

MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

- Epidemiologic Notes and Reports**
293 Morbidity Study at a Chemical Dump — New York
294 *Campylobacter* Sepsis Associated with "Nutritional Therapy" — California
296 Diabetic Nephropathy — Georgia
Current Trends
301 Urban Rat Control — United States

Epidemiologic Notes and Reports

Morbidity Study at a Chemical Dump — New York

In June and August 1979, the National Institute for Occupational Safety and Health (NIOSH) conducted industrial hygiene and engineering surveys and performed a cross-sectional medical study of 428 persons who lived or worked near the Hyde Park Landfill, a chemical disposal site just north of Niagara Falls, New York. Adjacent to the landfill are a metal-sand manufacturing plant employing 260 persons, a structural-steel fabricating shop employing 50 persons, and 2 small businesses. Bloody Run Creek flows north from the landfill, through a conduit under a shipping-drum manufacturing plant that employs 90 persons, through a residential neighborhood of about 50 persons, and, as an underground storm drain, along the edge of a private college that employs 90 maintenance workers.

The landfill was used from 1953 to 1975 by a chemical manufacturer as a disposal site for an estimated 80,200 tons of chemical waste, including many chlorinated hydrocarbons (1). Following numerous complaints of odors, skin irritation, and metal corrosion attributed to vapors, mist, and dust from the landfill, a compacted clay cover was installed over the landfill in 1978, and a drainage system, around the perimeter in 1979.

NIOSH investigators found lindane, mirex, and dioxins in parts per billion (ppb) levels in settled dust samples from rafters at all 3 companies, and all 3 substances were found in sediment from Bloody Run Creek.

The medical study included an interviewer-administered questionnaire composed of sections excerpted, without modification, from the Health and Nutrition Examination Survey (HANES), a nationwide health survey conducted from 1971 to 1973 by the National Center for Health Statistics (2); a limited physical examination focusing on skin, mucous membranes, thyroid, and blood pressure; a urine analysis; and blood tests for liver enzymes, hematologic parameters, creatinine, and, in a 20% sample of participants, lindane and mirex.

Of the 490 current employees of the 3 companies and the college (maintenance jobs), 290 (59%) participated. The 246 who were at least 25 years old were each matched by age, sex, race, income, and marital status with 2 employed persons from the HANES sample. Of 180 evaluated variables (reported health conditions, health risk factors, or laboratory results), 9 (5%) were statistically significant indicators of ill health ($p < 0.025$, odds ratio > 2.0) in the Hyde Park group: surgery for hiatus hernia (odds ratio 7.6), other abdominal surgery (4.6), loss of blood from stomach or bowels (5.6), hiatus hernia (4.5), benign tumor (3.4), frequent cough (3.7), use of skin medicine (2.6), skin moles (2.5), and leg pain (2.5).

Of 91 pregnancies in the Hyde Park group, 7 (8%) ended in miscarriage, compared

Chemical Dump — Continued

with a rate of 14% in HANES. No participant had evidence of chloracne. Thyroid examinations detected 1 nodule, previously diagnosed as a "cold" nodule. Systolic and diastolic blood pressures were lower in the Hyde Park group than in the HANES matches. Compared with the HANES data, none of the 4 Hyde Park groups, individually or combined, had higher serum creatinine or liver enzyme levels, nor did they have lower hemoglobin, hematocrit, or red blood cell counts. None of the 55 participants who had blood lindane and mirex determinations had detectable levels of mirex; 2 employees of the shipping-drum plant and 1 from the college had 0.05 ppb of lindane.

Reported by R Rothenberg, MD, State Epidemiologist, New York State Dept of Health; and Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: This study was designed to provide a rapid assessment of the health status of people who lived or worked in the vicinity of the Hyde Park Landfill. While the cross-sectional prevalence approach is helpful in identifying existing disease, it is most useful when targeted at a specific health effect or the effects of a specific exposure rather than the more diffuse issue of intermittent, relatively low exposures to multiple toxic chemicals. Interpretation of this study is also limited by the low participation rate and the fact that a substantial portion of the sample population had not had a sufficient interval from first exposure for some health effects (e.g., cancer) to be manifest.

The reason for the relatively large odds ratio for hiatus hernia and related surgery is not apparent. Hiatus hernia is a common radiological finding (3), and unexplained gastrointestinal symptoms might be attributed to it. Thus, this apparent excess might be indicative of an increased prevalence of general gastrointestinal symptoms. These symptoms and the increased prevalence of other conditions such as benign tumors and cough might be indicative of exposure to occupational agents or to environmental agents such as landfill material. However, no definite associations were determined.

Although the study showed no consistent patterns of health effects, the environmental findings should not be overlooked. There is no reasonable source, other than the landfill, for the mirex found in the buildings and in the sediment of Bloody Run Creek. This illustrates the major danger posed by chemical landfills: the release of chemicals into the surrounding environment, particularly into water sources and the food chain.

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***Campylobacter* Sepsis Associated with "Nutritional Therapy" — California**

Between January 1979 and March 1981, 10 patients were reported to the San Diego County Department of Health Services to have sepsis caused by *Campylobacter fetus* subsp. *fetus* (formerly known as *Campylobacter fetus* subsp. *intestinalis*). In the previous

Campylobacter Sepsis — Continued

2 years, no infections caused by this organism had been reported. Nine of the 10 patients had been treated for severe underlying illness with "nutritional therapy" that had been administered in 1 of 2 clinics in the Tijuana area of Mexico; the 10th patient had treated himself at home with the same regimen recommended by the clinics.

Nine patients, who ranged in age from 32 to 75 years, had malignancies; the other patient was a 13-year-old girl who had systemic lupus erythematosus. Five of the patients were from California, 4 were from other states, and 1 was from Canada; 7 were females. All had been admitted to San Diego area hospitals for evaluation and treatment after their clinical status had worsened markedly. Five patients were comatose, usually in association with severe hyponatremia (serum sodium as low as 102 mEq/L), and 6 were febrile. *C. fetus* subsp. *fetus* was isolated from blood cultures from 9 patients and from peritoneal fluid from 1 patient. One patient who had metastatic melanoma died within 1 week of the septic episode.

The only exposure common to these patients was having had nutritional therapy within the previous week. This treatment consisted of freshly prepared raw fruit, vegetable juices, and raw calf's liver taken orally; coffee enemas were given as an adjunct. The duration of treatment ranged from 5-14 days. Since the therapy was administered in Mexico, it was not possible to culture any ingredients or equipment. The number of patients who received this therapy is not known.

Reported by MM Ginsberg, MD, MA Thompson, DrPH, CR Peter, PhD, DG Ramras, MD, San Diego County Dept of Health Services; J Chin, MD, State Epidemiologist; California Dept of Health Services; Enteric Diseases Br, Bacterial Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: In contrast to *C. jejuni*, which is a common cause of diarrheal illness in previously healthy persons, *C. fetus* subsp. *fetus* is an infrequent cause of human infections, usually resulting in systemic illness, and usually affecting debilitated persons with chronic hepatic, renal, or neoplastic disease, or with compromised immune function (1). The genital and intestinal tracts of cattle and sheep are the major reservoirs for the organism (2); however, in 2 studies of patients infected with this organism, fewer than half had significant exposures to animals (1,3). Bacteremia, intravascular infections, meningitis, and abscesses have most frequently been reported; diarrheal symptoms may not be an important feature of the infection (1,3,4).

The fact that all 10 of these patients had histories of receiving nutritional therapy strongly suggests that 1 or more of the components of that therapy was the source of infection. Colonic enemas administered as part of nutritional therapy have been reported as sources of enteric pathogens (6). Because 1 of the known reservoirs for this organism is the intestinal tract of cattle, and there has been a report of an infection in a patient who had eaten raw calf's liver (5), liver is considered the most likely vehicle of infection in the situation reported here. Physicians should be aware of the possibility of *Campylobacter* sepsis among their patients who receive such nutritional therapy.

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Diabetic Nephropathy — Georgia

Most cases of end-stage renal disease (ESRD) have been considered unpreventable. Approximately half of new ESRD cases are caused by hypertension and diabetes, diseases which are the targets of national disease-control programs. A small case-control study was conducted in Lowndes County (Valdosta area), Georgia, to ascertain possible risk factors in diabetics that might predispose persons to develop nephropathy and to determine those risk factors which could be targeted for control programs.

Each of 10 patients with diabetic nephropathy from the only dialysis unit in the area was matched with 3 controls from an internal medicine practice in the same area. Controls were matched to patients on the basis of age (± 5 years) and duration of diabetes as closely as possible (± 5 years for 26 controls, 6 years for 3 controls, and 7 for 1). Case-control, matched-pair analysis with variable matching ratio was used to test differences. Differences were expressed as odds ratios which approximate the relative risks for diseases of rare frequency, such as chronic renal failure.

In this study, the mean age of patients was 52.9 years and of controls, 54.2. The mean duration of diabetes was 17.4 years for patients and 15.5 for controls. For the factors not matched, 3 patients were white and 7 black, compared with 24 white controls and 6

(Continued on page 301)

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

DISEASE	24th WEEK ENDING		MEDIAN 1976-1980	CUMULATIVE, FIRST 24 WEEKS		
	June 20 1981	June 14 1980		June 20 1981	June 14 1980	MEDIAN 1976-1980
Aseptic meningitis	139	101	86	1,721	1,512	1,014
Brucellosis	7	2	2	70	77	77
Chickenpox	5,293	5,809	4,687	153,670	139,808	139,808
Diphtheria	—	—	—	3	2	35
Encephalitis: Primary (arthropod-borne & unspec.)	25	14	14	338	274	274
Post-infectious	1	9	7	42	94	97
Hepatitis, Viral: Type B	419	437	301	8,946	7,613	6,945
Type A	537	597	597	11,512	12,366	13,306
Type unspecified	231	283	185	5,164	5,082	4,097
Malaria	34	45	14	591	795	246
Measles (rubella)	34	521	1,120	2,137	10,761	19,755
Meningococcal infections: Total	47	51	40	1,966	1,483	1,317
Civilian	46	51	40	1,954	1,473	1,259
Military	1	—	—	10	10	11
Mumps	85	185	493	2,542	6,224	11,276
Pertussis	19	30	29	459	498	498
Rubella (German measles)	29	109	359	1,406	2,674	9,511
Tetanus	3	1	2	23	25	26
Tuberculosis	599	584	620	12,330	12,059	13,074
Tularemia	8	7	4	79	63	59
Typhoid fever	17	5	8	217	161	161
Typhus fever, tick-borne (Rky. Mt. spotted)	51	59	52	377	279	239
Veneral diseases:						
Gonorrhea: Civilian	19,120	19,033	19,451	444,778	432,053	432,053
Military	386	424	430	13,152	12,388	12,388
Syphilis, primary & secondary: Civilian	527	566	431	13,630	11,899	11,008
Military	10	2	3	172	144	140
Rabies in animals	128	136	75	3,310	3,114	1,361

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1981		CUM. 1981
Anthrax	—	Poliomyelitis: Total	—
Botulism (Utah 1, Calif. 1)	29	Paralytic	—
Cholera	1	Psittacosis (Ohio 1, Calif. 1)	52
Congenital rubella syndrome	4	Rabies in man	—
Leprosy (N.J. 1, Mich. 1)	102	Trichinosis (Mass. 1, Conn. 2, N.J. 7)	90
Leptospirosis	17	Typhus fever, flea-borne (endemic, murine) (Kans. 1)	15
Plague	5		

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending
June 20, 1981 and June 14, 1980 (24th week)

REPORTING AREA	ASEPTIC MENING- GITIS	BRU- CEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-in- fectious	B	A	Unspecified		
						1981	1980	1981	1981	1981	1981		
UNITED STATES	139	7	5,293	-	3	25	14	1	419	537	231	34	591
NEW ENGLAND	2	1	616	-	-	1	1	-	7	5	18	4	32
Maine	1	-	65	-	-	-	-	-	1	1	2	-	1
N.H.	NA	NA	NA	NA	-	NA	-	NA	NA	NA	NA	NA	3
Vt.	-	-	3	-	-	-	-	-	1	-	-	-	3
Mass.	-	1	268	-	-	1	-	-	3	1	14	3	15
R.I.	-	-	133	-	-	-	-	-	1	1	-	1	2
Conn.	1	-	147	-	-	-	1	-	1	2	2	-	8
MID. ATLANTIC	7	-	239	-	-	1	2	-	47	34	21	2	66
Upstate N.Y.	1	-	125	-	-	-	1	-	15	5	9	1	17
N.Y. City	5	-	114	-	-	1	1	-	32	29	12	1	23
N.J.	-	-	NN	-	-	-	-	-	NA	NA	NA	-	19
Pa.	1	-	-	-	-	-	-	-	NA	NA	NA	-	7
E.N. CENTRAL	9	2	3,461	-	-	4	1	1	60	54	28	3	25
Ohio	3	2	336	-	-	1	1	-	10	4	7	1	6
Ind.	1	-	180	-	-	1	-	1	15	14	11	-	6
Ill.	-	-	653	-	-	-	-	-	14	20	3	2	5
Mich.	5	-	1,869	-	-	2	-	-	20	14	7	-	8
Wis.	-	-	423	-	-	-	-	-	1	2	-	-	-
W.N. CENTRAL	5	-	81	-	-	3	-	-	12	28	7	1	18
Minn.	-	-	6	-	-	1	-	-	3	2	1	-	7
Iowa	-	-	24	-	-	1	-	-	1	3	1	-	2
Mo.	1	-	5	-	-	-	-	-	2	8	2	-	2
N. Dak.	-	-	26	-	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	16	-	-	-	-	-	1	1	-	-	1
Nebr.	1	-	4	-	-	1	-	-	1	3	2	-	1
Kans.	3	-	-	-	-	-	-	-	5	11	1	1	5
S. ATLANTIC	17	2	414	-	1	2	2	-	108	79	36	7	71
Del.	-	-	7	-	-	-	-	-	6	1	-	-	1
Md.	-	-	100	-	-	-	-	-	23	10	10	5	15
D.C.	-	-	-	-	-	-	-	-	1	-	-	-	1
Va.	-	-	16	-	-	2	1	-	11	3	3	-	11
W. Va.	-	-	202	-	-	-	-	-	3	1	1	-	3
N.C.	4	-	NN	-	-	-	-	-	3	2	-	-	6
S.C.	1	-	8	-	-	-	1	-	4	3	3	-	8
Ga.	-	2	4	-	-	-	-	-	20	9	-	-	8
Fla.	12	-	77	-	1	-	-	-	37	50	19	2	25
E.S. CENTRAL	35	1	36	-	-	4	1	-	27	32	3	1	4
Ky.	-	-	13	-	-	-	-	-	-	2	-	-	-
Tenn.	25	-	NN	-	-	4	-	-	16	18	1	-	-
Ala.	10	1	21	-	-	-	1	-	10	6	2	1	3
Miss.	-	-	2	-	-	-	-	-	1	6	-	-	1
W.S. CENTRAL	17	-	127	-	-	5	2	-	34	59	50	1	39
Ark.	-	-	2	-	-	2	-	-	6	3	-	-	2
La.	1	-	NN	-	-	1	-	-	18	6	16	-	2
Okla.	2	-	-	-	-	1	1	-	3	13	3	-	4
Tex.	14	-	125	-	-	1	1	-	7	37	31	1	31
MOUNTAIN	4	-	98	-	1	-	-	-	11	45	19	2	21
Mont.	-	-	-	-	1	-	-	-	-	3	-	-	-
Idaho	-	-	-	-	-	-	-	-	1	7	1	-	-
Wyo.	-	-	71	-	-	-	-	-	-	-	-	-	-
Colo.	1	-	18	-	-	-	-	-	4	13	3	1	10
N. Mex.	3	-	1	-	-	-	-	-	2	4	1	-	1
Ariz.	-	-	NN	-	-	-	-	-	1	8	10	-	4
Utah	-	-	8	-	-	-	-	-	1	-	1	1	3
Nev.	-	-	-	-	-	-	-	-	2	10	3	-	3
PACIFIC	43	1	221	-	1	5	5	-	113	201	49	13	315
Wash.	5	-	186	-	-	-	-	-	6	7	4	-	17
Oreg.	1	-	1	-	-	1	-	-	4	12	1	-	8
Calif.	36	1	26	-	-	4	4	-	96	159	43	13	286
Alaska	-	-	8	-	1	-	1	-	-	2	-	-	1
Hawaii	1	-	-	-	-	-	-	-	7	21	1	-	3
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	1
P.R.	1	-	47	-	-	-	-	-	4	3	2	4	8
V.I.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	2
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NN: Not notifiable.

NA: Not available

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont'd). Cases of specified notifiable diseases, United States, weeks ending
June 20, 1981 and June 14, 1980 (24th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	1981	1981	CUM. 1981	CUM. 1981
UNITED STATES	34	2,137	10,761	47	1,966	1,483	85	2,542	19	29	1,406	23
NEW ENGLAND	-	72	635	2	127	92	7	123	-	3	100	1
Maine	-	5	32	1	19	3	-	23	-	-	33	-
N.H.	NA	4	310	NA	12	5	NA	13	NA	NA	35	-
Vt.	-	1	226	-	7	11	-	4	-	-	-	-
Mass.	-	54	45	1	30	32	5	40	-	2	21	-
R.I.	-	-	2	-	11	7	-	17	-	-	-	-
Conn.	-	8	20	-	48	34	2	26	-	1	11	1
MID. ATLANTIC	5	607	3,240	3	247	251	24	403	2	3	164	1
Upstate N.Y.	3	193	594	1	86	88	1	75	2	1	71	-
N.Y. City	1	49	913	2	42	69	3	51	-	2	46	1
N.J.	1	51	707	-	59	50	2	80	-	-	43	-
Pa.	-	314	1,026	-	60	44	18	197	-	-	4	-
E.N. CENTRAL	-	72	1,715	10	229	167	28	748	4	6	297	4
Ohio	-	15	187	2	82	63	-	111	-	-	-	-
Ind.	-	8	83	1	35	31	2	88	1	2	100	-
Ill.	-	21	260	4	55	24	6	138	2	3	71	-
Mich.	-	27	216	3	53	38	13	287	1	-	31	3
Wis.	-	1	969	-	4	11	7	124	-	1	95	1
W.N. CENTRAL	1	8	1,191	3	90	61	1	171	1	-	72	2
Minn.	1	4	966	2	32	17	-	6	-	-	6	1
Iowa	-	1	20	-	17	5	1	40	-	-	3	-
Mo.	-	1	62	1	26	27	-	27	-	-	3	1
N. Dak.	-	-	-	-	1	1	-	-	-	-	-	-
S. Dak.	-	-	-	-	3	4	-	1	-	-	-	-
Nebr.	-	1	80	-	-	-	-	3	-	-	1	-
Kans.	-	1	63	-	11	7	-	94	1	-	59	-
S. ATLANTIC	-	310	1,651	7	464	345	9	341	7	1	125	4
Del.	-	-	1	-	4	2	-	8	-	-	1	-
Md.	-	1	47	-	29	32	4	69	-	-	1	-
D.C.	-	1	-	-	1	1	1	1	-	-	-	-
Va.	-	6	291	1	56	31	-	80	-	-	5	-
W. Va.	-	7	7	-	19	12	-	59	-	-	16	-
N.C.	-	4	113	2	67	69	-	12	-	-	4	-
S.C.	-	-	137	2	64	43	2	9	-	-	7	1
Ga.	-	99	723	-	79	64	-	33	2	-	42	1
Fla.	-	192	332	2	145	91	2	70	5	1	49	2
E.S. CENTRAL	-	-	298	3	147	142	-	63	1	-	24	1
Ky.	-	-	50	-	43	46	-	30	-	-	13	-
Tenn.	-	-	143	-	41	39	-	20	1	-	10	-
Ala.	-	-	21	3	47	36	-	12	-	-	1	1
Miss.	-	-	84	-	16	21	-	1	-	-	-	-
W.S. CENTRAL	26	770	894	8	337	173	3	155	2	4	119	4
Ark.	-	1	13	2	23	14	-	1	-	-	1	1
La.	-	-	11	2	82	62	-	3	1	-	9	1
Okla.	-	6	757	-	26	16	-	-	-	-	-	1
Tex.	26	763	113	4	206	81	3	151	1	4	109	1
MOUNTAIN	-	29	293	4	69	56	2	93	1	2	63	1
Mont.	-	-	1	1	6	2	-	5	-	1	4	-
Idaho	-	1	-	-	3	4	-	4	-	1	3	-
Wyo.	-	-	-	-	-	2	-	1	-	-	1	-
Colo.	-	5	16	2	31	14	-	39	1	-	26	-
N. Mex.	-	9	11	-	6	7	-	-	-	-	2	-
Ariz.	-	4	212	1	15	9	1	21	-	-	17	1
Utah	-	-	46	-	4	2	1	12	-	-	3	-
Nev.	-	10	7	-	4	16	-	11	-	-	7	-
PACIFIC	2	269	844	7	256	196	11	445	1	10	442	5
Wash.	-	1	160	1	51	34	4	128	-	3	58	-
Oreg.	-	3	-	1	38	38	1	54	-	-	30	-
Calif.	2	263	674	5	159	122	5	244	1	7	349	5
Alaska	-	-	5	-	4	2	1	5	-	-	-	-
Hawaii	-	2	5	-	4	-	-	14	-	-	5	-
Guam	NA	4	5	-	-	1	NA	6	NA	NA	1	-
P.R.	-	193	79	1	9	7	12	92	-	-	3	1
V.I.	NA	4	6	-	-	1	NA	4	NA	NA	-	-
Pac. Trust Terr.	NA	-	6	-	-	-	NA	4	NA	NA	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending
June 20, 1981 and June 14, 1980 (24th week)

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER			TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
									GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1981	CUM. 1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	CUM. 1981	
UNITED STATES	599	12,330	79	17	217	51	377	19,120	444,778	432,053	527	13,630	11,899	3,310	
NEW ENGLAND	16	337	1	-	12	1	5	543	11,015	11,103	14	300	252	12	
Maine	-	23	-	-	1	-	-	20	556	662	1	2	4	7	
N.H.	NA	9	-	NA	-	NA	-	NA	368	364	NA	10	1	1	
Vt.	-	11	-	-	-	-	-	9	195	266	-	13	3	-	
Mass.	11	187	-	-	7	1	3	196	4,428	4,504	10	194	141	1	
R.I.	2	21	-	-	-	-	-	47	571	669	2	18	13	-	
Conn.	3	86	1	-	4	-	2	271	4,897	4,638	1	63	90	3	
MID. ATLANTIC	60	1,965	10	3	39	1	8	1,255	51,198	46,798	105	2,070	1,710	19	
Upstate N.Y.	15	347	10	-	6	-	2	372	8,821	8,413	14	189	138	18	
N.Y. City	26	767	-	1	22	-	2	NA	20,554	18,435	60	1,262	1,129	-	
N.J.	13	423	-	2	7	1	2	292	10,132	8,590	10	272	218	-	
Pa.	6	428	-	-	4	-	2	591	11,691	11,360	21	347	225	1	
E.N. CENTRAL	82	1,657	1	-	14	3	10	2,452	67,268	67,093	16	852	1,128	425	
Ohio	17	312	-	-	1	3	8	1,289	24,551	18,226	9	128	177	32	
Ind.	-	148	-	-	-	-	2	145	6,386	6,378	2	100	91	29	
Ill.	43	685	-	-	6	-	-	364	15,905	20,909	4	611	636	336	
Mich.	14	429	1	-	5	-	-	539	14,396	15,019	4	166	179	3	
Wis.	8	83	-	-	2	-	-	315	6,030	6,561	1	47	45	25	
W.N. CENTRAL	31	445	5	1	8	1	7	1,048	21,350	18,715	9	261	144	1,427	
Minn.	11	72	-	-	2	-	-	117	3,397	3,208	2	97	54	256	
Iowa	2	49	-	-	2	-	-	225	2,295	2,132	-	13	8	459	
Mo.	7	188	4	-	1	1	3	593	9,863	7,724	7	128	68	115	
N. Dak.	-	20	-	-	-	-	-	18	306	277	-	4	1	219	
S. Dak.	5	35	-	-	1	-	-	31	602	598	-	2	1	167	
Nebr.	-	15	1	-	1	-	-	30	1,615	1,602	-	3	5	108	
Kans.	6	66	-	1	1	-	4	34	3,272	3,174	-	14	7	103	
S. ATLANTIC	161	2,787	8	5	32	37	220	4,525	109,605	105,742	154	3,633	2,814	188	
Del.	5	40	1	-	-	-	-	44	1,614	1,469	-	7	7	-	
Md.	11	278	-	2	10	6	28	238	11,577	10,812	9	279	195	3	
D.C.	11	164	-	-	1	-	-	275	6,935	7,497	7	303	193	-	
Va.	31	281	-	-	1	5	29	494	10,086	9,151	13	339	251	30	
W. Va.	2	86	-	-	4	-	3	46	1,638	1,381	-	9	12	9	
N.C.	16	470	1	-	1	20	79	540	16,970	15,671	18	284	210	2	
S.C.	-	275	2	-	-	5	54	357	10,240	10,129	6	247	147	14	
Ga.	32	453	4	-	2	-	21	1,123	22,501	19,759	49	939	836	93	
Fla.	53	740	-	3	13	1	6	1,408	28,044	29,873	52	1,226	963	37	
E.S. CENTRAL	78	1,077	2	-	5	1	40	1,789	37,273	35,233	25	895	961	220	
Ky.	28	291	2	-	-	-	2	312	4,773	5,186	-	43	71	63	
Tenn.	28	358	-	-	1	1	29	850	14,136	12,483	5	355	392	124	
Ala.	14	290	-	-	2	-	2	296	11,455	10,359	10	243	197	33	
Miss.	8	138	-	-	2	-	7	331	6,909	7,205	10	254	301	-	
W.S. CENTRAL	62	1,347	37	-	18	5	80	2,817	59,235	56,297	120	3,297	2,300	621	
Ark.	8	130	17	-	-	1	15	120	4,002	4,088	-	63	75	85	
La.	7	255	2	-	-	-	-	229	9,502	9,956	-	734	555	20	
Oklia.	3	158	11	-	3	4	53	296	6,293	5,565	2	81	42	117	
Tex.	44	804	7	-	15	-	12	2,172	39,438	36,688	118	2,419	1,628	399	
MOUNTAIN	9	342	12	1	17	2	6	805	17,726	16,491	15	347	278	91	
Mont.	-	22	4	-	4	2	2	37	617	607	-	8	1	52	
Idaho	1	6	2	-	-	-	1	19	721	756	1	9	9	-	
Wyo.	-	5	1	-	-	-	2	13	400	483	1	6	7	4	
Colo.	-	41	2	1	4	-	-	180	4,729	4,429	4	106	73	10	
N. Mex.	1	66	1	-	-	-	-	87	1,923	2,079	4	71	50	16	
Ariz.	7	148	-	-	9	-	-	259	5,608	4,434	-	69	93	7	
Utah	-	17	1	-	-	-	-	18	822	778	-	11	7	-	
Neuv.	-	37	1	-	-	-	1	192	2,906	2,925	5	67	38	2	
PACIFIC	100	2,373	3	7	72	-	1	3,686	70,108	74,581	69	1,975	2,312	307	
Wash.	9	189	1	2	5	-	-	264	5,711	6,025	-	66	114	-	
Oreg.	1	88	-	-	3	-	-	227	4,509	5,167	-	45	52	3	
Calif.	89	1,997	2	5	64	-	1	3,066	56,747	60,057	69	1,823	2,055	291	
Alaska	-	34	-	-	-	-	-	69	1,773	1,780	-	5	3	1 ^a	
Hawaii	1	65	-	-	-	-	-	60	1,368	1,552	-	36	88	-	
Guam	NA	7	-	NA	-	NA	-	NA	47	62	NA	-	3	-	
P.R.	-	149	-	-	3	-	-	55	1,530	1,232	7	315	250	37	
V.I.	NA	1	-	NA	1	NA	-	NA	57	102	NA	3	10	-	
Pac. Trust Terr.	NA	23	-	NA	-	NA	-	NA	134	193	NA	-	-	-	

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE IV. Deaths in 121 U.S. cities,* week ending
June 20, 1981 (24th 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	610	400	150	31	10	19	50	S. ATLANTIC	1,174	683	325	81	35	49	47
Boston, Mass.	142	83	41	6	4	8	19	Atlanta, Ga.	144	80	38	11	7	8	3
Bridgeport, Conn.	50	37	9	2	-	2	7	Baltimore, Md.	224	137	62	12	6	7	3
Cambridge, Mass.	19	11	7	1	-	-	2	Charlotte, N.C.	60	35	20	2	1	1	3
Fall River, Mass.	35	25	9	-	1	-	-	Jacksonville, Fla.	88	49	25	10	3	1	4
Hartford, Conn.	64	37	19	6	1	1	3	Miami, Fla.	121	69	32	11	-	9	1
Lowell, Mass.	33	26	6	1	-	-	2	Norfolk, Va.	46	18	15	5	4	4	3
Lynn, Mass.	16	13	2	1	-	-	1	Richmond, Va.	78	50	19	6	1	2	5
New Bedford, Mass.	23	17	4	1	-	1	4	Savannah, Ga.	39	23	10	4	1	1	4
New Haven, Conn.	39	22	10	3	2	2	2	St. Petersburg, Fla.	103	87	13	1	1	1	11
Providence, R.I.	49	32	12	3	2	-	3	Tampa, Fla.	64	38	18	3	1	4	7
Somerville, Mass.	13	11	1	1	-	-	2	Washington, D.C.	160	74	56	15	7	8	3
Springfield, Mass.	48	27	13	4	-	4	-	Wilmington, Del.	47	23	17	1	3	3	-
Waterbury, Conn.	26	21	5	-	-	-	1								
Worcester, Mass.	53	38	12	2	-	1	4								
MID. ATLANTIC	2,500	1,591	567	208	72	62	85	E.S. CENTRAL	633	363	178	47	29	16	12
Albany, N.Y.	51	29	13	4	3	2	1	Birmingham, Ala.	113	63	30	12	4	4	2
Allentown, Pa.	20	14	6	-	-	-	-	Chattanooga, Tenn.	68	43	15	4	4	2	1
Buffalo, N.Y.	150	101	31	8	4	6	8	Knoxville, Tenn.	49	29	13	4	2	1	-
Camden, N.J.	43	25	11	4	1	2	2	Louisville, Ky.	87	48	26	5	2	6	3
Elizabeth, N.J.	21	13	6	2	-	-	-	Memphis, Tenn.	116	73	34	7	1	1	1
Erie, Pa.†	29	20	5	2	-	2	1	Mobile, Ala.	59	34	12	5	8	-	1
Jersey City, N.J.	45	26	12	7	-	-	-	Montgomery, Ala.	35	13	16	5	-	1	1
N.Y. City, N.Y.	1,282	819	284	121	40	18	37	Nashville, Tenn.	106	60	32	5	8	1	3
Newark, N.J.	46	21	12	6	6	1	2								
Paterson, N.J.	37	14	7	5	1	10	1	W.S. CENTRAL	1,232	687	330	104	69	42	40
Philadelphia, Pa.	304	180	84	21	12	7	13	Austin, Tex.	64	40	17	6	1	-	7
Pittsburgh, Pa.†	74	49	15	5	1	4	3	Baton Rouge, La.	27	13	12	1	1	-	-
Reading, Pa.	40	29	10	1	-	-	1	Corpus Christi, Tex.	57	31	16	4	4	2	-
Rochester, N.Y.	117	80	24	9	3	1	8	Dallas, Tex.	187	101	53	18	10	5	3
Schenectady, N.Y.	27	18	5	3	1	-	2	El Paso, Tex.	51	29	11	8	2	1	5
Scranton, Pa.†	33	29	1	2	-	1	1	Fort Worth, Tex.	78	51	20	2	4	1	4
Syracuse, N.Y.	98	67	20	3	-	8	3	Houston, Tex.	254	129	74	28	16	7	1
Trenton, N.J.	27	15	8	4	-	-	1	Little Rock, Ark.	67	39	17	4	5	2	3
Utica, N.Y.	25	19	6	-	-	-	-	New Orleans, La.	143	75	41	14	7	6	1
Yonkers, N.Y.	31	23	7	1	-	-	1	New Orleans, La.	167	101	36	9	12	9	6
								San Antonio, Tex.	41	26	6	5	-	4	1
								Shreveport, La.	96	52	27	5	7	5	8
								Tulsa, Okla.							
E.N. CENTRAL	2,153	1,342	526	133	76	76	57	MOUNTAIN	614	323	149	75	44	23	20
Akron, Ohio	53	31	12	3	2	5	-	Albuquerque, N. Mex.	83	33	16	20	14	-	1
Canton, Ohio	40	23	14	3	-	-	5	Colorado Springs, Colo.	31	20	7	3	1	-	2
Chicago, Ill.	493	293	120	32	31	17	7	Denver, Colo.	128	51	42	22	9	4	1
Cincinnati, Ohio	156	97	41	11	3	4	16	Las Vegas, Nev.	64	29	19	10	4	2	4
Cleveland, Ohio	174	96	51	11	6	10	2	Ogden, Utah	23	19	2	1	1	-	-
Columbus, Ohio	135	88	32	8	3	4	3	Phoenix, Ariz.	131	73	28	11	10	9	3
Dayton, Ohio	111	65	36	6	4	-	2	Pueblo, Colo.	20	13	4	2	1	-	-
Detroit, Mich.	242	138	59	27	8	10	2	Salt Lake City, Utah	47	30	8	2	2	5	-
Evansville, Ind.	44	28	14	1	1	-	3	Tucson, Ariz.	87	55	23	4	2	3	9
Fort Wayne, Ind.	39	30	9	-	-	-	1								
Gary, Ind.	15	9	2	1	2	1	-								
Grand Rapids, Mich.	53	36	10	3	1	3	-								
Indianapolis, Ind.	152	103	33	11	2	3	1	PACIFIC	1,695	1,111	370	104	50	59	75
Madison, Wis.	32	21	6	2	2	1	2	Berkeley, Calif.	31	19	7	3	1	1	2
Milwaukee, Wis.	125	82	29	4	5	5	1	Fresno, Calif.	71	50	11	4	3	3	4
Peoria, Ill.	40	28	6	2	-	4	5	Glendale, Calif.	38	28	5	4	-	1	2
Rockford, Ill.	34	26	7	-	1	-	3	Honolulu, Hawaii	54	31	15	6	-	2	1
South Bend, Ind.	40	30	9	1	-	-	2	Long Beach, Calif.	84	63	15	3	1	2	4
Toledo, Ohio	109	70	24	4	4	7	2	Los Angeles, Calif.	472	294	106	41	14	16	16
Youngstown, Ohio	66	48	12	3	1	2	-	Oakland, Calif. §	86	55	18	6	4	3	4
								Pasadena, Calif.	22	19	2	-	-	1	2
								Portland, Oreg.	116	80	22	4	6	4	3
								Sacramento, Calif.	61	46	10	1	2	2	8
W.N. CENTRAL	718	479	140	40	25	34	26	San Diego, Calif.	129	84	31	8	4	2	2
Des Moines, Iowa	56	40	13	2	1	-	-	San Francisco, Calif.	157	109	33	7	3	5	5
Duluth, Minn.	25	19	2	2	2	-	-	San Jose, Calif.	153	94	42	6	5	6	13
Kansas City, Kans.	39	22	6	4	3	4	4	Seattle, Wash.	123	73	32	6	4	8	2
Kansas City, Mo.	105	65	23	7	5	5	3	Spokane, Wash.	46	30	10	2	2	2	5
Lincoln, Nebr.	31	26	4	-	1	-	2	Tacoma, Wash.	52	36	11	3	1	1	2
Minneapolis, Minn.	95	59	17	8	4	7	-								
Omaha, Nebr.	84	52	17	6	3	6	-								
St. Louis, Mo.	167	115	32	8	4	8	12								
St. Paul, Minn.	61	47	11	2	-	1	2								
Wichita, Kans.	55	34	15	1	2	3	3								
TOTAL	11,329 ^{††}	6,979	2,735	823	410	380	412								

*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 3 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 this week. Figures are estimates based on average percent of regional totals.

Diabetic Nephropathy – Continued

black (odds ratio = 12.5, $p = 0.002$). Nine patients were female and 1 was male, compared with 14 female controls and 16 male (odds ratio not calculable, $p = 0.08$). Seven of 10 patients and 9 of 30 controls lived outside Valdosta (odds ratio = 5.45, $p = 0.014$).

Social class was assessed by the Hollingshead Index (1) on a scale of 1 (high) to 5 (low) according to the number of years of formal education and the head of household's occupation. Data were obtainable for both of these factors on only 7 patients, all of whom were in social classes 4 and 5. Eleven of the 25 controls were also in social classes 4 and 5 (odds ratio not calculable, $p = 0.013$). Other disease complications were noted based on the physician's documentation of their presence. Neuropathy was more common for patients (odds ratio not calculable, $p = 0.006$), as were amputations (odds ratio = 6, $p = 0.048$) and myocardial infarctions (odds ratio = 7.13, $p = 0.026$). The prevalence rates of smoking and retinopathy did not differ significantly. Hypertension was more common among patients (odds ratio = 2.14), but not at a statistically significant level. Information to judge the adequacy of hypertension and diabetes control over the years was not available. No ESRD patient had onset of diabetes before age 20, and only 4 of the 10 had onset before age 30.

Reported by G Light, MD, CO Barker, MD, Valdosta; JA Wilber, MD, Georgia Dept of Human Resources; Kidney Disease Activity, Center for Prevention Services, CDC.

Editorial Note: This epidemiologic, community-based study represents a new, potentially useful approach to the understanding of diabetic nephropathy. Although careful interpretation is necessary in a preliminary and limited study such as this, several factors are striking. Blacks and females appear to be at high risk of developing diabetic nephropathy. ESRD patients were more commonly from lower social classes and lived in rural areas. Hypertension and smoking did not appear to be significant factors, but, because of the small number of cases, these factors should not be eliminated from further consideration. It was not possible to determine absolute insulin dependence, but in this population it appears that persons with onset after age 20 have a high risk of renal failure; diabetic nephropathy has been reported most commonly in association with type 1 (juvenile-onset) diabetics (2).

The results of this study need to be validated in larger community-based studies. If these risk factors are borne out in larger study groups, identified high-risk groups should be targeted for special consideration for prevention of diabetic nephropathy.

References

1. Hollingshead AB, Redlich FC. Social class and mental illness; a community study. New York: Wiley, 1958.
2. Kussman MJ, Goldstein H, Gleason RE. The clinical course of diabetic nephropathy. JAMA 1976; 236:1861-3.

*Current Trends***Urban Rat Control – United States**

During the second quarter of fiscal year 1981, urban rat-control programs in 60 communities identified 1,025 environmentally improved blocks (EIBs) (Table 1). The programs also achieved maintenance status in 1,428 blocks. As of March 31, services had been provided in a total of 59,391 blocks. Of these, 38,865 are now sustained locally as EIBs, with 20,526 remaining in project target areas. Over 7 million people

Urban Rat Control — Continued

now live in areas that are rat free and environmentally improved as a result of these programs.

The goal of each urban rat-control program is to reduce rat infestations and environmental deficiencies to a level at which they no longer constitute a major problem in the community. To date, this goal has been accomplished in 36 communities, including 3 in this quarter.

Reported by the Environmental Health Services Div, Center for Environmental Health, CDC.

TABLE 1. Status of target-area blocks in Urban Rat-Control Programs, 2nd quarter fiscal year 1981 (January 1-March 31)

Program community	Target-area blocks				Environmentally improved blocks*	
	Total†	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION I	935	700	189	46	0	1,121
Bridgeport	220	215	5	0	0	0
Hartford	314	219	83	12	0	313
Boston	401	266	101	34	0	20
Previously funded programs						788
REGION II	3,792	1,390	946	1,085	108	4,788
Atlantic City	202	20	77	0	0	0
Camden	242	101	50	91	0	109
Jersey City	240	91	60	89	0	203
Newark	219	16	130	73	0	0
New York City	1,376	547	320	453	0	977
Rochester	158	63	30	65	45	412
Yonkers	40	6	14	20	0	109
Aguadilla	140	83	26	31	63	229
Arecibo	157	69	65	23	0	236
Guayama	216	146	70	0	0	0
Mayagüez	187	137	31	19	0	207
Ponce	257	57	22	76	0	347
San Juan	358	54	51	145	0	305
Previously funded programs						1,654
REGION III	3,399	1,307	1,387	489	246	7,556
"War on Rats"	1,044	458	357	48	101	1,193
Baltimore	368	138	139	91	0	306
Chester	181	64	65	17	21	116
N.E. Pa. V.C. Assn.‡	281	39	88	154	7	1,189
Philadelphia	1,067	407	601	59	12	1,513
Pittsburgh	389	132	137	120	61	1,336
Norfolk	69	69	0	0	44	1,381
Previously funded programs						522
REGION IV	4,450	1,888	2,052	269	281	7,258
Mobile	123	38	79	6	218	617
Tuscaloosa	344	138	158	48	0	0
Miami	1,315	621	603	91	63	1,020
Pensacola	503	235	268	0	0	86
Atlanta, Ga.§	721	316	151	13	0	0
DeKalb Co., Ga.	335	149	167	19	0	405
Lexington	317	37	220	60	0	0
Louisville	512	188	292	32	0	738
Memphis	280	166	114	0	0	534
Previously funded programs						3,858

Urban Rat Control - Continued

TABLE 1. Status of target-area blocks in Urban Rat-Control Programs, 2nd quarter fiscal year 1981 (January 1-March 31) - Continued

Program community	Target-area blocks				Environmentally Improved blocks*	
	Total †	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥12 months		
REGION V	4,967	1,991	1,733	218	112	5,009
Chicago	490	228	250	12	0	10
Peoria	324	50	195	79	0	0
Indianapolis	351	287	64	0	0	417
Benton Harbor	119	22	97	0	71	71
Detroit	934	0	0	0	0	706
Highland Park	220	107	91	22	0	0
Saginaw	333	132	151	50	0	0
Washtenaw Co.-Ypsilanti	263	152	111	0	0	0
Wayne Co.-Ecorse	193	68	34	0	0	0
Akron	254	93	161	0	0	610
Barberton	198	99	96	3	0	99
Cincinnati	149	76	68	5	19	163
Cleveland	329	212	113	4	15	718
Columbus	282	101	138	43	0	283
Toledo	173	132	41	0	7	165
Youngstown	220	107	113	0	0	0
Milwaukee	135	125	10	0	0	0
Previously funded programs						1,767
REGION VI	1,594	549	618	305	0	6,688
Little Rock	402	139	214	49	0	0
Pine Bluff	218	89	129	0	0	190
New Orleans	470	149	106	215	0	2,970
Houston	504	172	169	41	0	2,270
Previously funded programs						1,258
REGION VII	830	90	378	105	243	4,038
Kansas City, Kan.	8	0	2	6	46	1,233
Kansas City, Mo.	154	12	34	8	64	717
St. Louis	321	8	148	8	94	1,091
Omaha	347	70	194	83	39	601
Previously funded programs						396
REGION IX	559	165	357	37	35	1,577
Los Angeles	246	15	231	0	15	319
Oakland	205	125	67	13	0	261
San Francisco	108	25	59	24	20	326
Previously funded programs						671
REGION X						830
Previously funded programs						830
TOTAL	20,526	8,080	7,660	2,554	1,025	38,865

* Contiguous blocks where maintenance has been achieved and sustained for a minimum of 12 months. These blocks are no longer part of the approved project target area.

† Includes blocks in pre-attack phase.

‡ Northeastern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazleton.

§ Target-area blocks are confined to public housing projects.

Addendum, Vol. 30, No. 21

p253. In the article "Risk-Factor-Prevalence Survey — Utah," in the list of references at the end of the article, the following references pertaining to the survey instrument and conduct of the survey should be added:

5. Christenson G, Freston M, Kreuter M. Health risk prevalence among Utahns. In preparation.
6. Freston M. Development of a survey instrument for assessing behavior related to cardiovascular health. Salt Lake City: University of Utah College of Health, unpublished doctoral dissertation, 1981.

The Morbidity and Mortality Weekly Report, circulation 118,223, is published by the Centers for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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

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