23	3,196	1	7	2,311	8
Upstate New York	-	2,951	624	1	69	38	4	404	-	3	609	4
New York City	-	476	162	-	49	30	10	1,692	-	1	151	3
New Jersey	2	613	473	-	29	20	4	526	-	-	1,346	-
Pennsylvania	19	3,072	591	-	42	34	5	574	1	3	205	1
EAST NORTH CENTRAL ..	121	15,089	6,568	2	166	171	151	14,020	9	60	4,181	4
Ohio	2	579	106	-	68	50	28	1,997	4	3	312	2
Indiana	49	3,446	450	-	8	9	11	1,506	-	40	834	-
Illinois	12	1,661	1,835	-	20	22	7	1,809	3	8	1,193	-
Michigan	7	5,884	3,089	2	59	68	63	5,006	2	4	1,409	2
Wisconsin	51	3,519	1,088	-	11	22	42	3,702	-	5	433	-
WEST NORTH CENTRAL ..	36	1,206	5,015	-	76	79	101	3,549	-	5	415	7
Minnesota	-	425	182	-	12	17	-	548	-	1	30	2
Iowa	-	37	606	-	10	6	87	1,352	-	-	85	-
Missouri*	-	24	271	-	31	40	-	348	-	-	43	2
North Dakota	-	3	1,058	-	3	2	-	127	-	-	3	1
South Dakota*	-	4	356	-	1	1	-	9	-	-	21	1
Nebraska	-	55	395	-	5	2	-	104	-	-	3	-
Kansas	36	658	2,147	-	14	11	14	1,061	-	4	230	1
SOUTH ATLANTIC	2	2,179	369	5	241	250	24	2,624	-	4	1,310	8
Delaware	-	130	35	1	9	7	2	67	-	-	36	-
Maryland	-	715	49	-	21	29	4	697	-	-	3	3
District of Columbia ..	-	13	1	-	2	5	2	107	-	-	46	-
Virginia	2	774	37	-	29	21	3	207	-	2	237	1
West Virginia	-	202	172	1	8	5	7	793	-	2	318	-
North Carolina	-	17	2	1	49	45	1	384	-	-	18	-
South Carolina	-	4	-	-	36	36	-	45	-	-	590	-
Georgia	-	2	40	1	26	15	-	-	-	-	2	-
Florida*	-	322	33	1	61	87	5	324	-	-	60	4
EAST SOUTH CENTRAL ..	2	890	303	1	120	175	25	2,859	-	5	378	9
Kentucky	-	752	94	-	23	73	5	976	-	3	172	2
Tennessee*	2	121	178	-	50	57	17	1,531	-	2	194	6
Alabama	-	-	5	1	33	31	3	293	-	-	1	1
Mississippi	-	17	26	-	14	14	-	59	-	-	11	-
WEST SOUTH CENTRAL ..	6	759	353	-	196	187	46	2,484	1	8	552	10
Arkansas	-	-	-	-	11	10	-	81	-	-	190	-
Louisiana*	2	227	2	-	38	36	1	26	1	-	89	2
Oklahoma	3	300	144	-	21	11	17	721	-	3	77	-
Texas	1	232	207	-	126	130	28	1,656	-	5	196	8
MOUNTAIN	5	5,140	1,455	2	46	37	5	1,157	-	1	484	1
Montana*	5	251	50	-	5	7	-	22	-	-	235	-
Idaho	-	2,020	12	1	7	5	-	446	-	-	18	-
Wyoming	-	4	2	-	-	1	-	1	-	-	2	-
Colorado	-	320	1,158	-	12	9	4	244	-	-	24	-
New Mexico	-	16	13	-	4	4	-	127	-	-	31	-
Arizona	-	227	80	-	10	3	-	-	-	-	-	1
Utah	-	2,237	112	1	6	7	1	201	-	1	155	-
Nevada*	-	65	28	-	2	1	-	116	-	-	19	-
PACIFIC	44	2,662	5,676	2	194	132	22	3,012	2	23	1,170	6
Washington	2	354	290	-	33	17	6	884	-	8	191	1
Oregon	3	173	199	-	17	7	3	383	-	1	136	1
California	34	2,123	5,123	-	119	100	12	1,682	2	12	820	4
Alaska	5	9	-	2	22	6	-	28	-	2	3	-
Hawaii	-	3	64	-	3	2	1	35	-	-	20	-
Guam*	-	15	33	-	1	3	-	20	-	-	5	-
Puerto Rico	3	448	663	1	4	1	8	752	-	-	10	7
Virgin Islands*	1	15	8	-	1	-	1	32	-	-	8	1

*Delayed reports: Measles: Mont.add 30, Nev. add 1; Men. Inf.: Mo. add 1, S. Dak. add 2, Fla. add 7, La. delete 1; Mumps: Tenn. add 9, Nev. add 1, Guam add 1, V.I. add 4; Pertussis: La. add 6; Rubella: Tenn. add 2, Guam add 1; Tetanus: V.I. add 1

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending November 6, 1976 and November 1, 1975 - 44th Week

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1976	CUM. 1976	CUM. 1976	1976	CUM. 1976	1976	CUM. 1976	1976	CUMULATIVE		1976	CUMULATIVE		CUM. 1976
									1976	1975		1976	1975	
UNITED STATES	530	28,001	115	9	347	4	829	20,273	855,293	843,002	454	20,479	21,738	2,519
NEW ENGLAND	10	964	1	-	24	-	9	759	24,271	23,200	19	702	779	71
Maine	1	68	-	-	-	-	-	58	2,052	1,862	-	20	30	33
New Hampshire*	1	40	-	-	2	-	-	19	714	601	1	10	15	1
Vermont	-	26	-	-	-	-	-	17	601	591	-	9	7	-
Massachusetts	5	571	1	-	15	-	4	318	11,510	10,793	10	511	512	24
Rhode Island	1	72	-	-	-	-	3	82	1,693	1,847	-	17	20	5
Connecticut	2	187	-	-	7	-	2	265	7,701	7,516	8	135	195	8
MIDDLE ATLANTIC	74	5,206	3	1	62	-	60	2,602	98,728	97,343	85	3,382	3,940	68
Upstate New York	9	802	2	-	9	-	23	551	15,992	17,431	2	211	356	15
New York City	NA	2,053	1	1	33	-	5	800	43,416	41,002	51	2,096	2,289	-
New Jersey	21	1,043	-	-	12	-	13	599	15,626	13,962	14	509	626	31
Pennsylvania	44	1,308	-	-	8	-	19	652	23,694	24,948	18	566	669	22
EAST NORTH CENTRAL ..	92	3,994	1	-	40	-	23	3,279	136,303	138,878	36	1,802	1,757	167
Ohio	16	755	-	-	12	-	18	804	34,120	38,542	4	427	428	34
Indiana	9	450	-	-	4	-	-	199	13,396	11,914	1	95	131	22
Illinois	29	1,390	1	-	12	-	-	1,216	46,871	48,355	24	983	837	24
Michigan	38	1,180	-	-	9	-	5	772	29,250	26,625	2	201	295	7
Wisconsin	-	219	-	-	3	-	-	288	12,666	13,442	5	96	66	80
WEST NORTH CENTRAL ..	24	1,009	28	1	21	-	26	1,124	44,923	42,389	18	388	518	575
Minnesota	4	171	3	-	10	-	-	227	7,920	8,570	5	87	98	145
Iowa*	4	101	1	-	1	-	3	164	5,632	6,019	-	37	39	116
Missouri*	12	493	20	1	6	-	13	368	17,969	15,341	5	159	240	59
North Dakota	1	31	-	-	-	-	-	31	705	657	-	-	5	119
South Dakota	-	48	1	-	1	-	3	28	1,324	1,655	-	5	5	57
Nebraska*	-	44	-	-	2	-	-	59	3,763	3,802	3	33	17	15
Kansas	3	121	3	-	1	-	7	247	7,610	6,345	5	67	114	64
SOUTH ATLANTIC	111	5,917	7	1	45	4	413	4,505	206,406	206,951	109	5,908	6,766	397
Delaware	2	63	-	-	-	-	1	40	2,948	2,982	-	58	74	17
Maryland	17	818	1	-	5	-	21	616	27,138	25,524	3	471	481	11
District of Columbia ..	-	255	-	1	2	-	-	337	11,801	11,824	11	521	590	-
Virginia	14	876	2	-	5	-	98	405	21,706	20,435	8	598	520	55
West Virginia	9	231	-	-	5	-	8	70	2,615	2,649	1	22	52	14
North Carolina*	25	1,102	3	-	2	3	177	681	30,499	29,655	11	1,074	875	14
South Carolina	7	441	-	-	4	1	50	505	19,365	19,405	3	320	476	5
Georgia	19	754	1	-	3	-	56	889	40,034	38,616	22	677	934	197
Florida	18	1,377	-	-	19	-	2	962	50,300	55,861	50	2,167	2,764	84
EAST SOUTH CENTRAL ..	56	2,412	17	-	14	-	155	1,667	75,898	71,338	20	794	988	114
Kentucky*	16	503	1	-	6	-	34	79	9,924	9,307	2	113	148	54
Tennessee	16	784	16	-	7	-	89	727	30,430	28,318	7	273	375	39
Alabama	17	706	-	-	1	-	13	463	21,127	19,713	8	165	217	21
Mississippi	7	419	-	-	-	-	19	398	14,417	14,000	3	243	248	-
WEST SOUTH CENTRAL ..	76	3,352	43	1	15	-	133	2,223	108,062	103,790	47	2,457	1,904	567
Arkansas	11	419	24	-	4	-	20	288	10,073	11,163	2	91	58	138
Louisiana*	6	534	3	-	3	-	-	160	15,862	18,536	8	510	453	7
Oklahoma	5	328	7	-	1	-	95	200	10,544	10,099	4	87	79	143
Texas	54	2,071	9	1	7	-	18	1,575	71,583	63,992	33	1,769	1,314	279
MOUNTAIN	16	789	4	-	20	-	4	703	32,991	34,035	13	675	504	191
Montana*	1	42	2	-	2	-	1	30	1,708	1,792	2	10	5	84
Idaho	1	28	-	-	1	-	1	34	1,844	1,742	-	32	13	-
Wyoming*	-	17	1	-	-	-	-	36	682	804	-	8	10	1
Colorado	3	129	-	-	5	-	1	113	8,751	9,118	3	137	89	53
New Mexico*	4	148	-	-	2	-	1	224	6,357	5,981	5	257	136	3
Arizona	6	351	-	-	9	-	-	171	9,591	9,002	3	185	187	29
Utah	-	41	1	-	1	-	-	38	1,895	2,124	-	20	15	21
Nevada	1	33	-	-	-	-	-	57	2,163	3,472	-	26	49	-
PACIFIC	71	4,358	11	5	106	-	6	3,411	127,711	125,078	107	4,371	4,582	369
Washington*	-	360	2	-	5	-	3	236	10,683	11,441	-	112	152	8
Oregon	5	171	1	-	-	-	-	305	9,099	9,587	1	98	124	11
California	53	3,212	8	3	95	-	3	2,765	101,443	98,852	105	4,055	4,252	309
Alaska*	-	77	-	-	-	-	-	68	3,674	3,117	-	21	6	41
Hawaii	13	538	-	2	6	-	-	37	2,812	2,081	1	85	48	-
Guam*	-	37	-	-	1	-	-	-	254	354	-	2	16	-
Puerto Rico	12	363	-	-	1	-	-	67	2,316	2,500	8	521	612	40
Virgin Islands*	-	5	-	-	-	-	-	-	207	183	-	48	37	-

NA: Not available

*Delayed reports: TB: N. Hamp. delete 1, Iowa delete 1, Mo. delete 1, N. Car. delete 7, Ky delete 1, La. delete 1, Alaska add 3; RMSF: Mo. add 1; GC: N. Hamp add 3 (mil), Neb. add 4, Mont add 24, Wyo. add 1, N. Mex. delete 4, Wash. add 66 (mil), Guam add 13; Syphilis: Mo. add 1, Mont. add 2, Wyo add 1, N. Mex. delete 2, Wash. add 17, Alaska add 1, V.I. delete 1; An rabies: N. Mex. add 1

Table IV
Deaths in 121 United States Cities*
Week Ending November 6, 1976 - 44th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year			ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	
NEW ENGLAND	673	427	158	30	41	37	SOUTH ATLANTIC	993	586	264	61	47	46
Boston, Mass.	170	99	48	9	6	7	Atlanta, Ga.	134	70	42	12	8	4
Bridgeport, Conn.	41	28	9	3	1	2	Baltimore, Md.	142	91	37	6	4	3
Cambridge, Mass.	27	18	8	1	-	4	Charlotte, N. C.	59	36	18	1	2	2
Fall River, Mass.	30	24	5	1	-	1	Jacksonville, Fla.	79	44	20	8	4	5
Hartford, Conn.	41	23	12	2	4	-	Miami, Fla.	67	38	21	6	1	5
Lowell, Mass.	27	20	7	-	-	2	Norfolk, Va.	47	24	14	1	3	5
Lynn, Mass.	17	11	2	3	1	-	Richmond, Va.	77	45	13	4	11	5
New Bedford, Mass.	25	19	5	-	1	4	Savannah, Ga.	33	17	7	5	2	5
New Haven, Conn.	67	27	16	2	21	1	St. Petersburg, Fla.	87	69	13	1	4	2
Providence, R.I.	64	37	18	1	4	9	Tampa, Fla.	96	53	26	8	2	9
Somerville, Mass.	7	4	2	1	-	-	Washington, D. C.	107	61	30	7	5	1
Springfield, Mass.	46	34	7	3	-	4	Wilmington, Del.	65	38	23	2	1	-
Waterbury, Conn.	44	29	10	1	3	1							
Worcester, Mass.	67	54	9	3	-	2							
MIDDLE ATLANTIC	2,853	1,806	730	163	87	119	EAST SOUTH CENTRAL	729	449	181	47	14	41
Albany, N. Y.	57	31	16	-	3	4	Birmingham, Ala.	107	66	22	11	6	4
Allentown, Pa.	25	17	6	1	1	-	Chattanooga, Tenn.	74	43	21	7	-	4
Buffalo, N. Y.	123	82	31	3	5	10	Knoxville, Tenn.	54	38	12	2	-	4
Camden, N. J.	32	21	9	2	-	-	Louisville, Ky.	102	63	23	6	4	13
Elizabeth, N. J.	23	20	1	1	1	-	Memphis, Tenn.	162	100	41	9	1	3
Erie, Pa.	25	17	5	2	1	1	Mobile, Ala.	67	38	18	4	2	1
Jersey City, N. J.	42	29	10	1	2	2	Montgomery, Ala.	42	29	9	3	-	4
Newark, N. J.	52	25	19	4	4	1	Nashville, Tenn.	121	72	35	5	1	8
New York City, N. Y.	1,456	959	334	91	34	47	WEST SOUTH CENTRAL	1,222	699	336	81	57	38
Paterson, N. J.	42	23	9	3	5	2	Austin, Tex.	45	25	7	2	11	1
Philadelphia, Pa.	403	223	126	32	13	17	Baton Rouge, La.	62	36	17	3	3	2
Pittsburgh, Pa.	190	109	61	7	10	8	Corpus Christi, Tex.	31	23	5	-	2	-
Reading, Pa.	35	20	12	1	1	2	Dallas, Tex.	177	101	53	11	6	6
Rochester, N. Y.	116	78	28	9	-	11	El Paso, Tex.	56	34	16	4	2	2
Schenectady, N. Y.	26	18	7	1	-	2	Fort Worth, Tex.	75	50	22	1	1	2
Scranton, Pa.	45	27	16	-	2	2	Houston, Tex.	332	174	93	32	15	7
Syracuse, N. Y.	82	56	21	2	3	3	Little Rock, Ark.	57	28	13	6	9	4
Trenton, N. J.	30	15	9	2	1	1	New Orleans, La.	141	81	47	8	1	1
Utica, N. Y.	24	16	6	1	-	2	San Antonio, Tex.	123	71	35	5	5	6
Yonkers, N. Y.	25	20	4	-	1	4	Shreveport, La.	45	27	11	3	1	2
							Tulsa, Okla.	78	49	17	6	1	5
EAST NORTH CENTRAL	2,259	1,321	633	140	91	41	MOUNTAIN	482	282	112	30	20	14
Akron, Ohio	85	48	27	4	6	-	Albuquerque, N. Mex.	48	28	10	4	1	4
Canton, Ohio	41	22	15	3	-	-	Colorado Springs, Colo.	34	23	6	1	-	2
Chicago, Ill.	572	322	158	49	20	8	Denver, Colo.	105	59	27	9	1	2
Cincinnati, Ohio	139	82	39	8	7	2	Las Vegas, Nev.	23	11	10	2	-	2
Cleveland, Ohio	181	107	56	9	7	-	Ogden, Utah	23	16	6	-	-	1
Columbus, Ohio	128	72	37	11	6	-	Phoenix, Ariz.	95	53	27	4	4	-
Dayton, Ohio	101	65	23	4	7	7	Pueblo, Colo.	22	13	5	1	-	1
Detroit, Mich.	288	155	80	26	14	3	Salt Lake City, Utah ..	58	38	9	2	6	1
Evansville, Ind.	43	25	12	1	2	2	Tucson, Ariz.	74	41	12	7	8	1
Fort Wayne, Ind.	52	29	18	-	3	3							
Gary, Ind.	20	12	7	1	-	-	PACIFIC	1,408	904	318	72	57	35
Grand Rapids, Mich.	51	36	14	-	-	4	Berkeley, Calif.	15	11	2	-	1	-
Indianapolis, Ind.	146	77	45	10	6	4	Fresno, Calif.	63	40	13	1	8	1
Madison, Wis.	45	31	7	2	3	3	Glendale, Calif.	14	10	3	1	-	-
Milwaukee, Wis.	114	67	39	5	2	2	Honolulu, Hawaii	49	29	15	2	-	1
Peoria, Ill.	31	17	9	3	1	-	Long Beach, Calif.	100	68	23	6	2	2
Rockford, Ill.	38	32	4	-	1	1	Los Angeles, Calif.	323	186	80	25	11	16
South Bend, Ind.	37	28	6	2	1	1	Oakland, Calif.	60	40	11	5	1	-
Toledo, Ohio	85	62	17	1	2	-	Pasadena, Calif.	33	24	7	-	1	-
Youngstown, Ohio	61	32	20	1	3	1	Portland, Oreg.	116	67	32	3	7	-
							Sacramento, Calif.	60	37	13	2	5	-
WEST NORTH CENTRAL	840	543	202	37	33	33	San Diego, Calif.	116	72	28	5	7	2
Des Moines, Iowa	75	45	23	1	4	1	San Francisco, Calif.	167	103	43	7	7	2
Duluth, Minn.	33	26	4	2	1	6	San Jose, Calif.	64	52	6	4	1	2
Kansas City, Kans.	31	22	2	3	2	2	Seattle, Wash.	140	102	24	9	1	2
Kansas City, Mo.	131	83	29	8	9	3	Spokane, Wash.	47	37	6	-	4	6
Lincoln, Nebr.	47	30	15	2	-	1	Tacoma, Wash.	41	26	12	2	1	1
Minneapolis, Minn.	114	72	26	4	9	1							
Omaha, Nebr.	78	48	21	5	1	2	TOTAL	11,459	7,017	2,934	661	447	404
St. Louis, Mo.	170	104	46	8	5	7	Expected Number	11,427	6,887	2,981	743	403	384
St. Paul, Minn.	70	48	16	1	1	1							
Wichita, Kans.	91	65	20	3	1	9							

* By place of occurrence and week of filing certificate. Excludes fetal deaths.

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn.: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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Immunization Recommendations — Continued

deficiency diseases and by the suppressed immune responses that occur with leukemia, lymphoma, or generalized malignancy or with therapy with corticosteroids, alkylating drugs, antimetabolites, or radiation. Patients with such conditions should not be given live, attenuated virus vaccines.

SEVERE FEBRILE ILLNESSES

Vaccination of persons with severe febrile illness should generally be deferred until they have recovered. This is to avoid superimposing adverse side effects from the vaccine on the underlying illness or mistakenly identifying a complication of the illness as having been caused by the vaccine. Minor illnesses such as mild upper respiratory infections do not necessarily preclude vaccination.

*International Notes***Smallpox Surveillance — Worldwide**

A total of eighteen cases of smallpox have been reported in Somalia; dates of onset of the cases extend from August 30 through October 12.

No new cases have been detected in Ethiopia, however, where a thorough search throughout all recently infected and neighboring areas has been completed. Since the last case in Ethiopia occurred on August 9, 1,100 villages and 45 water holes in the southern Ogaden Desert have been searched and 30,000 persons vaccinated. Similar searches in the desert areas of Somalia have failed to detect cases.

In Mogadishu, the capital of Somalia where all cases in the current outbreak have been reported, a staff of more

LIVE VACCINES AND PREGNANCY

On grounds of a theoretical risk to the developing fetus, live, attenuated virus vaccines are not generally given to pregnant women. With some of these antigens, particularly live, attenuated rubella vaccine, pregnancy is a contraindication to vaccination. With others, however, if there is a substantial risk of exposure to natural infection, vaccine should generally be given, taking whatever specific precautions are indicated — for example, giving vaccinia immune globulin with smallpox vaccine.

RECENT ADMINISTRATION OF IMMUNE SERUM GLOBULIN OR HYPERIMMUNE GLOBULIN

Passively acquired antibody can interfere with the response to live, attenuated virus vaccines. Therefore, administration of such vaccines should be deferred until approximately 3 months after passive immunization.

than 2,000 conducted a house-to-house search October 14-15. Eight additional suspect cases were detected, 5 clearly representing secondary transmission. As of October 29, 5 more cases were discovered, 1 in the Mogadishu General Hospital and 4 in the citywide searches, bringing the total number of reported cases to 18. The source of infection has been found for 9 of these cases.

In Mogadishu, 120 teams are now engaged in search and vaccination. Additional teams are working the border areas in Somalia and Ethiopia.

Reported by the World Health Organization in the Weekly Epidemiological Record 51(43,44):338, 343.

Diphtheria Outbreak — Canada

Four cases of diphtheria due to a virulent intermedius strain of *Corynebacterium diphtheriae* occurred February 10-March 5, 1976, on Vancouver Island, Canada.

The initial patient, a 4-year-old girl who had received 1 injection of diphtheria toxoid, developed pharyngitis, bull neck, and a grey tonsillar membrane. She was diagnosed as having diphtheria and treated with intravenous penicillin and 80,000 units of antitoxin intramuscularly and intravenously on the fourth day of illness. She died of myocardial disease and renal failure 11 days after onset of symptoms.

Contacts identified and treated included the family of the index patient, retarded children in a residential home where the patient had visited, children in a special school for those retarded children, and 2 families who had been visited by 1 of the school children. Control measures included assessing current immunization status, culturing all contacts, isolating contacts in their homes, treating contacts with oral penicillin or erythromycin for 5 days, and reculturing carriers 48 hours after completion of therapy. Nine carriers of *C. diphtheriae* were identified in the contact group; most were fully immunized. Carriers were treated with antibiotics for 9 days and then recultured.

Three contacts who had not received antibiotic prophylaxis and whose immunization was not complete developed diphtheria. The second case developed in a 7-year-old sibling of the index patient, and the third developed in a girl who had attended the special school. A sibling of the third patient also developed diphtheria 4 weeks after the index case.

Reported by PJ Reynolds, MD, Central Vancouver Island Health Unit; E Bowmer, MD, Provincial Health Laboratory Service; WGL Carr, MD, British Columbia; F White, MD, Bur of Epidemiology, Laboratory Centre for Disease Control, Ottawa, in Canada Diseases Weekly Report 2(36):141-142, 1976; and Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: In unimmunized family contacts of a diphtheria patient the secondary attack rate of clinical diphtheria is age-dependent; children 1-13 years of age have a 30% attack rate, and adults have an 11% attack rate (1). Full DTP immunization prevents illness but does not prevent acquisition and carriage of *C. diphtheriae* (2,3).

Oral erythromycin and intramuscular penicillin eradicate pharyngeal carriage of *C. diphtheriae* in 92% and 84% of carriers, respectively (4). Although antibiotic treatment of

Diphtheria — Continued

pharyngeal carriers has not been shown to prevent disease, these drugs may be useful for chemoprophylaxis of unimmunized diphtheria contacts.

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*Current Trends***Primary and Secondary Syphilis — United States, September 1976**

Reported cases of primary and secondary syphilis numbered 2,018 in September 1976 — 9.6% less than the number of cases reported in September 1975. During the first 9 months of 1976, some 17,953 cases were reported;

this was 1,286 cases or 6.7% less than the number reported during the same period of 1975.

Reported by Venereal Disease Control Div, Bur of State Services, CDC.

Summary of Reported Primary and Secondary Syphilis Cases by Reporting Area

September 1976 and September 1975 — Provisional Data

Reporting Area by HEW Regions	September		Calendar Year Cumulative January–September		Reporting Area by HEW Regions	September		Calendar Year Cumulative January–September		Reporting Area by HEW Regions	September		Calendar Year Cumulative January–September	
	1976	1975	1976	1975		1976	1975	1976	1975		1976	1975	1976	1975
Connecticut	21	18	128	170	Illinois (Excl. Chicago)	13	15	111	210	Arizona	14	24	168	189
Maine	3	0	19	26	Chicago	85	49	704	561	California (Excl. LA & SF)	151	194	1532	1391
Massachusetts	58	50	401	423	Indiana (Excl. Indianapolis)	9	8	65	88	Los Angeles*	158	139	1384	1407
New Hampshire	1	2	8	14	Indianapolis*	4	8	29	37	San Francisco*	80	107	600	738
Rhode Island	1	5	17	17	Michigan	18	25	180	250	Hawaii	5	10	70	44
Vermont	1	1	9	7	Minnesota	9	13	77	89	Nevada	2	5	32	42
REGION I TOTAL	85	76	582	657	Ohio	53	57	376	381	REGION IX TOTAL	410	479	3786	3811
New Jersey	45	67	427	594	Wisconsin	7	2	78	55	Alaska	6	1	22	6
New York (Excl. NYC)	19	24	182	320	REGION V TOTAL	198	177	1620	1671	Idaho	3	1	20	13
New York City	219	260	1852	2189	Arkansas	10	5	70	47	Oregon	15	13	86	102
REGION II TOTAL	283	361	2461	3103	Louisiana	55	55	445	387	Washington	21	10	122	165
Delaware	3	5	51	69	New Mexico	11	10	122	114	REGION X TOTAL	46	25	260	288
District of Columbia	42	71	436	518	Oklahoma	7	6	79	61					
Maryland (Excl. Baltimore)	21	19	153	162	Texas	228	174	1526	1157					
Baltimore	17	28	291	285	REGION VI TOTAL	311	260	2242	1766					
Pennsylvania (Excl. Phila.)	15	35	185	287	Iowa	2	1	33	26					
Philadelphia	25	17	312	308	Kansas	6	11	60	113					
Virginia	54	39	508	443	Missouri	14	14	133	219					
West Virginia	1	11	20	31	Nebraska	3	1	29	17					
REGION III TOTAL	178	226	1956	2103	REGION VII TOTAL	25	27	255	375					
Alabama	13	28	144	195	Colorado	12	8	105	79					
Florida	163	228	1680	2467	Montana	0	0	8	4					
Georgia (Excl. Atlanta)	73	55	455	489	North Dakota	0	0	2	4					
Atlanta*	42	44	364	330	South Dakota	0	0	4	4					
Kentucky	11	11	101	130	Utah	1	1	21	12					
Mississippi	32	27	217	203	Wyoming	0	0	4	6					
North Carolina	94	112	966	797	REGION VIII TOTAL	13	9	144	109					
South Carolina	28	67	298	424										
Tennessee	14	41	232	323										
REGION IV TOTAL	470	613	4657	5358										

*County Data

Note: Cumulative totals include revised and delayed reports through previous months.

Source: CDC 9-98, HEW-CDC-BSS-VD Control Division, Atlanta, Georgia

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