

# M M W R

## MORBIDITY AND MORTALITY WEEKLY REPORT

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### International Notes

#### Outbreak of Hemorrhagic Colitis — Ottawa, Canada

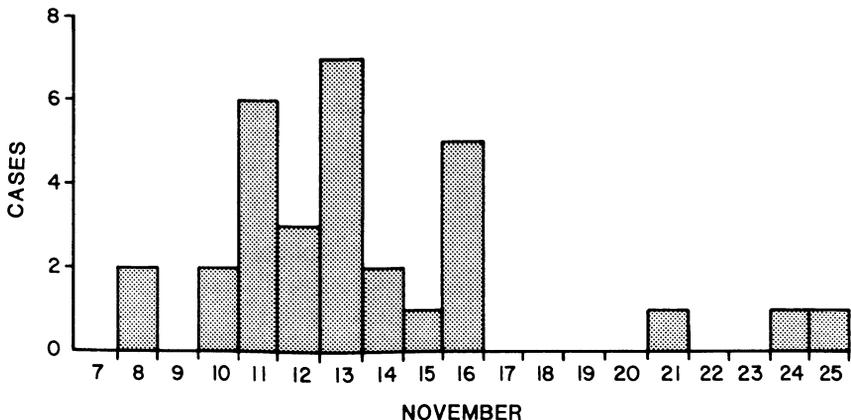
In November 1982, 31 (8.8%) of 353 residents at a home for the aged in Ottawa, Ontario, Canada, became ill with gastrointestinal symptoms. Cases occurred over an 18-day period (Figure 1). Eight of the ill patients had loose stools only, while 18 of the 23 more severely ill patients had watery, bloody diarrhea. For those with loose stools only, illness lasted 1-2 days; for those more severely ill, illness lasted 5-12 days. Four patients were hospitalized, and one with metastatic uterine carcinoma died.

None of the usual enteric pathogens (*Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, or *Amoeba*) were found in stool specimens obtained from the 31 affected residents. *Escherichia coli* O157:H7 was isolated from the stools of 17 patients, with the isolation rate higher for those with watery, bloody diarrhea (78%) than for those with loose stools only (38%). In studies of serial stool specimens, *E. coli* O157:H7 was usually isolated from the time diarrhea began until formed stools returned, up to 11 days after onset.

Food prepared in the home's kitchen was a possible source of the outbreak. A single lot of hamburger had been served repeatedly between November 6 and 20 and was considered the most likely vehicle. Two samples of frozen meat from this lot were cultured, but *E. coli* O157:H7 was not recovered.

The cases beginning between November 8 and 16 occurred among residents of seven floors throughout the home's two buildings, whereas all three cases occurring after November

FIGURE 1. Diarrheal illness among residents in a home for the aged, by date of onset — Ottawa, Canada, November 1982



### *Hemorrhagic Colitis — Continued*

16 were from a single floor, where residents are mentally incompetent. These three individuals may have acquired infection through person-to-person transmission.

The National Enteric Reference Centre of the Canadian Laboratory Centre for Disease Control (LCDC) serotyped the *E. coli* from this outbreak. Further analysis at LCDC of the *E. coli* O157:H7 strains demonstrated that, although they did not produce heat-labile (LT) or heat-stable (ST) enterotoxin and were not invasive, they produced a cytotoxin in the Vero cell tissue culture assay (1); 80% of the isolates fermented sorbitol after 4-5 days.

Since 1978, LCDC has received six isolates of *E. coli* O157:H7 from sporadic cases of gastrointestinal illness. All five for which histories are available were from patients with hemorrhagic colitis.

*Reported by Canada Diseases Weekly Report 1983, 9:29-32; Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.*

**Editorial Note:** This report of a third outbreak of hemorrhagic colitis associated with isolation of *E. coli* O157:H7 (2,3) further implicates this *E. coli* serotype as an important cause of hemorrhagic colitis syndrome. Isolation of the organism from patients with nonbloody diarrhea that occurred during the outbreak gives added evidence that *E. coli* O157:H7 can cause a spectrum of gastrointestinal illnesses. Although later cases among a group of patients with poor personal hygiene suggested that person-to-person transmission may have occurred, no evidence existed for this mode of transmission in the two previously described outbreaks (2).

The pathophysiology of hemorrhagic colitis is unknown. Documentation that *E. coli* O157:H7 produces a cytotoxin for Vero cells (1) suggests the organism may produce an enterotoxin distinct from LT and ST; however, further work is necessary to show that this cytotoxin plays a role in pathogenesis.

Since August 1982, 39 cases of sporadic hemorrhagic colitis have been reported to CDC from 18 states. *E. coli* O157:H7 has been isolated from six of 21 stool specimens submitted from these patients. These isolates ferment sorbitol slowly or not at all.

CDC is continuing to investigate sporadic cases of hemorrhagic colitis (3) and requests that cases with acute onset of symptoms fulfilling the following criteria: 1) abdominal cramps, 2) grossly bloody diarrhea, 3) absent or low-grade fever, and 4) stool specimens negative for the usual bacterial and parasitic enteric pathogens be reported to the Enteric Diseases Branch at (404) 329-3753. These reports and arrangements for examination of stool specimens should be made through the state epidemiologist and laboratory director as described previously (3).

#### *References*

1. Johnson WM, Lior H, Bezanson GS. Cytotoxic *Escherichia coli* O157:H7 associated with haemorrhagic colitis in Canada. *Lancet* 1983;1:76.
2. Riley LW, Remis RS, Helgerson SD, et al. Outbreaks of hemorrhagic colitis associated with a rare *Escherichia coli* serotype. *N Engl J Med* 1983;308:681-5.
3. CDC. Isolation of *E. coli* O157:H7 from sporadic cases of hemorrhagic colitis—United States. *MMWR* 1982;31:580, 585.

### Current Trends

#### **The Safety of Hepatitis B Virus Vaccine**

Since its licensure in 1981 and its general availability in July 1982, hepatitis B virus (HBV) vaccine has been administered to over 200,000 individuals, mostly health care workers. In a collaborative effort, the Centers for Disease Control, the Food and Drug Administration, and

*Hepatitis B – Continued*

Merck, Sharp, and Dohme have collected information on illnesses that developed after receipt of HBV vaccine. All illnesses reported to any of these three groups have been recorded. Serious illnesses have been followed up by telephone or personal interviews. Some illnesses, especially minor ones, probably have not been reported, and many reported illnesses have not been causally related to the vaccine.

As of March 1, 1983, illness had been reported in 118 vaccinees (most illnesses began within 4 weeks of the first vaccine dose). Of the 118 cases, 56 (47.5%) were considered not likely to be attributable to vaccine use because: 1) another specific cause was identified, 2) onset of illness occurred before receipt of vaccine, or 3) the reported event was unrelated to the vaccine (e.g., deltoid pain after gluteal injection). Many of the remaining 62 illnesses may represent "background" disease rather than adverse reactions to the vaccine. Of these 62 persons, 57 (91.9%) had mild or moderate illness that included: six neurologic conditions (five persons with tremors and one with recurrent Bell's palsy); 11 skin or mucous membrane lesions (hives, herpes zoster, psoriasis, and nonspecific lesions); 10 musculo-skeletal ailments (including generalized aches, joint pain, and joint inflammation); five hepatitis-like illnesses (with increased liver enzyme levels and no other identified cause); and 25 miscellaneous complaints (14 persons with a flu-like syndrome, four with injection-site reactions, four with diarrhea, one with headache, one with vomiting, and one with self-limited chest pain with a normal cardiac evaluation).

Six persons had serious illness; illness was defined as serious when it caused hospitalization or other intensive medical care, lasted 14 days or more, caused permanent disability, or was life-threatening. Five of these serious illnesses included one case each of erythema multiforme, aseptic meningitis, grand mal seizure, possible transverse myelitis, and Guillain-Barré syndrome (GBS). A second case of GBS was also reported in a person with antecedent febrile illness, presumptively caused by cytomegalovirus; febrile illness began 11 days after receipt of HBV vaccine, and GBS began 10 days after onset of febrile illness. This case was thus counted among the 56 illnesses not likely to be attributable to the vaccine. Although the numbers of vaccinees and GBS cases are too few on which to base firm conclusions, two cases of GBS do not exceed the number expected by chance alone within 6 weeks of vaccinating 200,000 people (23 GBS cases per million adults per year).

Whether acquired immune deficiency syndrome (AIDS) could be associated with HBV vaccine has been questioned, since the vaccine is made from human plasma. Since 1979, homosexual men, including those from cities with reported AIDS cases, have been the source for much of this plasma. Vaccine produced from these sources has been used in various investigative studies since 1980 and has been commercially available since 1982. To date, no AIDS in vaccine recipients has been reported outside groups with high AIDS incidence. Specifically, no cases have occurred among the several thousand individuals, other than male homosexuals (primarily health care workers), who participated in vaccine studies from 1980 to date. In addition, no cases have been reported from the over 200,000 individuals who have received HBV vaccine since its general availability in July 1982. (The latent period for AIDS, if an infectious agent is involved, appears to be between 8 and 18 months.) Two homosexual men who participated in the original HBV vaccine field trials have developed AIDS. This occurrence is not significantly different from that observed among men who were screened for participation in these trials but who were ultimately not vaccinated. Furthermore, the manufacturing process for HBV vaccine includes several procedures that inactivate representative viruses of all known types (7). Thus, both current microbiologic and empiric data provide no support for the suggestion that HBV vaccine might carry an etiologic risk for AIDS.

Surveillance for reactions that may be caused by HBV vaccine is ongoing. The vaccine is

## Hepatitis B - Continued

recommended for groups at risk of HBV infection (2). Health care providers are encouraged to report illness following receipt of HBV vaccine through their local or state health departments to the Hepatitis Division, Center for Infectious Diseases, CDC.

Reported by Div of Hepatitis and Viral Enteritis, Center for Infectious Diseases, CDC; Immunization Practices Advisory Committee.

## References

1. CDC. Hepatitis B virus vaccine safety: report of an inter-agency group. MMWR 1982;31:465-7.
2. ACIP. Inactivated hepatitis B virus vaccine. MMWR 1982;31:317-22, 327-8.

## Update: Influenza Activity — United States

The first influenza type B outbreak this season has recently been documented in a 175-bed facility for elderly patients in Portland, Maine, where increases in influenza-like illness were noted in late January and continued through early March. Approximately 45% of the residents had influenza-like illnesses during the outbreak; six were affected by x-ray-documented pneumonia, and three others died following influenza-like illness. Six influenza type B isolates

(Continued on page 141)

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

Disease	10th Week Ending			Cumulative, 10th Week Ending		
	March 12, 1983	March 13, 1982	Median 1978-1982	March 12, 1983	March 13, 1982	Median 1978-1982
Aseptic meningitis	58	66	54	809	763	628
Encephalitis: Primary (arthropod-borne & unsp.)	19	16	15	157	146	115
Post-infectious	3	-	2	11	5	27
Gonorrhea: Civilian	15,773	18,262	18,928	171,525	181,179	181,512
Military	487	549	481	4,778	5,464	5,376
Hepatitis: Type A	439	454	529	4,593	4,402	5,159
Type B	393	464	332	3,934	3,678	2,870
Non A, Non B	62	59	N	553	332	N
Unspecified	157	161	201	1,449	1,604	1,878
Legionellosis	12	4	N	101	56	N
Leprosy	2	8	3	42	27	29
Malaria	10	21	21	114	138	138
Measles: Total	22	29	281	151	121	1,746
Indigenous	20	N	N	115	N	N
Imported*	2	N	N	36	N	N
Meningococcal infections: Total	81	90	89	598	633	639
Civilian	81	89	88	588	629	632
Military	-	1	1	10	4	4
Mumps	120	135	451	793	1,037	2,870
Pertussis	33	21	21	231	189	201
Rubella (German measles)	21	54	165	178	366	792
Syphilis (Primary & Secondary): Civilian	598	657	540	6,351	6,455	5,070
Military	6	2	6	97	78	77
Toxic-shock syndrome	9	N	N	67	N	N
Tuberculosis	451	541	541	4,022	4,431	4,506
Tularemia	2	1	1	28	16	16
Typhoid fever	4	8	7	60	75	75
Typhus fever, tick-borne (RMSF)	-	1	1	9	16	11
Rabies, animal	146	112	79	967	866	866

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1983		Cum. 1983
Anthrax	-	Plague	-
Botulism: Foodborne	5	Poliomyelitis: Total	1
Infant (Calif. 1, Hawaii 1)	12	Paralytic	1
Other	-	Psittacosis (Ohio 1, Kans. 2, Calif. 1)	11
Brucellosis (Ga. 1, Tenn. 1)	20	Rabies, human (Mass. 1)	1
Cholera	-	Tetanus (Calif. 1)	8
Congenital rubella syndrome	6	Trichinosis (Mass. 1, Md. 1)	5
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	2
Leptospirosis	4		

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

TABLE III. Cases of specified notifiable diseases, United States, weeks ending  
March 12, 1983 and March 13, 1982 (10th week)

Reporting Area	Aseptic Mening- itis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel- losis	Leprosy	Malaria
		Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied			
		1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1982	1983	1983	1983	1983	1983	Cum. 1983
UNITED STATES	58	157	11	171,525	181,179	439	393	62	157	12	42	114
NEW ENGLAND	1	7	-	4,516	4,144	2	20	-	21	-	-	1
Maine	-	-	-	260	205	-	1	-	-	-	-	-
N.H.	-	-	-	128	156	1	-	-	-	-	-	-
Vt.	-	-	-	74	87	-	-	-	-	-	-	-
Mass.	-	5	-	2,015	1,907	1	13	-	21	-	-	-
R.I.	-	-	-	244	295	-	3	-	-	-	-	-
Conn.	1	2	-	1,795	1,494	-	3	-	-	-	-	1
MID ATLANTIC	10	24	2	21,998	21,910	56	44	5	9	-	3	18
Upstate N.Y.	3	9	-	3,173	3,398	4	7	1	1	-	-	6
N.Y. City	1	6	-	9,064	9,623	19	6	-	-	-	3	8
N.J.	2	3	-	4,230	3,826	5	17	2	5	-	-	3
Pa.	4	6	2	5,531	5,063	28	14	2	3	-	-	1
E.N. CENTRAL	7	33	2	20,819	25,436	36	47	7	5	9	2	5
Ohio	3	15	1	6,114	7,207	17	22	2	4	6	1	-
Ind.	1	4	1	2,751	3,021	-	2	-	-	-	-	-
Ill.	-	-	-	3,030	6,849	2	7	-	-	-	1	1
Mich.	3	13	-	6,793	6,018	16	16	5	1	3	-	4
Wis.	-	1	-	2,131	2,341	1	-	-	-	-	-	-
W.N. CENTRAL	3	11	1	8,514	8,306	6	7	5	2	-	-	4
Minn.	-	-	-	1,264	1,180	3	5	1	-	-	-	-
Iowa	1	10	-	877	934	-	-	2	-	-	-	2
Mo.	2	-	-	4,075	3,750	-	2	2	1	-	-	1
N. Dak.	-	-	-	79	108	-	-	-	-	-	-	-
S. Dak.	-	-	-	235	241	-	-	-	-	-	-	-
Nebr.	-	1	-	483	515	-	-	-	-	-	-	-
Kans.	-	-	1	1,501	1,578	3	-	-	1	-	-	1
S. ATLANTIC	9	29	2	44,707	46,497	52	78	6	22	-	1	16
Del.	-	-	-	884	713	-	-	-	-	-	-	-
Md.	1	3	-	5,850	6,243	1	7	-	2	-	-	3
D.C.	-	-	-	3,076	2,289	-	2	-	-	-	-	2
Va.	-	12	1	3,736	3,843	3	17	1	1	-	-	3
W. Va.	-	-	-	430	515	2	-	1	-	-	-	1
N.C.	2	6	-	5,914	7,587	4	5	-	3	-	-	-
S.C.	1	1	-	4,458	4,239	17	3	-	2	-	-	1
Ga.	2	1	-	9,580	7,650	6	22	1	3	-	-	1
Fla.	3	6	1	10,779	13,418	19	22	3	11	-	1	5
E.S. CENTRAL	1	6	2	15,426	14,933	45	37	4	6	1	-	2
Ky.	-	-	-	1,958	1,992	20	6	1	2	-	-	-
Tenn.	1	1	-	5,757	5,674	7	18	2	-	-	-	-
Ala.	-	5	2	5,037	4,544	13	10	1	4	1	-	1
Miss.	-	-	-	2,674	2,723	5	3	-	-	-	-	1
W.S. CENTRAL	8	15	-	24,896	25,215	74	37	4	56	-	2	7
Ark.	1	-	-	2,007	2,080	-	2	1	6	-	-	1
La.	1	2	-	3,989	4,158	22	4	1	1	-	-	-
Okla.	2	4	-	2,939	2,646	2	6	2	4	-	-	3
Tex.	4	9	-	15,961	16,331	50	25	-	45	-	2	3
MOUNTAIN	2	8	-	5,244	6,676	28	20	3	7	2	4	5
Mont.	-	-	-	265	305	-	1	-	-	-	-	-
Idaho	-	-	-	260	267	-	2	-	-	-	-	-
Wyo.	1	1	-	159	204	-	1	-	-	-	-	-
Colo.	1	2	-	1,519	1,856	9	6	1	3	-	1	2
N. Mex.	-	-	-	711	827	9	3	2	-	-	-	1
Ariz.	-	-	-	1,210	1,826	4	-	-	1	2	3	2
Utah	-	5	-	257	255	4	5	-	3	-	-	-
Nev.	-	-	-	863	1,136	2	2	-	-	-	-	-
PACIFIC	17	24	2	25,405	28,062	140	103	28	29	-	30	56
Wash.	1	2	-	1,721	2,392	12	7	11	1	-	2	2
Oreg.	-	-	-	1,279	1,538	32	8	1	4	-	1	2
Calif.	13	20	2	21,295	22,927	90	82	15	24	-	20	52
Alaska	1	-	-	589	722	1	6	1	-	-	-	-
Hawaii	2	2	-	521	483	5	-	-	-	-	7	-
Guam	U	-	-	26	26	U	U	U	U	U	-	-
P.R.	5	-	-	542	591	16	11	-	17	-	-	1
I.	-	-	-	57	46	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	92	U	U	U	U	U	-	-

N: Not notifiable

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending  
March 12, 1983 and March 13, 1982 (10th week)

Reporting Area	Measles (Rubeola)					Meningo- coccal infections	Mumps			Pertussis			Rubella		
	Indigenous		Imported*		Total		1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
	1983	Cum. 1983	1983	Cum. 1983	Cum. 1982										
UNITED STATES	20	115	2	36	121	598	120	793	1,037	33	231	189	21	178	366
NEW ENGLAND	-	-	-	-	5	29	3	37	78	1	10	15	2	4	8
Maine	-	-	-	-	-	5	-	5	18	-	-	-	-	-	-
N.H.	-	-	-	-	-	1	1	10	8	-	2	4	-	-	8
Vt.	-	-	-	-	2	-	-	4	3	-	1	-	-	1	-
Mass.	-	-	-	-	-	9	2	9	35	1	6	4	2	3	-
R.I.	-	-	-	-	-	1	-	3	7	-	1	5	-	-	-
Conn.	-	-	-	-	3	13	-	6	7	-	-	2	-	-	-
MID ATLANTIC	-	-	1	4	21	86	6	49	72	4	49	23	-	9	23
Upstate N.Y.	-	-	-	1	11	31	3	21	21	1	25	14	-	6	15
N.Y. City	-	-	1 §	2	8	9	-	5	12	-	5	3	-	2	8
N.J.	-	-	-	1	-	13	1	11	16	-	6	2	-	1	-
Pa.	-	-	-	-	2	33	2	12	23	3	13	4	-	-	-
E.N. CENTRAL	-	26	-	10	16	95	78	414	512	6	53	62	1	20	45
Ohio	-	-	-	1	-	42	62	247	308	-	24	13	-	1	-
Ind.	-	-	-	1	1	14	1	9	17	-	3	7	-	-	5
Ill.	-	26	-	4	8	13	6	28	24	5	20	19	1	7	11
Mich.	-	-	-	5	7	24	9	106	101	1	3	7	-	4	15
Wis.	-	-	-	-	-	2	-	24	62	-	3	16	-	8	14
W.N. CENTRAL	-	-	-	-	-	32	5	62	35	1	10	9	3	13	13
Minn.	-	-	-	-	-	3	1	7	3	-	-	3	-	3	1
Iowa	-	-	-	-	-	6	1	28	12	-	2	-	-	-	-
Mo.	-	-	-	-	-	16	-	2	3	-	2	4	-	-	8
N. Dak.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1
Nebr.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Kans.	-	-	-	-	-	5	3	25	17	1	6	-	3	10	3
S. ATLANTIC	8	46	-	4	16	146	4	34	104	7	33	17	2	14	14
Del.	-	-	-	-	-	-	-	3	3	-	-	4	-	-	-
Md.	-	1	-	-	1	20	-	4	7	-	-	-	-	1	4
D.C.	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-
Va.	-	1	-	1	10	19	-	8	14	2	10	1	-	1	5
W. Va.	-	-	-	-	1	1	2	8	52	-	2	3	-	-	1
N.C.	-	-	-	-	-	29	1	4	4	1	1	1	-	-	-
S.C.	-	-	-	3	-	18	-	2	3	-	2	2	-	-	1
Ga.	-	2	-	-	-	23	1	5	2	3	14	1	-	4	1
Fla.	8	42	-	-	3	35	-	-	19	1	4	4	2	8	2
E.S. CENTRAL	-	-	-	-	4	39	-	10	16	-	3	3	-	3	8
Ky.	-	-	-	-	1	6	-	6	7	-	1	-	-	3	8
Tenn.	-	-	-	-	3	14	-	4	5	-	2	2	-	-	-
Ala.	-	-	-	-	-	13	-	-	2	-	-	-	-	-	-
Miss.	-	-	-	-	-	6	-	-	2	-	-	1	-	-	-
W.S. CENTRAL	-	-	-	11	2	70	9	78	46	4	35	10	3	29	27
Ark.	-	-	-	11	-	3	-	1	3	-	1	-	-	-	-
La.	-	-	-	-	-	10	-	-	-	-	2	-	-	-	-
Okla.	-	-	-	-	-	10	-	-	-	1	8	1	-	-	1
Tex.	-	-	-	-	2	47	9	77	43	3	24	9	3	29	26
MOUNTAIN	-	-	-	1	-	17	3	26	24	10	31	12	2	8	11
Mont.	-	-	-	-	-	-	-	-	2	-	1	-	-	1	1
Idaho	-	-	-	-	-	2	-	1	2	1	2	-	2	2	-
Wyo.	-	-	-	-	-	1	-	-	1	2	2	1	-	1	3
Colo.	-	-	-	1	-	8	1	3	4	5	20	4	-	-	1
N. Mex.	-	-	-	-	-	2	-	-	-	-	4	3	-	-	1
Ariz.	-	-	-	-	-	1	-	16	8	2	2	4	-	3	1
Utah	-	-	-	-	-	3	2	6	5	-	-	-	-	1	3
Nev.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1
PACIFIC	12	43	1	6	57	84	12	83	150	-	7	38	8	78	217
Wash.	-	1	-	-	14	16	1	10	23	-	1	6	-	-	13
Oreg.	1	3	-	-	-	9	-	-	-	-	-	4	-	5	2
Calif.	11	38	1 †	6	42	57	10	61	123	-	6	28	8	73	200
Alaska	-	-	-	-	-	-	1	7	3	-	-	-	-	-	1
Hawaii	-	1	-	-	1	2	-	5	1	-	-	-	-	-	1
Guam	U	-	U	-	-	-	U	-	1	U	-	-	U	-	1
P.R.	-	19	-	-	28	5	3	30	10	-	2	4	-	1	2
V.I.	-	-	-	5	-	-	-	-	-	-	-	-	-	1	-
Pac. Trust Terr.	U	-	U	-	-	-	U	-	-	U	-	-	U	-	-

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

U: Unavailable

†International

§Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending  
March 12, 1983 and March 13, 1982 (10th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1983	Cum. 1982	1983	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983
UNITED STATES	6,351	6,455	9	451	4,022	28	60	9	967
NEW ENGLAND	160	118	2	20	95	-	2	1	1
Maine	3	-	1	2	9	-	-	-	1
N.H.	3	-	-	4	10	-	-	-	-
Vt.	1	-	-	-	1	-	-	-	-
Mass.	112	86	-	6	39	-	2	1	-
R.I.	3	8	-	2	9	-	-	-	-
Conn.	38	24	-	6	27	-	-	-	-
MID ATLANTIC	739	864	2	106	821	-	14	-	21
Upstate N.Y.	33	83	-	28	158	-	3	-	16
N.Y. City	456	547	2	41	314	-	5	-	-
N.J.	145	95	-	19	182	-	6	-	-
Pa.	105	139	-	18	167	-	-	-	5
E.N. CENTRAL	247	393	2	73	624	-	8	1	53
Ohio	100	64	-	8	79	-	2	-	6
Ind.	38	45	-	6	85	-	1	-	1
Ill.	36	205	-	15	296	-	3	-	26
Mich.	54	60	2	40	133	-	2	1	-
Wis.	19	19	-	4	31	-	-	-	20
W.N. CENTRAL	78	121	-	14	137	9	1	2	136
Minn.	38	22	-	-	18	-	-	-	33
Iowa	2	3	-	1	18	-	-	-	40
Mo.	28	73	-	6	76	8	1	2	16
N. Dak.	-	3	-	-	-	-	-	-	12
S. Dak.	-	-	-	3	10	-	-	-	11
Nebr.	1	3	-	2	4	-	-	-	7
Kans.	9	17	-	2	11	1	-	-	17
S. ATLANTIC	1,662	1,753	1	67	769	7	10	1	393
Del.	10	2	-	-	1	-	-	-	-
Md.	83	110	-	7	128	2	4	-	181
D.C.	60	112	-	3	25	-	-	-	-
Va.	118	118	1	1	43	1	3	-	145
W. Va.	5	6	-	5	37	-	2	-	19
N.C.	165	140	-	4	70	4	-	-	6
S.C.	138	95	-	8	71	-	-	-	-
Ga.	300	375	-	23	140	-	-	-	33
Fla.	783	795	-	16	254	-	1	1	7
E.S. CENTRAL	447	507	-	46	395	4	1	3	77
Ky.	26	28	-	12	112	-	-	-	17
Tenn.	113	132	-	12	110	3	1	1	50
Ala.	188	167	-	15	104	-	-	2	10
Miss.	120	180	-	7	69	1	-	-	-
W.S. CENTRAL	1,684	1,653	-	45	367	6	1	-	178
Ark.	29	42	-	8	26	4	-	-	26
La.	351	347	-	9	52	2	-	-	6
Okla.	46	29	-	3	50	-	-	-	22
Tex.	1,258	1,235	-	25	239	-	1	-	124
MOUNTAIN	132	178	1	14	112	1	2	-	37
Mont.	2	1	-	3	11	-	-	-	28
Idaho	1	13	-	1	8	-	-	-	-
Wyo.	2	7	-	-	2	-	-	-	-
Colo.	37	59	1	2	8	-	1	-	-
N. Mex.	50	33	-	1	18	1	-	-	2
Ariz.	23	32	-	3	48	-	1	-	7
Utah	6	5	-	2	10	-	-	-	-
Nev.	11	28	-	2	7	-	-	-	-
PACIFIC	1,202	868	1	66	702	1	21	1	71
Wash.	39	27	-	2	41	-	2	-	-
Oreg.	19	31	-	1	30	-	-	-	-
Calif.	1,119	781	1	57	579	1	19	1	65
Alaska	5	6	-	-	4	-	-	-	6
Hawaii	20	23	-	6	48	-	-	-	-
Guam	-	-	U	U	-	-	-	-	-
P.R.	110	120	-	5	96	-	-	-	11
V.I.	5	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,\* week ending  
March 12, 1983 (10th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	694	511	135	24	6	18	51	S. ATLANTIC	1,361	819	333	112	54	43	72
Boston, Mass.	193	124	45	10	3	11	17	Atlanta, Ga.	163	93	40	16	5	9	-
Bridgeport, Conn.	44	36	6	1	1	-	3	Baltimore, Md.	239	148	53	18	13	7	6
Cambridge, Mass.	33	24	8	1	-	-	2	Charlotte, N.C.	79	52	21	3	2	1	7
Fall River, Mass.	34	23	10	1	-	-	1	Jacksonville, Fla.	101	73	22	4	2	-	14
Hartford, Conn.	49	37	9	2	-	1	-	Miami, Fla.	132	71	33	14	7	7	2
Lowell, Mass.	21	21	-	-	-	-	3	Norfolk, Va.	59	38	12	4	3	2	7
Lynn, Mass.	25	16	6	1	2	-	-	Richmond, Va.	85	49	28	2	4	2	8
New Bedford, Mass.	24	20	3	1	-	-	-	Savannah, Ga.	51	28	17	5	-	1	6
New Haven, Conn.	37	26	7	1	-	3	1	St. Petersburg, Fla.	106	84	16	2	3	1	6
Providence, R.I.	59	46	13	-	-	-	2	Tampa, Fla.	79	45	23	7	1	3	6
Somerville, Mass.	8	5	3	-	-	-	-	Washington, D.C.	219	117	57	27	9	9	8
Springfield, Mass.	55	39	12	2	-	2	3	Wilmington, Del.	48	21	11	10	5	1	2
Waterbury, Conn.	44	37	6	1	-	-	5	E.S. CENTRAL	759	506	175	43	16	19	41
Worcester, Mass.	68	57	7	3	-	1	14	Birmingham, Ala.	93	54	28	6	2	3	1
MID. ATLANTIC	2,856	1,925	640	160	61	68	133	Chattanooga, Tenn.	61	46	10	1	-	4	7
Albany, N.Y.	44	28	9	3	1	3	1	Knoxville, Tenn.	53	37	11	1	2	2	-
Allentown, Pa.	15	13	2	-	-	-	-	Louisville, Ky.	124	89	26	3	2	4	12
Buffalo, N.Y.	156	92	47	8	4	5	16	Memphis, Tenn.	153	99	38	14	2	-	14
Camden, N.J.	34	23	10	-	1	-	2	Mobile, Ala.	89	58	21	3	4	3	1
Elizabeth, N.J.	27	20	6	-	1	-	2	Montgomery, Ala.	64	41	13	6	2	2	2
Erie, Pa.†	52	34	11	3	1	3	3	Nashville, Tenn.	122	82	28	9	2	1	4
Jersey City, N.J.	65	41	22	-	2	-	1	W.S. CENTRAL	1,270	770	319	86	47	48	69
N.Y. City, N.Y.	1,454	991	314	92	29	28	52	Austin, Tex.	58	43	10	5	-	-	6
Newark, N.J.	66	33	18	9	2	2	6	Baton Rouge, La.	56	31	18	3	4	-	9
Paterson, N.J.	30	18	8	1	1	2	2	Corpus Christi, Tex.	26	17	6	1	2	-	1
Philadelphia, Pa.†	397	262	90	26	11	8	20	Dallas, Tex.	199	117	44	19	6	13	-
Philadelphia, Pa.†	69	40	23	2	2	2	2	El Paso, Tex.	47	29	12	4	1	1	4
Reading, Pa.	33	27	5	1	-	-	4	Fort Worth, Tex.	97	64	26	1	3	3	8
Rochester, N.Y.	133	97	20	8	-	8	9	Houston, Tex.	220	119	69	20	5	7	7
Schenectady, N.Y.	28	25	3	-	-	-	-	Little Rock, Ark.	95	51	29	4	6	5	10
Scranton, Pa.†	32	19	10	2	1	-	1	New Orleans, La.	143	85	39	8	6	5	4
Syracuse, N.Y.	112	85	19	1	4	3	7	San Antonio, Tex.	205	129	39	15	13	9	9
Trenton, N.J.	51	34	11	3	-	3	-	Shreveport, La.	53	37	12	2	-	2	-
Utica, N.Y.	26	19	7	-	-	-	3	Tulsa, Okla.	71	48	15	4	1	3	11
Yonkers, N.Y.	32	24	5	1	1	1	2	MOUNTAIN	759	497	168	41	26	27	39
E.N. CENTRAL	2,297	1,481	528	134	57	97	103	Albuquerque, N.Mex.	82	45	28	6	2	1	6
Akron, Ohio	59	47	10	1	-	1	2	Alto. Springs, Colo.	46	30	6	7	3	-	4
Canton, Ohio	47	34	8	4	-	1	5	Denver, Colo.	155	102	33	7	6	7	5
Chicago, Ill.	465	283	113	36	11	22	14	Las Vegas, Nev.	113	69	37	3	-	4	5
Cincinnati, Ohio	184	109	48	12	6	9	17	Ogden, Utah	16	10	1	2	1	2	1
Cleveland, Ohio	163	102	43	10	4	4	2	Phoenix, Ariz.	156	116	25	6	2	7	4
Columbus, Ohio	138	83	35	6	3	11	6	Pueblo, Colo.	14	12	1	-	1	-	-
Dayton, Ohio	121	84	27	4	-	6	4	Salt Lake City, Utah	66	42	12	5	3	4	2
Detroit, Mich.	267	169	56	23	11	8	4	Tucson, Ariz.	111	71	25	5	8	2	12
Evansville, Ind.	49	32	13	3	1	-	3	PACIFIC	1,564	1,055	323	102	35	47	90
Fort Wayne, Ind.	58	33	15	2	6	2	2	Berkeley, Calif.	22	14	3	2	1	2	-
Gary, Ind.	17	9	5	1	1	1	1	Fresno, Calif.	66	50	10	2	1	3	4
Grand Rapids, Mich.	68	55	10	1	1	1	4	Fresno, Calif.	23	17	4	1	-	1	1
Indianapolis, Ind.	164	112	32	9	1	10	6	Honolulu, Hawaii	65	38	19	4	-	4	5
Madison, Wis.	40	24	6	4	3	3	8	Long Beach, Calif.	106	78	15	7	3	3	3
Milwaukee, Wis.	132	88	36	6	1	1	4	Los Angeles, Calif.	284	184	67	17	7	8	10
Peoria, Ill.	56	29	13	3	2	9	6	Oakland, Calif.	83	62	16	2	2	1	12
Rockford, Ill.	41	31	9	-	1	-	1	Pasadena, Calif.	38	26	6	4	1	1	4
South Bend, Ind.	60	35	20	3	-	2	6	Portland, Oreg.	99	66	23	5	-	5	4
Toledo, Ohio	90	65	16	5	2	2	8	Sacramento, Calif.	66	49	10	4	1	2	5
Youngstown, Ohio	78	57	13	1	3	4	1	San Diego, Calif.	153	100	28	15	5	5	13
W.N. CENTRAL	800	525	181	46	22	26	52	San Francisco, Calif.	170	101	38	20	5	6	7
Des Moines, Iowa	77	53	18	2	3	1	7	San Jose, Calif.	169	117	36	8	5	2	16
Duluth, Minn.	31	23	6	2	-	-	-	Seattle, Wash.	138	95	33	7	2	1	1
Kansas City, Kans.	32	19	9	1	2	1	-	Spokane, Wash.	45	33	8	1	1	2	2
Kansas City, Mo.	129	94	21	6	4	4	10	Tacoma, Wash.	37	25	7	3	1	1	3
Lincoln, Neb.	47	35	7	3	1	1	9	TOTAL	12,360	8,089	2,802	748	324	393	650
Minneapolis, Minn.	90	60	16	5	4	5	5								
Omaha, Neb.	111	66	32	6	3	4	4								
St. Louis, Mo.	155	88	48	11	1	7	8								
St. Paul, Minn.	64	49	8	3	2	2	5								
Wichita, Kans.	64	38	16	7	2	1	4								

\* 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.

*Influenza — Continued*

have been obtained from patients at this facility and identified at the Maine state health laboratory and at CDC.

Arkansas and New Jersey have recently reported their first influenza virus isolates of the season; both were type A(H3N2).

For the week ending March 11, 1983, an excess in the ratio of pneumonia and influenza (P&I) deaths to total deaths was reported from 121 cities for the ninth consecutive week. The ratio was 5.3, and the expected ratio was 4.2. Five states (Iowa, Kentucky, Missouri, Nebraska, and Virginia) reported widespread influenza activity, and 11 states reported regional activity.

*Reported by B Zolov, MD, Portland, A Littlefield, E Cotton, M Duplessis, T Lee, PhD, Maine State Dept of Human Svcs; Respective state epidemiologists and laboratory directors; Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, Epidemic Investigations Br, Hospital Infections Program, WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.*

## **Behavioral Risk Factor Prevalence Surveys — United States, First Quarter 1982**

The Surgeon General's Report on Health Promotion and Disease Prevention emphasized that simple measures to enhance the prospects of good health are within the practical grasp of most Americans (1). A variety of behavioral risk factors, e.g., alcohol misuse, cigarette smoking, obesity, sedentary lifestyle, lack of seat belt use, and uncontrolled hypertension, influence individual health. In 1982, several states began obtaining data on these risk factors for the first time.

During the first quarter of 1982, five states (Alabama, Florida, Nebraska, Virginia, and West Virginia) conducted behavioral risk factor surveys. Preliminary analysis of data (Table 1) on adults 18 years and over indicates the following:

1. Acute, heavy drinking was higher for young adults (both male and female) ages 18-34 than for older adults; rates for young males were higher than those for young females.
2. Young men were more likely than older adults to drive while intoxicated.
3. At all ages, men, more frequently than women, reported misuse of alcohol.
4. Men were more likely than women to have a sedentary lifestyle; for both sexes, sedentary living increased with age.
5. Obesity was more prevalent in the middle adult ages (35-54), and was reported somewhat more often by women.
6. Cigarette smoking was more prevalent among men than women and was more prevalent for the middle ages (35-54 years).
7. Failure to use seat belts was widespread for all ages and both sexes.
8. Uncontrolled hypertension increased with age.

These self-reported data were collected through random digit-dialing telephone surveys utilizing a standard questionnaire developed jointly by CDC and health education/risk reduction personnel of the five state health departments. The data are age-adjusted and weighted according to the respondents' probability of selection and are therefore comparable from state to state. However, the small sample size of subpopulations from state to state should be considered when making comparisons.

*Behavioral Risk Factors – Continued*

Reported by SE Jones, Bureau of Primary Prevention, Special Svcs Div, Alabama State Dept of Public Health; NB Watkins, Health Program Office, Florida State Dept of Health and Rehabilitative Svcs; D Snapp, Community Health Education, Nebraska State Dept of Health; RP Hyner, Div of Health Education and Information, Virginia State Dept of Health; AP Holmes, Health Statistics Center, West Virginia State Dept of Health; Div of Nutrition, Center for Health Promotion and Education, CDC.

**Editorial Note:** The particular behaviors addressed in these studies were selected because of their association with eight of the 10 leading causes of premature death; they may ultimately contribute to over half the premature mortality in the United States. Health promotion and education programs are increasingly offered by health, education, volunteer, and other agencies that address these risk factors. The relevance of the need for such programs is emphasized by the finding of a significant prevalence of practices that can contribute to illness, injury, and premature death. For example, although smoking levels have declined nationally, between one-fourth and one-third of adults in these five states reported smoking cigarettes. For young adult males, acute, heavy drinking in the previous month ranged from 32% to 48%, and up to 29% reported driving after drinking too much alcohol. These and similar data suggest that lifestyle change offers a substantial potential to individuals who wish to reduce risks of disease, disability, and premature death.

These surveys represent a growing trend by state health departments to collect behavioral risk factor information in their efforts to monitor the health status of their citizens. Using a standardized core questionnaire greatly enhances the ability of states to compare survey results and to gain additional insight and support for program decisions.

*Reference*

1. United States. Surgeon General's Office. Healthy people: the Surgeon General's report on health promotion and disease prevention. Rockville, Md.: Department of Health, Education, and Welfare 1979. (DHEW publication no. [PHS] 79-55071).

**TABLE 1. Behavioral risk factor prevalence rates\* in five states, by age group and sex — first quarter 1982**

Risk factor, bystate	Age group (years), by sex								Total respondents	
	18-34		35-54		≥55		All ages		Number	Rate
	M	F	M	F	M	F	M	F		
<b>1. Drinking &amp; driving†</b>										
Alabama	15.2	4.6	2.1	0.0	2.9	0.0	8.0	1.7	693	4.7
Florida	13.4	0.0	4.8	3.3	1.2	0.0	6.3	1.0	460	3.8
Nebraska	29.7	3.4	7.4	0.7	1.6	0.0	15.8	1.5	471	8.4
Virginia	12.0	8.8	4.2	0.0	0.0	0.0	5.9	2.9	504	4.3
W. Virginia	8.4	1.7	2.2	1.4	0.0	0.0	4.0	1.0	473	2.4
<b>2. Acute heavy drinking‡</b>										
Alabama	36.7	13.5	23.3	2.4	18.6	0.9	25.0	5.8	693	14.9
Florida	47.7	17.1	26.9	15.0	21.6	4.2	31.7	11.7	460	22.3
Nebraska	45.4	24.6	26.2	14.8	12.5	2.5	31.5	15.0	471	22.9
Virginia	38.3	22.4	24.1	5.3	9.2	3.2	25.4	10.3	504	17.6
W. Virginia	32.0	14.4	17.6	4.1	8.0	1.7	20.1	6.8	473	13.1

\*Per 100,000 population.

†Person who drives after having too much to drink, one or more times in past month.

‡Person who drinks five or more drinks on an occasion, one or more times in past month.

(Continued on next page)

## Behavioral Risk Factors — Continued

TABLE 1. Behavioral risk factor prevalence rates\* in five states, by age group and sex — first quarter 1982 — Continued

Risk factor, by state	Age group (years), by sex								Total respondents	
	18-34		35-54		≥55		All ages		Number	Rate
	M	F	M	F	M	F	M	F		
<b>3. Chronic heavy drinking¶</b>										
Alabama	7.2	1.9	9.0	0.9	10.4	0.0	8.6	1.0	693	4.5
Florida	18.1	5.4	22.1	9.2	22.8	6.9	21.4	6.8	460	14.5
Nebraska	10.8	2.2	7.4	7.0	5.5	0.0	8.7	3.1	471	5.8
Virginia	13.8	4.2	12.9	4.3	3.8	5.8	10.6	4.7	504	7.5
W. Virginia	10.1	0.0	5.1	0.0	6.4	0.0	7.5	0.0	473	3.5
<b>4. Sedentary lifestyle**</b>										
Alabama	5.2	9.2	6.7	10.4	28.8	19.1	11.8	12.6	693	12.3
Florida	10.1	6.2	17.2	10.8	18.0	14.6	15.5	10.5	460	13.1
Nebraska	4.9	10.1	16.4	13.4	19.5	8.4	12.9	10.3	471	11.6
Virginia	5.1	9.4	19.3	15.5	19.8	14.6	14.1	13.2	504	13.6
W. Virginia	5.4	7.8	16.2	4.8	30.4	9.9	15.6	7.6	473	11.4
<b>5. Obesity††</b>										
Alabama	15.1	12.6	33.2	40.6	20.3	25.3	22.7	25.7	693	24.2
Florida	17.4	14.0	28.3	39.5	21.7	40.1	22.5	30.7	460	26.3
Nebraska	16.0	19.5	32.8	27.1	23.4	25.0	22.7	23.5	471	23.1
Virginia	15.4	14.9	25.9	15.2	37.2	27.6	25.0	18.9	504	21.8
W. Virginia	20.2	21.6	21.3	17.7	31.5	34.1	16.0	32.0	473	25.6
<b>6. Cigarette smoking§§</b>										
Alabama	46.3	25.7	40.3	35.4	20.8	12.9	37.9	24.6	693	30.8
Florida	34.2	36.4	39.3	36.7	28.6	23.6	33.6	30.6	460	32.2
Nebraska	25.3	25.7	39.3	28.2	14.1	10.3	27.4	21.6	471	24.4
Virginia	37.1	38.2	35.5	29.2	28.9	22.3	34.5	29.9	504	32.1
W. Virginia	31.7	31.1	45.8	33.3	34.7	17.7	36.8	27.0	473	31.7
<b>7. Uncontrolled hypertension¶¶</b>										
Alabama	3.0	0.4	6.3	10.4	14.3	6.3	6.9	5.3	693	6.1
Florida	1.4	0.0	8.6	3.9	3.8	6.3	4.5	3.5	460	4.0
Nebraska	2.7	1.2	5.7	0.7	6.9	3.4	5.1	1.6	471	3.3
Virginia	1.1	0.0	7.8	2.2	1.5	4.0	3.6	2.0	504	2.8
W. Virginia	0.0	3.3	2.8	0.7	4.8	13.8	2.3	6.3	473	4.4
<b>8. Lack of seat belt use***</b>										
Alabama	60.4	58.5	64.4	66.2	60.1	57.1	61.6	60.6	693	61.1
Florida	61.1	71.3	64.1	56.7	52.8	56.9	59.2	61.3	460	60.2
Nebraska	70.3	60.3	66.9	69.7	55.6	59.0	65.8	63.2	471	64.4
Virginia	60.6	50.6	44.2	71.1	49.6	50.3	52.2	49.9	504	51.0
W. Virginia	73.0	58.9	72.5	68.7	68.0	62.1	71.6	62.8	473	66.9

¶ Person whose average total alcoholic beverage intake exceeds 56 drinks per month.

\*\* Combined low level of activity from exercise, work, and recreation.

†† 120% of ideal weight (ideal weight defined as the mid-value of the medium-frame person on the Metropolitan height/weight tables).

§§ Current cigarette smoker.

¶¶ Person who states having been told by medical professional he/she was hypertensive and who states still has high blood pressure.

\*\*\* Person who states seldom or never using a seat belt while riding in or driving a car.

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The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and distributed by the National Technical Information Service, Springfield, Virginia. The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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