CENTERS FOR DISEASE CONTROL

November 5, 1982 / Vol. 31 / No. 43

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Acquired Immune Deficiency Syndrome (AIDS): Precautions for Clinical and Laboratory Staffs

The etiology of the underlying immune deficiencies seen in AIDS cases is unknown. One hypothesis consistent with current observations is that a transmissible agent may be involved. If so, transmission of the agent would appear most commonly to require intimate, direct contact involving mucosal surfaces, such as sexual contact among homosexual males, or through parenteral spread, such as occurs among intravenous drug abusers and possibly hemophilia patients using Factor VIII products. Airborne spread and interpersonal spread through casual contact do not seem likely. These patterns resemble the distribution of disease and modes of spread of hepatitis B virus, and hepatitis B virus infections occur very frequently among AIDS cases.

There is presently no evidence of AIDS transmission to hospital personnel from contact with affected patients or clinical specimens. Because of concern about a possible transmissible agent, however, interim suggestions are appropriate to guide patient-care and laboratory personnel, including those whose work involves experimental animals. At present, it appears prudent for hospital personnel to use the same precautions when caring for patients with AIDS as those used for patients with hepatitis B virus infection, in which blood and body fluids likely to have been contaminated with blood are considered infective. Specifically, patient-care and laboratory personnel should take precautions to avoid direct contact of skin and mucous membranes with blood, blood products, excretions, secretions, and tissues of persons judged likely to have AIDS. The following precautions do not specifically address outpatient care, dental care, surgery, necropsy, or hemodialysis of AIDS patients. In general, procedures appropriate for patients known to be infected with hepatitis B virus are advised, and blood and organs of AIDS patients should not be donated.

The precautions that follow are advised for persons and specimens from persons with: opportunistic infections that are not associated with underlying immunosuppressive disease or therapy; Kaposi's sarcoma (patients under 60 years of age); chronic generalized lymphadenopathy, unexplained weight loss and/or prolonged unexplained fever in persons who belong to groups with apparently increased risks of AIDS (homosexual males, intravenous drug abusers, Haitian entrants, hemophiliacs); and possible AIDS (hospitalized for evaluation). Hospitals and laboratories should adapt the following suggested precautions to their individual circumstances; these recommendations are not meant to restrict hospitals from implementing additional precautions.

A. The following precautions are advised in providing care to AIDS patients:

1. Extraordinary care must be taken to avoid accidental wounds from sharp instruments contaminated with potentially infectious material and to avoid contact of open skin lesions with material from AIDS patients.

Acquired Immune Deficiency Syndrome – Continued

2. Gloves should be worn when handling blood specimens, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.
3. Gowns should be worn when clothing may be soiled with body fluids, blood, secretions, or excretions.
4. Hands should be washed after removing gowns and gloves and before leaving the rooms of known or suspected AIDS patients. Hands should also be washed thoroughly and immediately if they become contaminated with blood.
5. Blood and other specimens should be labeled prominently with a special warning, such as "Blood Precautions" or "AIDS Precautions." If the outside of the specimen container is visibly contaminated with blood, it should be cleaned with a disinfectant (such as a 1:10 dilution of 5.25% sodium hypochlorite [household bleach] with water). All blood specimens should be placed in a second container, such as an impervious bag, for transport. The container or bag should be examined carefully for leaks or cracks.
6. Blood spills should be cleaned up promptly with a disinfectant solution, such as sodium hypochlorite (see above).
7. Articles soiled with blood should be placed in an impervious bag prominently labeled "AIDS Precautions" or "Blood Precautions" before being sent for reprocessing or disposal. Alternatively, such contaminated items may be placed in plastic bags of a particular color designated solely for disposal of infectious wastes by the hospital. Disposable items should be incinerated or disposed of in accord with the hospital's policies for disposal of infectious wastes. Reusable items should be reprocessed in accord with hospital policies for hepatitis B virus-contaminated items. Lensed instruments should be sterilized after use on AIDS patients.
8. Needles should not be bent after use, but should be promptly placed in a puncture-resistant container used solely for such disposal. Needles should not be reinserted into their original sheaths before being discarded into the container, since this is a common cause of needle injury.
9. Disposable syringes and needles are preferred. Only needle-locking syringes or one-piece needle-syringe units should be used to aspirate fluids from patients, so that collected fluid can be safely discharged through the needle, if desired. If reusable syringes are employed, they should be decontaminated before reprocessing.
10. A private room is indicated for patients who are too ill to use good hygiene, such as those with profuse diarrhea, fecal incontinence, or altered behavior secondary to central nervous system infections.

Precautions appropriate for particular infections that concurrently occur in AIDS patients should be added to the above, if needed.

B. The following precautions are advised for persons performing laboratory tests or studies on clinical specimens or other potentially infectious materials (such as inoculated tissue cultures, embryonated eggs, animal tissues, etc.) from known or suspected AIDS cases:

1. Mechanical pipetting devices should be used for the manipulation of all liquids in the laboratory. Mouth pipetting should not be allowed.
2. Needles and syringes should be handled as stipulated in Section A (above).
3. Laboratory coats, gowns, or uniforms should be worn while working with potentially infectious materials and should be discarded appropriately before leaving the laboratory.
4. Gloves should be worn to avoid skin contact with blood, specimens containing blood, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.

Acquired Immune Deficiency Syndrome – Continued

5. All procedures and manipulations of potentially infectious material should be performed carefully to minimize the creation of droplets and aerosols.
6. Biological safety cabinets (Class I or II) and other primary containment devices (e.g., centrifuge safety cups) are advised whenever procedures are conducted that have a high potential for creating aerosols or infectious droplets. These include centrifuging, blending, sonicating, vigorous mixing, and harvesting infected tissues from animals or embryonated eggs. Fluorescent activated cell sorters generate droplets that could potentially result in infectious aerosols. Translucent plastic shielding between the droplet-collecting area and the equipment operator should be used to reduce the presently uncertain magnitude of this risk. Primary containment devices are also used in handling materials that might contain concentrated infectious agents or organisms in greater quantities than expected in clinical specimens.
7. Laboratory work surfaces should be decontaminated with a disinfectant, such as sodium hypochlorite solution (see A5 above), following any spill of potentially infectious material and at the completion of work activities.
8. All potentially contaminated materials used in laboratory tests should be decontaminated, preferably by autoclaving, before disposal or reprocessing.
9. All personnel should wash their hands following completion of laboratory activities, removal of protective clothing, and before leaving the laboratory.

C. The following additional precautions are advised for studies involving experimental animals inoculated with tissues or other potentially infectious materials from individuals with known or suspected AIDS.

1. Laboratory coats, gowns, or uniforms should be worn by personnel entering rooms housing inoculated animals. Certain nonhuman primates, such as chimpanzees, are prone to throw excreta and to spit at attendants; personnel attending inoculated animals should wear molded surgical masks and goggles or other equipment sufficient to prevent potentially infective droplets from reaching the mucosal surfaces of their mouths, nares, and eyes. In addition, when handled, other animals may disturb excreta in their bedding. Therefore, the above precautions should be taken when handling them.
2. Personnel should wear gloves for all activities involving direct contact with experimental animals and their bedding and cages. Such manipulations should be performed carefully to minimize the creation of aerosols and droplets.
3. Necropsy of experimental animals should be conducted by personnel wearing gowns and gloves. If procedures generating aerosols are performed, masks and goggles should be worn.
4. Extraordinary care must be taken to avoid accidental sticks or cuts with sharp instruments contaminated with body fluids or tissues of experimental animals inoculated with material from AIDS patients.
5. Animal cages should be decontaminated, preferably by autoclaving, before they are cleaned and washed.
6. Only needle-locking syringes or one-piece needle-syringe units should be used to inject potentially infectious fluids into experimental animals.

The above precautions are intended to apply to both clinical and research laboratories. Biological safety cabinets and other safety equipment may not be generally available in clinical laboratories. Assistance should be sought from a microbiology laboratory, as needed, to assure containment facilities are adequate to permit laboratory tests to be conducted safely.

Reported by Hospital Infections Program, Div of Viral Diseases, Div of Host Factors, Div of Hepatitis and

Acquired Immune Deficiency Syndrome — Continued

Viral Enteritis, AIDS Activity, Center for Infectious Diseases, Office of Biosafety, CDC; Div of Safety, National Institutes of Health.

Epidemiologic Notes and Reports

Isolation of *E. coli* 0157:H7 from Sporadic Cases of Hemorrhagic Colitis — United States

Since the beginning of August 1982, stool isolates of *Escherichia coli* serotype 0157:H7 have been identified at CDC from specimens obtained from four patients in two states. Three of four patients had an unusual bloody diarrheal illness; each illness began suddenly with severe crampy abdominal pain followed within 24 hours by watery diarrhea, which subsequently became markedly bloody. One patient underwent a laparotomy to rule out appendicitis. All patients recovered within 7 days without complications or specific therapy. In one instance, *E. coli* 0157:H7 was isolated from the stool of a patient's spouse. This fourth patient had abdominal cramps and non-bloody diarrhea. Since early August, 25 additional sporadic cases of this unusual illness have been reported to CDC, but appropriately collected stool specimens were available in only two of these. *E. coli* 0157:H7 was not isolated from either specimen. The four patients with sporadic cases in which *E. coli* was isolated from

(Continued on page 585)

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

Disease	43rd Week Ending			Cumulative, First 43 Weeks		
	October 30, 1982	October 31, 1981	Median 1977-1981	October 30, 1982	October 31, 1981	Median 1977-1981
Aseptic meningitis	307	216	216	7,307	8,032	6,288
Brucellosis	7	4	4	137	141	147
Encephalitis: Primary (arthropod-borne & unspec.)	41	31	30	1,149	1,238	980
Post-infectious	1	-	3	50	79	181
Gonorrhea: Civilian	14,141	19,008	21,991	787,973	831,987	829,232
Military	276	520	511	21,897	23,237	22,824
Hepatitis: Type A	425	531	567	18,521	20,772	24,118
Type B	402	484	308	17,572	16,877	13,606
Non A, Non B	40	N	N	1,879	N	N
Unspecified	154	213	207	7,402	8,944	8,516
Legionellosis	4	N	N	428	N	N
Leprosy	3	4	3	165	214	147
Malaria	16	15	17	883	1,184	633
Measles (rubeola)	44	28	61	1,491	2,739	13,074
Meningococcal infections: Total	42	58	35	2,420	2,926	2,179
Civilian	42	58	35	2,407	2,915	2,159
Military	-	-	-	13	11	16
Mumps	46	59	105	4,492	3,655	11,824
Pertussis	137	24	24	1,383	1,039	1,422
Rubella (German measles)	16	9	51	2,109	1,865	11,007
Syphilis (Primary & Secondary): Civilian	604	590	590	27,127	25,464	20,615
Military	11	9	8	366	325	258
Tuberculosis	440	641	557	21,139	22,381	22,745
Tularemia	12	3	3	220	231	171
Typhoid fever	5	16	9	333	495	432
Typhus fever, tick-borne (RMSF)	4	8	12	945	1,134	1,075
Rabies, animal	112	108	96	5,203	6,236	4,281

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1982		Cum. 1982
Anthrax	-	Poliomyelitis: Total	4
Botulism (Md. 1, Utah 1, Calif. 1)	70	Paralytic	4
Cholera	-	Psittacosis (S.C. 1)	101
Congenital rubella syndrome	5	Rabies, human	-
Diphtheria	2	Tetanus	67
Leptospirosis	55	Trichinosis (Ohio 1, Mo. 1)	77
Plague	18	Typhus fever, flea-borne (endemic, murine) (Hawaii 2)	38

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd 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	307	137	1,149	50	787,973	831,987	425	402	40	154	4	165
NEW ENGLAND	8	3	50	5	19,108	20,455	15	22	1	9	1	1
Maine	-	-	-	-	992	1,100	-	2	-	-	-	-
N.H.	2	-	8	-	628	736	2	-	-	-	1	-
Vt.	-	-	-	-	361	362	-	1	-	-	-	-
Mass.	4	-	20	-	8,602	8,629	6	10	-	9	-	-
R.I.	1	-	-	1	1,276	1,206	2	1	-	-	-	-
Conn.	1	3	22	4	7,249	8,422	5	8	1	-	-	1
MID. ATLANTIC	37	3	118	11	99,031	100,263	48	64	5	14	-	9
Upstate N.Y.	13	3	49	3	16,670	17,346	11	17	2	3	-	1
N.Y. City	U	-	17	-	39,959	41,490	U	U	U	U	U	6
N.J.	8	-	21	-	18,061	18,839	10	32	3	6	-	1
Pa.	16	-	31	8	24,341	22,588	27	15	-	5	-	1
E.N. CENTRAL	34	4	270	10	109,599	124,604	25	43	1	9	1	7
Ohio	13	1	111	4	30,434	39,056	8	8	-	3	1	-
Ind.	U	-	75	3	13,551	10,573	U	U	U	U	U	-
Ill.	1	2	15	1	28,305	36,170	9	10	1	1	-	6
Mich.	20	1	64	-	27,218	27,341	8	25	-	5	-	-
Wis.	-	-	5	2	10,091	11,464	-	-	-	-	-	1
W.N. CENTRAL	16	16	84	4	37,367	39,968	18	22	3	4	1	4
Minn.	-	1	27	1	5,404	6,305	5	5	-	-	-	2
Iowa	9	5	41	1	3,950	4,397	3	3	2	2	-	-
Mo.	1	4	6	-	17,841	18,557	7	5	1	2	1	1
N. Dak.	-	-	-	-	493	500	-	-	-	-	-	-
S. Dak.	-	1	-	1	994	1,066	-	1	-	-	-	1
Nebr.	4	2	5	-	2,217	2,961	-	1	-	-	-	-
Kans.	2	3	5	1	6,468	6,182	3	7	-	-	-	-
S. ATLANTIC	54	25	174	8	207,112	204,869	58	98	11	20	-	10
Del.	-	-	-	-	3,471	3,284	1	4	-	1	-	-
Md.	2	-	22	-	25,254	24,130	7	17	2	8	-	3
D.C.	-	-	-	-	12,463	11,598	1	3	-	-	-	-
Va.	18	8	33	1	16,656	18,821	12	17	3	3	-	1
W. Va.	U	-	15	-	2,293	3,089	U	U	U	U	U	-
N.C.	4	-	26	1	32,999	31,736	4	5	-	2	-	-
S.C.	1	2	2	-	20,081	19,911	8	8	2	-	-	-
Ga.	12	3	14	-	40,666	42,578	11	18	-	4	-	1
Fla.	17	12	62	6	53,229	49,722	14	26	4	2	-	5
E.S. CENTRAL	49	12	60	2	68,589	69,108	16	25	5	4	-	-
Ky.	1	-	1	-	9,307	8,530	2	2	1	1	-	-
Tenn.	2	7	27	-	27,171	26,293	2	8	2	1	-	-
Ala.	45	4	16	2	19,921	20,749	5	13	2	2	-	-
Miss.	1	1	16	-	12,190	13,536	7	2	-	-	-	-
W.S. CENTRAL	39	42	187	1	109,291	109,473	111	44	1	60	-	26
Ark.	1	7	16	-	8,889	8,251	-	1	-	7	-	-
La.	17	8	24	-	20,703	18,821	31	10	-	6	-	-
Okla.	5	7	35	-	12,014	11,939	28	15	1	13	-	-
Tex.	16	20	112	1	67,685	70,462	52	18	-	34	-	26
MOUNTAIN	17	2	40	3	26,908	32,579	27	13	3	3	1	2
Mont.	-	2	-	-	1,103	1,183	1	1	-	-	-	-
Idaho	-	-	-	-	1,292	1,452	-	-	-	-	-	1
Wyo.	1	-	-	-	790	823	-	-	-	-	-	-
Colo.	2	-	19	1	7,217	8,799	4	1	-	-	-	-
N. Mex.	2	-	1	-	3,668	3,634	8	1	-	1	-	-
Ariz.	2	-	11	-	7,075	9,593	10	3	3	2	-	-
Utah	10	-	5	2	1,314	1,631	2	3	-	-	-	1
Nev.	-	-	4	-	4,449	5,464	2	4	-	-	1	-
PACIFIC	53	30	166	6	110,968	130,668	107	71	10	31	-	106
Wash.	4	1	11	-	9,493	10,970	2	7	-	3	-	8
Oreg.	1	-	3	-	6,599	7,744	17	4	-	-	-	1
Calif.	34	28	139	6	89,886	105,980	82	56	10	28	-	68
Alaska	1	1	9	-	2,850	3,390	1	2	-	-	-	1
Hawaii	13	-	4	-	2,140	2,584	5	2	-	-	-	28
Guam	U	-	-	-	97	96	U	U	U	U	U	-
P.R.	1	-	1	3	2,268	2,694	12	8	-	3	-	1
V.I.	U	-	-	-	195	193	U	U	U	U	U	-
Pac. Trust Terr.	U	-	-	-	297	364	U	U	U	U	U	13

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd 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	16	883	44	1,491	2,739	42	2,420	46	4,492	137	16	2,109	1,865
NEW ENGLAND	-	43	-	15	83	-	127	3	186	-	-	20	119
Maine	-	-	-	-	5	-	9	-	41	-	-	-	33
N.H.	-	2	-	3	6	-	15	1	17	-	-	10	51
Vt.	-	-	-	2	3	-	9	-	7	-	-	-	-
Mass.	-	24	-	4	59	-	32	-	86	-	-	5	23
R.I.	-	3	-	-	-	-	16	1	16	-	-	1	-
Conn.	-	14	-	6	10	-	46	1	19	-	-	4	12
MID. ATLANTIC	2	146	1	166	866	8	432	7	293	110	-	102	222
Upstate N.Y.	-	27	1	116	210	2	150	3	75	99	-	49	107
N.Y. City	U	55	U	42	88	U	82	U	47	U	U	34	55
N.J.	-	31	-	4	58	2	87	1	43	-	-	18	47
Pa.	2	33	-	4	510	4	113	3	128	11	-	1	13
E.N. CENTRAL	-	79	-	77	81	8	302	12	2,268	5	3	184	387
Ohio	-	12	-	1	16	3	108	2	1,594	2	-	-	3
Ind.	U	3	U	2	9	U	29	U	37	U	U	28	132
Ill.	-	34	-	24	23	1	76	2	193	2	1	68	98
Mich.	-	26	-	50	30	4	72	7	330	-	-	49	34
Wis.	-	4	-	-	3	-	17	1	114	1	2	39	120
W.N. CENTRAL	2	22	-	49	10	5	116	2	580	-	-	59	78
Minn.	-	2	-	-	3	1	30	-	443	-	-	5	7
Iowa	-	7	-	-	1	1	12	-	34	-	-	-	4
Mo.	1	6	-	2	1	-	29	-	18	-	-	38	2
N. Dak.	-	1	-	-	-	-	6	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	6	-	1	-	-	1	-
Nebr.	-	3	-	3	4	-	13	-	-	-	-	-	1
Kans.	1	3	-	44	1	2	20	2	84	-	-	15	64
S. ATLANTIC	2	123	29	110	445	3	508	6	276	14	2	84	137
Del.	-	4	-	-	-	-	-	-	13	-	-	1	1
Md.	-	19	-	3	5	-	34	1	30	11	-	34	1
D.C.	-	4	-	1	1	-	4	-	-	-	-	-	-
Va.	-	39	-	14	9	2	61	1	38	1	-	13	6
W. Va.	U	7	U	3	9	U	9	U	94	U	U	1	22
N.C.	1	7	-	1	3	1	100	3	19	1	-	1	5
S.C.	-	4	-	-	2	-	60	-	17	-	-	1	8
Ga.	1	16	-	-	111	-	101	1	19	-	1	15	37
Fla.	-	23	29	88	305	-	139	-	46	1	1	18	57
E.S. CENTRAL	-	9	-	9	5	2	148	5	57	-	-	46	36
Ky.	-	5	-	1	1	-	25	-	18	-	-	28	22
Tenn.	-	-	-	6	2	-	64	5	24	-	-	2	13
Ala.	-	1	-	2	2	2	48	-	9	-	-	-	1
Miss.	-	3	-	-	-	-	11	-	6	-	-	16	-
W.S. CENTRAL	-	61	3	152	866	5	287	3	211	2	4	115	168
Ark.	-	4	-	-	22	-	14	-	7	-	-	1	3
La.	-	5	-	2	4	1	61	-	6	-	-	1	9
Okla.	-	8	-	30	6	-	27	-	-	-	-	3	2
Tex.	-	44	3	120	834	4	185	3	198	2	4	110	154
MOUNTAIN	2	29	5	28	35	2	106	1	100	3	-	78	94
Mont.	-	1	-	-	-	1	5	1	4	-	-	5	3
Idaho	-	2	-	-	1	-	7	-	4	-	-	6	4
Wyo.	-	-	-	1	1	-	5	-	2	-	-	7	12
Colo.	1	12	-	7	10	-	44	-	16	-	-	6	30
N. Mex.	-	3	-	-	8	-	15	-	-	-	-	6	5
Ariz.	-	7	2	17	5	1	19	-	47	-	-	14	21
Utah	1	4	3	3	-	-	9	-	20	3	-	22	8
Nev.	-	-	-	-	10	-	2	-	7	-	-	12	11
PACIFIC	8	371	6	885	348	9	394	7	521	3	7	1,421	624
Wash.	1	21	1	42	3	2	48	2	68	1	-	38	90
Oreg.	-	14	-	23	5	3	74	-	-	-	-	6	53
Calif.	7	331	5	814	333	4	257	5	427	2	6	1,363	465
Alaska	-	1	-	1	-	-	11	-	10	-	-	5	1
Hawaii	-	4	-	5	7	-	4	-	16	-	1	9	15
Guam	U	1	U	6	6	U	2	U	3	U	U	2	2
P.R.	-	4	5	132	285	-	8	-	78	-	-	11	4
V.I.	U	-	U	-	24	U	-	U	3	U	U	-	1
Pac. Trust Terr.	U	-	U	-	1	U	2	U	5	U	U	-	1

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 30, 1982 and October 31, 1981 (43rd 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	27,127	25,464	440	21,139	220	5	333	4	945	5,203
NEW ENGLAND	488	489	19	592	6	-	17	-	10	40
Maine	7	5	2	51	-	-	-	-	-	26
N.H.	1	12	-	20	-	-	-	-	1	1
Vt.	2	15	-	13	-	-	2	-	-	1
Mass.	328	313	12	375	6	-	13	-	5	6
R.I.	21	30	-	25	-	-	-	-	2	-
Conn.	129	114	5	108	-	-	2	-	2	6
MID. ATLANTIC	3,639	3,671	49	3,533	7	-	59	-	43	184
Upstate N.Y.	378	356	13	615	7	-	9	-	15	99
N.Y. City	2,141	2,192	U	1,326	-	U	31	U	3	-
N.J.	530	521	21	702	-	-	11	-	13	17
Pa.	590	602	15	890	-	-	8	-	12	68
E.N. CENTRAL	1,524	1,917	60	3,192	1	1	30	1	83	535
Ohio	259	252	12	536	-	-	11	1	77	75
Ind.	167	242	U	391	-	U	2	U	-	70
Ill.	774	1,039	24	1,372	-	-	5	-	6	275
Mich.	241	307	16	718	-	1	9	-	-	6
Wis.	83	77	8	175	1	-	3	-	-	109
W.N. CENTRAL	462	565	14	623	33	-	16	1	34	1,070
Minn.	105	171	1	107	-	-	8	-	-	182
Iowa	27	24	3	66	2	-	1	-	4	347
Mo.	260	319	6	301	21	-	4	1	12	109
N. Dak.	7	9	1	13	-	-	-	-	-	90
S. Dak.	2	2	-	27	1	-	-	-	4	88
Nebr.	14	9	-	26	4	-	2	-	2	114
Kans.	47	31	3	83	5	-	1	-	12	140
S. ATLANTIC	7,487	6,801	128	4,404	12	1	40	1	507	1,001
Del.	20	13	2	40	-	-	-	-	-	2
Md.	395	489	14	507	1	-	9	-	49	53
D.C.	401	553	28	208	-	-	-	-	-	-
Va.	509	588	3	475	4	-	3	-	72	545
W. Va.	25	22	U	132	-	U	4	U	8	38
N.C.	609	531	3	670	-	-	2	1	218	65
S.C.	467	477	12	421	6	-	3	-	105	55
Ga.	1,557	1,686	37	710	-	-	-	-	50	179
Fla.	3,504	2,442	29	1,241	1	1	19	-	5	64
E.S. CENTRAL	1,895	1,656	40	1,941	8	-	19	-	88	581
Ky.	114	91	9	514	-	-	4	-	1	121
Tenn.	540	606	18	632	6	-	3	-	56	322
Ala.	704	480	10	520	-	-	9	-	15	131
Miss.	537	479	3	275	2	-	3	-	16	7
W.S. CENTRAL	7,095	6,091	55	2,567	113	1	34	1	161	1,000
Ark.	177	127	13	303	67	-	5	-	28	140
La.	1,606	1,372	18	384	3	-	3	-	2	31
Okla.	154	146	-	279	33	-	3	-	75	172
Tex.	5,158	4,446	24	1,601	10	1	23	1	56	657
MOUNTAIN	701	642	9	589	30	-	13	-	13	262
Mont.	5	11	-	37	4	-	-	-	4	84
Idaho	25	18	-	28	1	-	-	-	4	10
Wyo.	16	14	-	6	5	-	-	-	1	21
Colo.	182	190	-	72	7	-	3	-	1	47
N. Mex.	167	113	2	101	2	-	-	-	1	23
Ariz.	191	158	6	246	-	-	7	-	-	55
Utah	20	25	1	40	11	-	2	-	-	18
Nev.	95	113	-	59	-	-	1	-	2	4
PACIFIC	3,836	3,632	66	3,698	10	2	105	-	6	530
Wash.	128	158	1	231	1	-	6	-	-	8
Oreg.	93	97	9	154	2	-	4	-	1	3
Calif.	3,507	3,305	51	3,003	6	2	91	-	5	439
Alaska	14	11	-	74	1	-	1	-	-	80
Hawaii	94	61	5	236	-	-	3	-	-	-
Guam	1	-	U	36	-	U	-	U	-	-
P.R.	672	554	-	352	-	-	2	-	-	45
V.I.	21	16	U	1	-	U	-	U	-	-
Pac. Trust Terr.	-	-	U	91	-	U	-	U	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending October 30, 1982 (43rd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	650	466	131	28	13	11	40
Boston, Mass.	185	119	43	15	3	5	12
Bridgeport, Conn.	48	38	8	2	-	-	4
Cambridge, Mass.	22	18	4	-	-	-	5
Fall River, Mass.	33	26	5	1	1	-	-
Hartford, Conn.	64	35	18	5	3	3	1
Lowell, Mass.	32	24	6	1	-	-	1
Lynn, Mass.	16	13	1	-	2	-	1
New Bedford, Mass.	32	24	7	-	-	1	1
New Haven, Conn.	30	26	3	1	-	-	-
Providence, R.I.	46	37	8	1	-	-	4
Somerville, Mass.	7	6	1	-	-	-	1
Springfield, Mass.	37	26	8	1	2	-	2
Waterbury, Conn.	38	31	7	-	-	-	3
Worcester, Mass.	60	43	12	1	2	2	5
MID. ATLANTIC	2,609	2,046	326	83	62	67	100
Albany, N.Y.	46	31	11	1	1	2	-
Allentown, Pa.	22	19	3	-	-	-	-
Buffalo, N.Y.	146	93	39	5	2	7	9
Camden, N.J.	44	29	14	-	1	-	1
Elizabeth, N.J. §	24	22	-	1	-	1	-
Erie, Pa.†	33	18	11	2	1	1	1
Jersey City, N.J.	65	41	18	3	1	2	2
N.Y. City, N.Y. §	1,363	1,241	9	22	35	31	39
Newark, N.J.	64	27	22	8	5	2	6
Paterson, N.J.	30	18	7	2	2	1	2
Philadelphia, Pa.†	290	181	77	20	6	6	16
Pittsburgh, Pa.†	79	37	29	8	-	5	1
Reading, Pa.	35	27	5	1	1	1	2
Rochester, N.Y.	136	99	29	4	3	1	7
Schenectady, N.Y.	33	21	11	1	-	-	2
Scranton, Pa.†	26	18	8	-	-	-	2
Syracuse, N.Y.	86	55	20	2	3	6	1
Trenton, N.J.	31	19	8	2	1	1	1
Utica, N.Y.	24	21	3	-	-	-	2
Yonkers, N.Y.	32	29	2	1	-	-	6
E.N. CENTRAL	2,300	1,482	562	110	57	87	66
Akron, Ohio	59	43	9	4	2	1	-
Canton, Ohio	49	33	12	2	2	-	2
Chicago, Ill.	466	278	139	21	9	19	9
Cincinnati, Ohio	159	108	33	5	4	9	12
Cleveland, Ohio	202	116	58	14	5	8	1
Columbus, Ohio	135	79	40	9	3	4	4
Dayton, Ohio	122	69	44	4	3	2	1
Detroit, Mich.	241	130	66	20	9	16	2
Evansville, Ind.	64	42	14	5	1	2	5
Fort Wayne, Ind. §	52	49	-	1	1	1	1
Gary, Ind.	15	11	3	-	1	-	-
Grand Rapids, Mich.	81	61	13	3	3	1	6
Indianapolis, Ind.	163	105	37	10	5	5	2
Madison, Wis.	30	21	5	1	3	-	1
Milwaukee, Wis.	132	99	24	2	3	4	5
Peoria, Ill.	41	28	7	2	1	3	3
Rockford, Ill.	43	32	8	2	-	1	3
South Bend, Ind.	51	34	12	1	1	3	4
Toledo, Ohio	135	100	26	3	-	6	2
Youngstown, Ohio	60	44	12	1	1	2	3
W.N. CENTRAL	752	522	138	43	25	24	35
Des Moines, Iowa	44	31	7	5	-	1	5
Duluth, Minn.	32	27	2	3	-	-	1
Kansas City, Kans.	34	22	5	2	2	3	-
Kansas City, Mo.	125	75	37	6	2	5	-
Lincoln, Nebr.	24	16	7	-	1	-	3
Minneapolis, Minn.	107	84	11	4	3	5	2
Omaha, Nebr.	95	64	19	5	5	2	12
St. Louis, Mo.	163	109	28	11	8	7	8
St. Paul, Minn.	67	53	11	2	1	-	2
Wichita, Kans.	61	41	11	5	3	1	2

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,221	722	306	94	43	56	30
Atlanta, Ga.	148	88	42	10	3	5	3
Baltimore, Md.	265	169	54	26	12	4	2
Charlotte, N.C.	57	35	10	7	3	2	2
Jacksonville, Fla.	103	59	27	10	1	6	-
Miami, Fla.	118	68	36	7	2	5	2
Norfolk, Va.	65	34	17	3	3	8	2
Richmond, Va.	90	44	31	7	3	5	4
Savannah, Ga.	40	17	16	2	4	1	2
St. Petersburg, Fla.	77	66	8	-	2	1	2
Tampa, Fla.	59	32	9	5	5	8	2
Washington, D.C.	144	74	42	15	3	10	3
Wilmington, Del.	55	36	14	2	2	1	6
E.S. CENTRAL	728	447	188	39	26	28	33
Birmingham, Ala.	111	60	34	6	3	8	2
Chattanooga, Tenn.	53	37	12	2	2	-	8
Knoxville, Tenn.	40	31	8	1	-	-	1
Louisville, Ky.	85	48	23	10	3	1	4
Memphis, Tenn.	174	112	42	11	7	2	5
Mobile, Ala.	85	46	24	6	3	6	3
Montgomery, Ala.	54	33	13	1	2	5	2
Nashville, Tenn.	126	80	32	2	6	6	8
W.S. CENTRAL	1,560	877	390	145	81	67	49
Austin, Tex.	62	41	9	7	4	1	1
Baton Rouge, La.	48	37	10	-	-	1	3
Corpus Christi, Tex.	55	30	11	6	3	5	2
Dallas, Tex.	202	121	49	17	11	4	2
El Paso, Tex.	48	25	13	4	4	2	1
Fort Worth, Tex.	81	48	25	2	-	6	5
Houston, Tex.	543	254	154	73	37	25	18
Little Rock, Ark.	86	47	28	5	1	5	9
New Orleans, La.	116	75	24	7	9	1	-
San Antonio, Tex.	184	118	34	14	6	12	4
Shreveport, La.	48	26	14	3	4	1	2
Tulsa, Okla.	87	55	19	7	2	4	2
MOUNTAIN	622	424	117	33	25	22	25
Albuquerque, N.Mex.	106	60	27	6	12	1	3
Colo. Springs, Colo.	28	15	6	3	1	3	3
Denver, Colo. §	127	110	1	6	2	7	5
Las Vegas, Nev.	73	49	15	6	2	1	2
Ogden, Utah	14	7	4	1	1	1	1
Phoenix, Ariz.	110	74	26	3	4	3	1
Pueblo, Colo.	24	18	5	1	-	-	2
Salt Lake City, Utah	53	33	14	1	-	5	2
Tucson, Ariz.	87	58	19	6	3	1	6
PACIFIC	1,923	1,248	405	131	81	58	115
Berkeley, Calif.	15	12	1	1	1	-	-
Fresno, Calif.	87	54	21	6	1	5	5
Glendale, Calif.	25	17	3	2	2	1	1
Honolulu, Hawaii	56	29	12	5	8	2	3
Long Beach, Calif.	92	58	23	8	1	2	3
Los Angeles, Calif.	618	395	126	51	31	15	29
Oakland, Calif.	86	52	21	8	2	3	4
Pasadena, Calif.	21	13	6	1	-	1	2
Portland, Oreg.	104	71	23	2	4	4	9
Sacramento, Calif.	73	47	18	1	5	2	7
San Diego, Calif.	172	105	34	16	7	10	15
San Francisco, Calif.	158	99	38	12	4	5	3
San Jose, Calif.	157	103	30	11	10	3	23
Seattle, Wash.	168	128	30	5	2	3	4
Spokane, Wash.	53	35	11	2	3	2	6
Tacoma, Wash.	38	30	8	-	-	-	1
TOTAL	12,365††	8,234	2,563	706	413	420	493

* 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.

E. coli 0157:H7 — Continued

stools and 24 of the remaining 25 patients with sporadic cases had eaten hamburgers from a variety of sources (including homes and/or local or national-chain restaurants) within the week before they became ill.

Examination of stool samples from sporadic cases of this recently recognized diarrheal illness, currently designated "hemorrhagic colitis," began at CDC after *E. coli* 0157:H7 was isolated from patients in two separate outbreaks of this illness earlier this year in Oregon and Michigan. Illness was associated with eating hamburgers at restaurants of one national chain.

Hemorrhagic colitis appears to be a distinct clinical entity, characterized by severe crampy abdominal pain, grossly bloody diarrhea, little or no fever, a characteristic barium-enema finding of marked edema involving the cecum, ascending and/or transverse colon, and the absence of usual pathogens in stool.

Reported by RR Uyeyama, MD, Good Samaritan Hospital, San Jose, SB Werner, MD, S Chin, MD, State Epidemiologist, California Dept of Health Svcs; SF Pearce, MD, CL Kollip, MD, Portland Adventist Medical Center, Portland, LP Williams, DVM, JA Googins, MD, State Epidemiologist, Oregon State Health Div; Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The diagnoses of hemorrhagic colitis are based on the typical clinical presentation and isolation of *E. coli* 0157:H7 from the stool specimens. Early stool collection (within 4 days after onset of illness and before any antibiotic exposure) is crucial for detecting the *E. coli*, so physicians encountering typical cases need to ensure that stool samples are obtained and a portion held frozen (preferably at -70 C [-94 F] or on dry ice) while their laboratories perform routine examinations for *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, and parasites. If these test results are negative, arrangements can be made through the state epidemiologist and state laboratory director to look for *E. coli* 0157:H7 in the frozen specimen. Those state laboratories that do not have the antisera to identify *E. coli* 0157:H7 may wish to send either the whole frozen stool or 10 picks (if possible) of *E. coli* colonies to CDC. This strain of *E. coli* 0157:H7 does not ferment sorbitol, and this biochemical property may facilitate screening for this serotype. Further studies are under way at CDC to better characterize the epidemiology of hemorrhagic colitis, the reservoir of *E. coli* 0157:H7, and serologic methods to confirm infection.

Epidemiologic investigation of the outbreaks showed that one source of *E. coli* 0157:H7 is hamburger. Other enteric diseases, such as salmonellosis, have been reported following consumption of hamburger (*1*). Careful handling and adequate cooking of raw meat products should minimize or eliminate the risk of contracting infectious diseases from this source.

Reference

1. Fontaine RE, Arnon S, Martin WT, et al. Raw hamburger: an interstate common source of human salmonellosis. Am J Epidemiol 1978;107:36-45.

Current Trends

Subacute Sclerosing Panencephalitis Surveillance — United States

Subacute sclerosing panencephalitis (SSPE) is a slow-virus infection of the central nervous system associated with prior measles infection. Onset generally occurs in late childhood or adolescence and is usually characterized by the insidious onset of mental deterioration and myoclonia. Although spontaneous improvement or stabilization can occur, the vast majority of patients proceed over a period of months to years to generalized convulsions, dementia, coma, and death.

To collect demographic and clinical information on SSPE cases, a national SSPE registry

TABLE IV. Deaths in 121 U.S. cities,* week ending October 30, 1982 (43rd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	650	466	131	28	13	11	40
Boston, Mass.	185	119	43	15	3	5	12
Bridgeport, Conn.	48	38	8	2	-	-	4
Cambridge, Mass.	22	18	4	-	-	-	5
Fall River, Mass.	33	26	5	1	1	-	-
Hartford, Conn.	64	35	18	5	3	3	1
Lowell, Mass.	32	24	6	1	-	-	1
Lynn, Mass.	16	13	1	-	2	-	1
New Bedford, Mass.	32	24	7	-	-	1	1
New Haven, Conn.	30	26	3	1	-	-	-
Providence, R.I.	46	37	8	1	-	-	4
Somerville, Mass.	7	6	1	-	-	-	1
Springfield, Mass.	37	26	8	1	2	-	2
Waterbury, Conn.	38	31	7	-	-	-	3
Worcester, Mass.	60	43	12	1	2	2	5
MID. ATLANTIC	2,609	2,046	326	83	62	67	100
Albany, N.Y.	46	31	11	1	1	2	-
Allentown, Pa.	22	19	3	-	-	-	-
Buffalo, N.Y.	146	93	39	5	2	7	9
Camden, N.J.	44	29	14	-	1	-	1
Elizabeth, N.J. §	24	22	-	1	-	1	-
Erie, Pa.†	33	18	11	2	1	1	1
Jersey City, N.J.	65	41	18	3	1	2	2
N.Y. City, N.Y. §	1,363	1,241	9	22	35	31	39
Newark, N.J.	64	27	22	8	5	2	6
Paterson, N.J.	30	18	7	2	2	1	2
Philadelphia, Pa.†	290	181	77	20	6	6	16
Pittsburgh, Pa.†	79	37	29	8	-	5	1
Reading, Pa.	35	27	5	1	1	1	2
Rochester, N.Y.	136	99	29	4	3	1	7
Schenectady, N.Y.	33	21	11	1	-	-	2
Scranton, Pa.†	26	18	8	-	-	-	2
Syracuse, N.Y.	86	55	20	2	3	6	1
Trenton, N.J.	31	19	8	2	1	1	1
Utica, N.Y.	24	21	3	-	-	-	2
Yonkers, N.Y.	32	29	2	1	-	-	6
E.N. CENTRAL	2,300	1,482	562	110	57	87	66
Akron, Ohio	59	43	9	4	2	1	-
Canton, Ohio	49	33	12	2	2	-	2
Chicago, Ill	466	278	139	21	9	19	9
Cincinnati, Ohio	159	108	33	5	4	9	12
Cleveland, Ohio	202	116	58	14	5	8	1
Columbus, Ohio	135	79	40	9	3	4	4
Dayton, Ohio	122	69	44	4	3	2	1
Detroit, Mich.	241	130	66	20	9	16	2
Evansville, Ind.	64	42	14	5	1	2	5
Fort Wayne, Ind. §	52	49	-	1	1	1	1
Gary, Ind.	15	11	3	-	1	-	-
Grand Rapids, Mich.	81	61	13	3	3	1	6
Indianapolis, Ind.	163	105	37	10	5	5	2
Madison, Wis.	30	21	5	1	3	-	1
Milwaukee, Wis.	132	99	24	2	3	4	5
Peoria, Ill.	41	28	7	2	1	3	3
Rockford, Ill.	43	32	8	2	-	1	3
South Bend, Ind.	51	34	12	1	1	3	4
Toledo, Ohio	135	100	26	3	-	6	2
Youngstown, Ohio	60	44	12	1	1	2	3
W.N. CENTRAL	752	522	138	43	25	24	35
Des Moines, Iowa	44	31	7	5	-	1	5
Duluth, Minn.	32	27	2	3	-	-	1
Kansas City, Kans.	34	22	5	2	2	3	-
Kansas City, Mo.	125	75	37	6	2	5	-
Lincoln, Nebr.	24	16	7	-	1	-	3
Minneapolis, Minn.	107	84	11	4	3	5	2
Omaha, Nebr.	95	64	19	5	5	2	12
St. Louis, Mo.	163	109	28	11	8	7	8
St. Paul, Minn.	67	53	11	2	1	-	2
Wichita, Kans.	61	41	11	5	3	1	2

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
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Atlanta, Ga.	148	88	42	10	3	5	3
Baltimore, Md.	265	169	54	26	12	4	2
Charlotte, N.C.	57	35	10	7	3	2	2
Jacksonville, Fla.	103	59	27	10	1	6	-
Miami, Fla.	118	68	36	7	2	5	2
Norfolk, Va.	65	34	17	3	3	8	2
Richmond, Va.	90	44	31	7	3	5	4
Savannah, Ga.	40	17	16	2	4	1	2
St. Petersburg, Fla.	77	66	8	-	2	1	2
Tampa, Fla.	59	32	9	5	5	8	2
Washington, D.C.	144	74	42	15	3	10	3
Wilmington, Del.	55	36	14	2	2	1	6
E.S. CENTRAL	728	447	188	39	26	28	33
Birmingham, Ala.	111	60	34	6	3	8	2
Chattanooga, Tenn.	53	37	12	2	2	-	8
Knoxville, Tenn.	40	31	8	1	-	-	1
Louisville, Ky.	85	48	23	10	3	1	4
Memphis, Tenn.	174	112	42	11	7	2	5
Mobile, Ala.	85	46	24	6	3	6	3
Montgomery, Ala.	54	33	13	1	2	5	2
Nashville, Tenn.	126	80	32	2	6	6	8
W.S. CENTRAL	1,560	877	390	145	81	67	49
Austin, Tex.	62	41	9	7	4	1	1
Baton Rouge, La.	48	37	10	-	-	1	3
Corpus Christi, Tex.	55	30	11	6	3	5	2
Dallas, Tex.	202	121	49	17	11	4	2
El Paso, Tex.	48	25	13	4	4	2	1
Fort Worth, Tex	81	48	25	2	-	6	5
Houston, Tex.	543	254	154	73	37	25	18
Little Rock, Ark.	86	47	28	5	1	5	9
New Orleans, La.	116	75	24	7	9	1	-
San Antonio, Tex.	184	118	34	14	6	12	4
Shreveport, La.	48	26	14	3	4	1	2
Tulsa, Okla.	87	55	19	7	2	4	2
MOUNTAIN	622	424	117	33	25	22	25
Albuquerque, N.Mex.	106	60	27	6	12	1	3
Colo. Springs, Colo.	28	15	6	3	1	3	3
Denver, Colo. §	127	110	1	6	2	7	5
Las Vegas, Nev.	73	49	15	6	2	1	2
Ogden, Utah	14	7	4	1	1	1	1
Phoenix, Ariz.	110	74	26	3	4	3	1
Pueblo, Colo.	24	18	5	1	-	-	2
Salt Lake City, Utah	53	33	14	1	-	5	2
Tucson, Ariz.	87	58	19	6	3	1	6
PACIFIC	1,923	1,248	405	131	81	58	115
Berkeley, Calif.	15	12	1	1	1	-	-
Fresno, Calif.	87	54	21	6	1	5	5
Glendale, Calif.	25	17	3	2	2	1	1
Honolulu, Hawaii	56	29	12	5	8	2	3
Long Beach, Calif.	92	58	23	8	1	2	3
Los Angeles, Calif.	618	395	126	51	31	15	29
Oakland, Calif.	86	52	21	8	2	3	4
Pasadena, Calif.	21	13	6	1	-	1	2
Portland, Oreg.	104	71	23	2	4	4	9
Sacramento, Calif.	73	47	18	1	5	2	7
San Diego, Calif.	172	105	34	16	7	10	15
San Francisco, Calif.	158	99	38	12	4	5	3
San Jose, Calif.	157	103	30	11	10	3	23
Seattle, Wash.	168	128	30	5	2	3	4
Spokane, Wash.	53	35	11	2	3	2	6
Tacoma, Wash.	38	30	8	-	-	-	1
TOTAL	12,365††	8,234	2,563	706	413	420	493

* 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.

E. coli 0157:H7 — Continued

stools and 24 of the remaining 25 patients with sporadic cases had eaten hamburgers from a variety of sources (including homes and/or local or national-chain restaurants) within the week before they became ill.

Examination of stool samples from sporadic cases of this recently recognized diarrheal illness, currently designated "hemorrhagic colitis," began at CDC after *E. coli* 0157:H7 was isolated from patients in two separate outbreaks of this illness earlier this year in Oregon and Michigan. Illness was associated with eating hamburgers at restaurants of one national chain.

Hemorrhagic colitis appears to be a distinct clinical entity, characterized by severe crampy abdominal pain, grossly bloody diarrhea, little or no fever, a characteristic barium-enema finding of marked edema involving the cecum, ascending and/or transverse colon, and the absence of usual pathogens in stool.

Reported by RR Uyeyama, MD, Good Samaritan Hospital, San Jose, SB Werner, MD, S Chin, MD, State Epidemiologist, California Dept of Health Svcs; SF Pearce, MD, CL Kollip, MD, Portland Adventist Medical Center, Portland, LP Williams, DVM, JA Googins, MD, State Epidemiologist, Oregon State Health Div; Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The diagnoses of hemorrhagic colitis are based on the typical clinical presentation and isolation of *E. coli* 0157:H7 from the stool specimens. Early stool collection (within 4 days after onset of illness and before any antibiotic exposure) is crucial for detecting the *E. coli*, so physicians encountering typical cases need to ensure that stool samples are obtained and a portion held frozen (preferably at -70 C [-94 F] or on dry ice) while their laboratories perform routine examinations for *Salmonella, Shigella, Campylobacter, Yersinia,* and parasites. If these test results are negative, arrangements can be made through the state epidemiologist and state laboratory director to look for *E. coli* 0157:H7 in the frozen specimen. Those state laboratories that do not have the antisera to identify *E. coli* 0157:H7 may wish to send either the whole frozen stool or 10 picks (if possible) of *E. coli* colonies to CDC. This strain of *E. coli* 0157:H7 does not ferment sorbitol, and this biochemical property may facilitate screening for this serotype. Further studies are under way at CDC to better characterize the epidemiology of hemorrhagic colitis, the reservoir of *E. coli* 0157:H7, and serologic methods to confirm infection.

Epidemiologic investigation of the outbreaks showed that one source of *E. coli* 0157:H7 is hamburger. Other enteric diseases, such as salmonellosis, have been reported following consumption of hamburger (*1*). Careful handling and adequate cooking of raw meat products should minimize or eliminate the risk of contracting infectious diseases from this source.

Reference

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Current Trends

Subacute Sclerosing Panencephalitis Surveillance — United States

Subacute sclerosing panencephalitis (SSPE) is a slow-virus infection of the central nervous system associated with prior measles infection. Onset generally occurs in late childhood or adolescence and is usually characterized by the insidious onset of mental deterioration and myoclonia. Although spontaneous improvement or stabilization can occur, the vast majority of patients proceed over a period of months to years to generalized convulsions, dementia, coma, and death.

To collect demographic and clinical information on SSPE cases, a national SSPE registry

Subacute sclerosing panencephalitis — Continued

was initiated in 1969 at the University of Tennesee. Since October 1980, responsibility for the registry has resided with the Medical College of Georgia.* The registry is supported by the Office of Biologics, Food and Drug Administration, and maintained in collaboration with CDC.

A case of SSPE is defined by CDC as an illness with a compatible clinical course plus one of the following items of supporting laboratory evidence: 1) measles antibody detected in the cerebrospinal fluid (CSF), 2) a characteristic pattern on electroencephalography, or 3) typical histologic findings in brain biopsy material or tissue obtained on postmortem examination.

As of July 1982, 634 individuals suspected of having SSPE, with onset from 1956-1981, had been reported to the registry; of these, 368 were U.S. citizens who met the case definition of SSPE and had onset of symptoms between 1969 and 1981 (Figure 1). Fifty-five percent (202) of the 368 confirmed cases had a history of only measles infection; 14% (51) had a history of only measles vaccination; and 17% (63) had a history of both, with the natural illness most frequently preceeding the vaccination. The remaining 14% (52) gave no positive history of having natural measles infection or measles vaccination.

The reported incidence rate among U.S. citizens under 20 years of age has been estimated for selected years (by year of onset of SSPE). The rate for 1970 is estimated at 0.61 per million population, decreasing to 0.35 in 1975 and 0.06 in 1980.

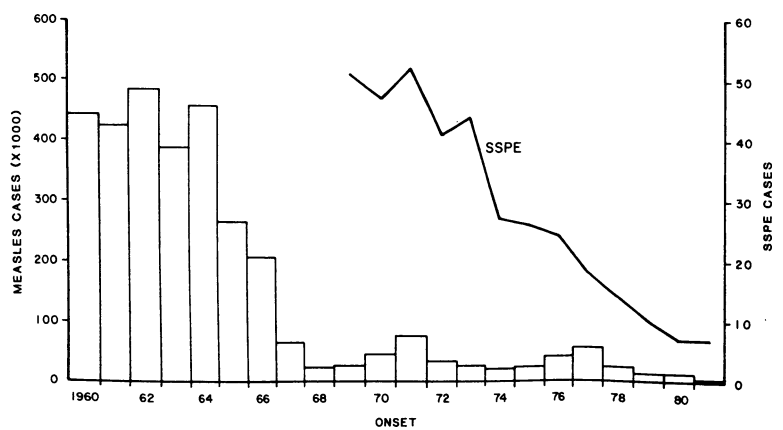
A crude estimate can be made of the risk of SSPE following natural measles infection by determining the year in which a given person who developed SSPE contracted measles and the number of measles cases that occurred in that year.† Similarly, the risk, if any, associated with measles vaccine can be estimated by determining the year of vaccination of patients with SSPE and the net number of doses of live-virus measles vaccine distributed during that year. The estimated risk of SSPE following natural measles infection averaged 8.5 cases per million measles cases occurring in 1960-1974.§ The estimated rate of SSPE following mea-

*Inquiries and suspected case reports can be directed to Dr. Paul R. Dyken, Professor and Chief, Section of Pediatric Neurology, Medical College of Georgia, 1459 Laney-Walker Boulevard, Augusta GA 30912.

†Assuming a 10% reporting efficiency, estimated case numbers were determined by multiplying reported cases for those years by 10.

§The average interval between onset of measles and onset of SSPE is approximately 7 years. Thus, SSPE risk estimates for persons who developed measles beyond 1974 are less likely to be accurate.

FIGURE 1. Confirmed subacute sclerosing panencephalitis (SSPE) and reported measles cases by year of onset — United States



Subacute sclerosing panencephalitis – Continued

sles vaccination averaged 0.7 reported SSPE cases per million doses of live-virus measles vaccine distributed from 1963 (the year of vaccine licensure) through 1974.

Reported by P Dyken, MD, R DuRant, P Shmunes, Medical College of Georgia, Augusta, GA; Surveillance, Investigations, and Research Br, Immunization Div, Center for Prevention Svcs, CDC.

Editorial Note: Reported SSPE cases with onset since 1973 have declined substantially paralleling the substantial decline in reported measles cases after 1964-1966 (Figure 1). The lag period between the decline in reported measles cases and the decline in reported SSPE cases is similar to the mean latent period of 7 years noted previously between natural measles infection and subsequent onset of SSPE (*1*). Recently reported cases have a mean latent period of approximately 10 years, indicating that many of these cases may reflect sequelae due to measles incidence from the 1960s and early 1970s.

There is often a several-year lag period between onset of SSPE and registry notification (median = 3 years). Reporting is probably not complete, in part because diagnosing the illness requires a high index of suspicion. However, surveillance efforts have increased during the past 2 years from the immediately preceeding years (e.g. by continually soliciting reports from pediatric neurologists). Therefore, the apparent decrease in case reports since 1973 is probably an accurate trend, but the apparent annual case report level since approximately 1980 must also be viewed with consideration of these factors. Because of the lag time between natural measles illness and SSPE onset and the current lag time between onset and reporting, the impact on SSPE incidence of the dramatic decline in measles incidence as a result of the measles elimination effort will not be seen for nearly another decade.

Four lines of evidence indicate that measles vaccine protects against SSPE: 1) the decrease in reported SSPE cases in recent years as measles incidence has declined; 2) two case-control studies performed in the United States which indicated that measles vaccine, by protecting against measles, reduces the chance of developing SSPE (*2,3*); 3) a cohort analysis of children born from 1953 to 1973 indicating that, for cohorts born since 1966, one of the first years of widespread use of measles vaccine, the incidence rate of SSPE occurring at all ages has progressively decreased (*4*); 4) estimates of the ratios of SSPE cases to measles cases and of SSPE cases to measles vaccinees suggest that if there is any risk of SSPE following measles vaccination, it is $\leq$ one-twelfth the risk of SSPE following measles infection. Although some cases of SSPE have developed among children who had no history of natural measles infection but who received measles vaccine, these patients may have had unrecognized measles illness (e.g., during the first year of life). Studies performed before measles vaccine licensure indicated that 15%-30% of persons without a history of measles illness had evidence of measles antibody (*5*). A better picture of the etiologic role of live-measles vaccine in SSPE occurrence will only be seen several years after interruption of measles transmission in this country. Based on current imperfect estimates, however, the risk, if any, of SSPE from vaccination seems extremely low.

SSPE is only one of a number of degenerative neurologic diseases. In such illnesses, testing for measles antibody in the CSF will allow the diagnosis of SSPE when applicable. In order to obtain as complete reporting as possible, health-care providers and public health personnel are encouraged to report all suspected cases to the registry.

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Epidemiologic Notes and Reports

Influenza — Alaska

Nine influenza viruses, which, in preliminary hemagglutination-inhibition testing, appear antigenically related to A/Bangkok/1/79(H3N2), were isolated in Alaska between September 25 and October 25, 1982. These isolations are the first reported in the United States for the 1982-1983 season. One virus was isolated in Anchorage, the rest in Fairbanks; several isolates were from children <1 year old. School absenteeism in Fairbanks has not increased, but increases in influenza-like illness have been reported in nursery schools and kindergartens.

Reported by D Ritter, Northern Region Laboratories, Section of Laboratories, J Middaugh, MD, State Epidemiologist, Alaska State Dept of Health and Social Svcs; Influenza Br, Center for Infectious Diseases, CDC.

Erratum, Vol. 31, No. 42

p. 565. In the article, "Valproic Acid and Spina Bifida: A Preliminary Report—France," the p-value in Table 2 on p. 266 should read: 0.00098.

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HHS Publication No. (CDC) 83-8017