CENTERS FOR DISEASE CONTROL

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Recommendation of the Immunization Practices Advisory Committee (ACIP)

Rubella Prevention

Changes in the ACIP recommendation for the use of rubella vaccine focus on more effective delivery of the vaccine to older individuals and, in particular, to females of childbearing age as well as on the continuing vaccination of young children.

INTRODUCTION

Rubella is a common childhood rash disease. It is often overlooked or misdiagnosed because its signs and symptoms vary. The most common ones—postauricular and suboccipital lymphadenopathy, arthralgia, transient erythematous rash, and low fever—may not be recognized as representing rubella. Moreover, subclinical infection occurs frequently. Transient polyarthralgia and polyarthritis sometimes accompany or follow rubella, particularly in women. Central nervous system complications and thrombocytopenia have only rarely been reported.

By far the most important consequences of rubella are fetal anomalies that result from rubella infection in early pregnancy, especially in the first trimester. Preventing fetal infection and consequent congenital rubella syndrome is the major objective of rubella immunization programs.

Postinfection immunity appears to be long-lasting. However, as with other viral diseases, re-exposure to natural rubella occasionally leads to reinfection without clinical illness or detectable viremia. The only reliable evidence of immunity to rubella is the presence of specific antibody. Laboratories that regularly perform antibody testing are generally the most reliable because reagents and procedures are strictly standardized.

Before rubella vaccine became available in 1969, most cases of rubella occurred in school-age children. Now, most cases are in adolescents and young adults. The incidence of reported rubella for adolescents and young adults has not decreased appreciably because vaccine has been primarily used for preschool- and elementary school-age children. Since 1976, more than 70% of persons with rubella have been ≥15 years old; in these age groups, 10%-20% are susceptible. As of the end of 1979, more than 98 million doses of live attenuated rubella virus vaccine had been distributed in the United States. The practice of vaccinating young children has prevented rubella epidemics, although the disease has continued to be endemic among adolescents and young adults. Outbreaks of rubella continue to be reported in junior and senior high schools, colleges, the military, and places of employment—most notably hospitals. The data suggest that a combined approach of vaccinating susceptible adolescents and young adults as well as children may be necessary to eliminate congenital rubella syndrome.

Rubella — Continued

LIVE RUBELLA VIRUS VACCINE

The live rubella virus vaccine* currently distributed in the United States is prepared in human diploid cell culture. In January 1979, this vaccine (RA 27/3) replaced the HPV-77:DE-5 vaccine grown in duck embryo cell culture. Although both subcutaneous and intranasal administration of the vaccine have been studied, it is licensed only for subcutaneous administration. The vaccine is produced in monovalent (rubella only) form and in combinations: measles-rubella (MR) and measles-mumps-rubella (MMR) vaccines. Health-care providers are encouraged to use MMR in routine child vaccination programs and whenever rubella vaccine is to be given to persons likely to be susceptible to measles and/or mumps as well as to rubella.

Approximately 95% of susceptible persons who receive a single dose of rubella vaccine when they are ⩾12 months old develop antibody and can be expected to have long-term, probably life-long, protection against both clinical rubella and asymptomatic viremia. Although vaccine-induced titers are generally lower than those stimulated by rubella infection, vaccine-induced immunity protects against both clinical illness and viremia after natural exposure.

Hemagglutination-inhibition (HI) antibody testing is usually used to screen for rubella immunity. Other acceptable screening assays include passive hemagglutination, hemolysis in gel, and enzyme-linked immunosorbent assay (ELISA) tests. There are now more sensitive measures than the HI test to determine rubella immunity. Indeed, when adults who have failed to seroconvert following vaccination have been examined more closely, almost all have had detectable antibody by a more sensitive test. A small number of children who initially seroconverted have lost detectable HI antibody over the course of 9 years of follow-up. However, almost all have had detectable antibody by more sensitive tests. Accordingly, any detectable rubella antibody or a history of rubella vaccination is presumptive evidence of immunity.

Some vaccinees intermittently shed small amounts of virus from the pharynx 7-28 days after vaccination. However, studies of more than 1,200 susceptible household contacts have yielded no evidence that vaccine virus has been transmitted. These data strongly suggest that vaccinating susceptible children whose mothers or other household contacts are pregnant does not present a risk.

Any detectable titer (whether resulting from vaccination or from naturally acquired rubella), even if very low, protects against subsequent viremic infection—including the so-called "reinfection" of persons with low levels of antibody. This suggests that immune females reinfected during pregnancy would be unlikely to infect their fetuses. Moreover, because there is very little pharyngeal excretion, there appears to be no risk to susceptible contacts in such reinfection settings. In view of the data on reinfection accumulated during the past decade, the Committee sees no reason to revaccinate persons with low levels of rubella HI antibody. Rather, more attention should be directed toward vaccinating the truly susceptible population.

VACCINE USAGE

General Recommendations

Rubella vaccine is recommended for all children, many adolescents, and some adults—particularly females—unless it is specifically contraindicated (see below). Vaccinating children protects them against rubella and prevents their spreading the virus. Vaccinating

*Official name: Rubella Virus Vaccine, Live.

Rubella – Continued

susceptible postpubertal females confers individual protection against rubella-induced fetal injury. Vaccinating adolescent or adult males and females in population groups such as those in colleges, places of employment, or military bases protects them against rubella and reduces the chance of epidemics.

Dosage: A single dose of 0.5 cc of reconstituted vaccine should be administered subcutaneously.

Individuals at Risk

Live rubella virus is recommended for all children ≥12 months of age. It should not be given to younger infants because persisting maternal antibodies may interfere with seroconversion. When the rubella vaccine is part of a combination that includes the measles antigen, the combination vaccine should be given to children at about 15 months of age or older to maximize measles seroconversion. Older children who have not received rubella vaccine should be vaccinated promptly. Because a history of rubella illness is not a reliable indicator of immunity, all children should be vaccinated unless there are contraindications. Official health agencies should take steps—including developing and enforcing immunization requirements—to assure that all students in school and children in day-care settings are protected against rubella, unless vaccination is contraindicated.

The ACIP has weighed several considerations in developing recommendations for vaccinating women of childbearing age against rubella. Although there may be theoretical risks in giving rubella vaccine during pregnancy, all available data on previously and currently available rubella vaccines indicate that the risk, if any, of teratogenicity from live rubella vaccine is quite small. As of October 1980, CDC has followed to term 101 known rubella-susceptible pregnant females who had been vaccinated with live rubella vaccine within 3 months before, or 3 months after, conception. Ninety-three received HPV-77 or Cendehill vaccines, and 8 received RA 27/3 vaccine. None of the babies, including 3 who developed presumptive subclinical rubella vaccine virus infection, had malformations consistent with congenital rubella infection. Based on the experience to date, the estimated theoretical risk of serious malformations attributable to rubella vaccine, derived from the binomial distribution, is 0-4%.

Although experience with RA 27/3 is more limited than that with the other rubella vaccines, rubella vaccine virus was not isolated from abortion material from any of 15 susceptible females who had been given RA 27/3 vaccine while pregnant, whereas virus was isolated from abortion material from 17 of 85 (20%) susceptible females who had been given HPV-77 or Cendehill vaccines while pregnant. This provides additional evidence that the RA 27/3 vaccine does not pose any greater risk of teratogenicity than did the HPV-77 or Cendehill vaccines.

Therefore, the ACIP believes that rubella vaccination during pregnancy should not be a reason to routinely recommend interruption of pregnancy. Although a final decision must rest with the individual patient and her physician, the ACIP believes that the risk of vaccine-associated malformations is so small as to be negligible.

The continuing occurrence of rubella among women of childbearing age and the increasing evidence of little or no teratogenicity from the vaccine strongly indicate that increased emphasis should be placed on vaccinating susceptible adolescent and adult females of childbearing age. However, because of the theoretical risk to the fetus, females of childbearing age should receive vaccine only if they say they are not pregnant and are counseled not to become pregnant for 3 months after vaccination. In view of the importance of protecting this age group against rubella, reasonable precautions in a

Rubella — Continued

rubella immunization program include asking females if they are pregnant, excluding those who say they are, and explaining the theoretical risks to the others.

Further control of rubella will require increased emphasis on vaccinating susceptible individuals who have left high school. The military services have already instituted routine rubella vaccination of susceptible male and female recruits. Educational and training institutions, such as colleges and universities, should strongly consider requiring proof of rubella immunity (a positive serologic test or documented rubella vaccination) for admission and employment. Nonpregnant females and other employees who lack proof of immunity should be vaccinated unless contraindications exist. Health-care providers should carefully review the rubella immunity status of young adults and vaccinate those who do not have documented immunity, unless there are contraindications. To protect susceptible female patients and female employees, persons (both male and female) working in hospitals and clinics who might contract rubella from infected patients or who, if infected, might transmit rubella to pregnant patients should be vaccinated against rubella, unless there are contraindications.

When practical, and when reliable laboratory services are available, potential vaccinees of childbearing age can have serologic tests to determine susceptiblity to rubella. Routine premarital tests for rubella antibody identify many susceptible females before pregnancy. Prenatal screening of pregnant women is highly recommended because it identifies those who should be vaccinated as soon as their babies are born. (Breast feeding is not a contraindication to postpartum vaccination even though virus may be excreted in breast milk and infants may be infected.) However, routinely performing serologic tests for all females of childbearing age to determine susceptiblity so that vaccine is given only to proven susceptibles is expensive and has been ineffective in some areas. Accordingly, the ACIP believes that rubella vaccination of a woman who is not known to be pregnant and has no history of vaccination is justifiable without serologic testing. A stored serum specimen taken at the time of vaccination might help later in assessing whether a woman was already immune at the time of vaccination, should she prove to have been pregnant when vaccinated; however, storing a serum specimen is not necessary. The Committee feels that vaccination of women in the childbearing-age group who are not known to be immune is important for more effective prevention of congenital rubella syndrome. This policy should be encouraged in all settings providing care for women of childbearing age, including colleges and other schools, the military, hospitals, family-planning clinics, physicians' offices, and the like.

Individuals Exposed to Disease

Use of vaccine following exposure: There is no evidence that giving live rubella virus vaccine after exposure will prevent illness or that vaccinating an individual incubating rubella is harmful. Since a single exposure may not cause infection and postexposure vaccination will protect an individual exposed in the future, vaccination is recommended unless otherwise contraindicated.

Use of human immune globulin (IG, formerly called immune serum globulin or ISG) following exposure: IG given after exposure to rubella will not prevent infection or viremia, but it may modify or suppress symptoms. The routine use of IG for postexposure prophylaxis of rubella in early pregnancy is not recommended. (Infants with congenital rubella have been born to women given IG shortly after exposure.) The only time IG might be useful is when a pregnant woman who has been exposed to rubella would not consider termination of pregnancy under any circumstances.

Rubella — Continued

Recent Administration of IG

Vaccination should be deferred for about 3 months after a person has received IG because passively acquired antibodies might interfere with the response to the vaccine. However, previous administration of anti-Rho (D) immune globulin (human) or blood products is not a contraindication to postpartum vaccination. In this situation, 6- to 8-week postvaccination serologic testing should be done on those who have received the globulin or blood products to ascertain that seroconversion has occurred. Obtaining laboratory evidence of seroconversion in other vaccinees is not necessary.

SIDE EFFECTS AND ADVERSE REACTIONS

Children sometimes have vaccine side effects such as rash and lymphadenopathy. Up to 40% of vaccinees in large-scale field trials have had joint pain, usually of the small peripheral joints, although frank arthritis is reported for fewer than 1%. Arthralgia and transient arthritis occur more frequently and tend to be more severe for susceptible women than children. When joint symptoms or non-joint-associated pain and paresthesias do occur, they generally begin 7-21 days after immunization, persist for 1-3 days, and rarely recur. Adults with joint problems usually have not had to disrupt work activities. The occasional reports of persistent or recurrent joint signs and symptoms probably represent coincidental disease rather than a vaccine complication. Transient peripheral neuritic complaints such as paresthesias and pain in the arms and legs have also very rarely occurred. Only susceptible vaccinees have been reported to have side effects of vaccination. There is no increased risk of these reactions for persons who are already immune when vaccinated.

Although vaccine is safe and effective for all persons ≥12 months of age, its safety for the developing fetus is not fully known. Therefore, though the risk appears to be minimal, rubella vaccine should not be given to women known to be pregnant because of the theoretical risk of fetal abnormality caused by the vaccine virus (see "Individuals at risk").

PRECAUTIONS AND CONTRAINDICATIONS

Pregnancy

Pregnant women should not be given rubella vaccine. If a pregnant women is vaccinated or if she becomes pregnant within 3 months of vaccination, she should be counseled on the theoretical risks to the fetus. As noted above, rubella vaccination during pregnancy is not a routine indication for interruption of pregnancy. Instances of vaccination during pregnancy should be reported through state health departments to the Immunization Division, Centers for Disease Control (404-329-3096).

Febrile Illness

Persons with febrile illness should not be vaccinated until they have recovered. Minor illnesses such as upper respiratory infection, however, do not preclude vaccination.

Allergies

Live rubella virus vaccine has not been reported to be associated with allergic reactions. It does not contain penicillin. However, the vaccine does contain trace amounts of neomycin to which patients may be allergic. Those administering vaccines should review the label information carefully before deciding whether patients with known allergies to neomycin can be vaccinated safely.

Rubella — Continued

Altered Immunity

Theoretically, replication of the rubella vaccine virus may be potentiated in patients with immune-deficiency diseases and by the suppressed immune responses that occur with leukemia, lymphoma, or generalized malignancy, or that result from therapy with corticosteroids, alkylating drugs, antimetabolites, or radiation. Patients with such conditions should not be given live rubella virus vaccine.

Simultaneous Administration of Certain Live Virus Vaccines

See "General Recommendations on Immunization," MMWR 1980;29:76, 81-3.

OUTBREAK MANAGEMENT

To curb rubella outbreaks, susceptible persons at risk should be vaccinated promptly. Women at risk of exposure who say they are not pregnant and are counseled not to become pregnant for 3 months should be vaccinated (see "Individuals at risk").

SURVEILLANCE

Accurate diagnosis and prompt reporting to local and state health departments of rubella or suspected rubella, congenital rubella syndrome, and vaccine complications are of great importance in assessing the progress of rubella control. Furthermore, all cases of birth defects suspected of being related to rubella should be thoroughly investigated and reported to state health departments.

(Continued on page 47)

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

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	4th WEEK ENDING		MEDIAN 1976-1980	CUMULATIVE, FIRST 4 WEEKS		
	January 31 1981	January 26 1980		January 31 1981	January 26 1980	MEDIAN 1976-1980
Aseptic meningitis	88	77	48	276	252	171
Brucellosis	1	1	3	6	4	7
Chickenpox	5,851	5,506	5,413	17,995	15,529	17,996
Diphtheria	1	–	1	1	–	5
Encephalitis: Primary (arthropod-borne & unspec.)	16	12	12	55	40	40
Post-infectious	1	3	1	5	7	7
Hepatitis, Viral: Type B	334	317	312	1,283	1,046	1,046
Type A	409	568	620	1,650	1,792	2,035
Type unspecified	208	207	181	801	667	649
Malaria	13	23	7	90	94	28
Measles (rubeola)	39	188	252	132	348	847
Meningococcal infections: Total	107	58	58	296	200	155
Civilian	107	57	57	295	197	155
Military	–	1	–	1	3	–
Mumps	94	305	426	364	884	1,374
Pertussis	13	22	22	46	62	110
Rubella (German measles)	46	72	157	166	183	561
Tetanus	1	1	1	5	5	3
Tuberculosis	456	527	536	1,568	1,522	1,790
Tularemia	5	1	1	9	6	9
Typhoid fever	6	2	7	30	9	18
Typhus fever, tick-borne (Rky. Mt. spotted)	2	1	1	6	2	2
Venereal diseases:						
Gonorrhea: Civilian	17,317	21,668	19,775	75,595	73,425	73,425
Military	367	560	577	2,160	1,817	2,203
Syphilis, primary & secondary: Civilian	540	603	508	2,197	1,982	1,814
Military	9	6	6	28	35	24
Rabies in animals	93	99	52	335	319	186

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1981		CUM. 1981
Anthrax	–	Poliomyelitis: Total	–
Botulism Calif. 1	4	Paralytic	–
Cholera	–	Psittacosis	4
Congenital rubella syndrome	–	Rabies in man	–
Leprosy N.J. 1, Tex. 2	10	Trichinosis Conn. 2	13
Leptospirosis	2	Typhus fever, flea-borne (endemic, murine)	–
Plague	–		

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 January 31, 1981 and January 26, 1980 (4th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1981	1981	1981	1981	CUM. 1981	1981	1980	1981	1981	1981	1981	1981	CUM. 1981
UNITED STATES	88	1	5,851	1	1	16	12	1	334	409	208	13	90
NEW ENGLAND	–	–	481	–	–	–	2	–	8	13	4	1	4
Maine	–	–	153	–	–	–	–	–	–	1	–	–	1
N.H.	–	–	12	–	–	–	–	–	1	2	–	–	1
Vt.	–	–	30	–	–	–	–	–	–	–	–	–	–
Mass.	–	–	140	–	–	–	1	–	3	6	3	1	2
R.I.	–	–	46	–	–	–	–	–	1	1	–	–	–
Conn.	–	–	100	–	–	–	1	–	3	3	1	–	–
MID. ATLANTIC	9	–	189	–	–	3	2	–	46	37	19	2	9
Upstate N.Y.	2	–	56	–	–	1	1	–	13	19	9	1	4
N.Y. City	–	–	79	–	–	–	1	–	23	8	–	–	4
N.J.	5	–	NN	–	–	2	–	–	10	10	10	–	–
Pa.	2	–	54	–	–	–	–	–	–	–	–	1	1
E.N. CENTRAL	5	1	2,661	–	–	2	2	–	23	40	14	–	3
Ohio	1	–	359	–	–	–	–	–	5	7	5	–	–
Ind.	–	–	260	–	–	–	1	–	5	7	3	–	–
Ill.	–	–	457	–	–	–	–	–	1	12	1	–	–
Mich.	4	1	1,126	–	–	2	1	–	11	14	5	–	3
Wis.	–	–	459	–	–	–	–	–	1	–	–	–	–
W.N. CENTRAL	5	–	848	–	–	1	1	–	16	27	5	–	1
Minn.	–	–	–	–	–	–	–	–	5	3	1	–	–
Iowa	4	–	415	–	–	1	1	–	4	12	–	–	–
Mo.	1	–	3	–	–	–	–	–	7	10	4	–	1
N. Dak.	–	–	17	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	20	–	–	–	–	–	–	–	–	–	–
Nebr.	–	–	13	–	–	–	–	–	–	1	–	–	–
Kans.	–	–	380	–	–	–	–	–	–	1	–	–	–
S. ATLANTIC	14	–	485	–	–	–	2	–	68	48	16	–	5
Del.	–	–	4	–	–	–	–	–	–	2	–	–	–
Md.	–	–	82	–	–	–	–	–	4	1	1	–	–
D.C.	–	–	–	–	–	–	–	–	6	2	1	–	–
Va.	3	–	35	–	–	–	–	–	6	3	6	–	2
W. Va.	–	–	125	–	–	–	–	–	–	3	–	–	–
N.C.	3	–	NN	–	–	–	2	–	10	8	1	–	–
S.C.	1	–	19	–	–	–	–	–	10	3	3	–	–
Ga.	5	–	23	–	–	–	–	–	15	9	–	–	2
Fla.	2	–	197	–	–	–	–	–	17	17	4	–	1
E.S. CENTRAL	29	–	285	–	–	6	2	1	35	21	10	–	–
Ky.	9	–	71	–	–	–	–	–	4	3	–	–	–
Tenn.	2	–	NN	–	–	4	2	1	20	8	7	–	–
Ala.	17	–	189	–	–	–	–	–	10	3	3	–	–
Miss.	1	–	25	–	–	2	–	–	1	7	–	–	–
W.S. CENTRAL	13	–	408	–	–	3	1	–	33	80	83	–	2
Ark.	–	–	2	–	–	–	–	–	4	5	1	–	1
La.	2	–	NN	–	–	–	–	–	7	11	6	–	1
Okla.	1	–	–	–	–	–	–	–	1	8	4	–	–
Tex.	10	–	406	–	–	3	1	–	21	56	72	–	–
MOUNTAIN	3	–	327	–	–	–	–	–	10	37	14	–	2
Mont.	–	–	–	–	–	–	–	–	2	–	–	–	–
Idaho	–	–	4	–	–	–	–	–	–	4	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	–
Colo.	1	–	316	–	–	–	–	–	1	11	–	–	1
N. Mex.	1	–	–	–	–	–	–	–	4	11	1	–	–
Ariz.	–	–	NN	–	–	–	–	–	2	3	5	–	1
Utah	1	–	3	–	–	–	–	–	–	2	6	–	–
Nev.	–	–	4	–	–	–	–	–	1	6	2	–	–
PACIFIC	10	–	167	1	1	1	–	–	95	106	43	10	64
Wash.	1	–	153	–	–	–	–	–	3	18	2	1	3
Oreg.	2	–	–	–	–	–	–	–	9	10	–	1	1
Calif.	5	–	–	–	–	–	–	–	74	71	41	8	60
Alaska	–	–	6	1	1	–	–	–	5	1	–	–	–
Hawaii	2	–	8	–	–	1	–	–	4	6	–	–	–
Guam													
P.R.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
V.I.	1	–	13	–	–	–	–	–	4	3	1	2	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 January 31, 1981 and January 26, 1980 (4th 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	39	132	348	107	296	200	94	364	13	46	166	5
NEW ENGLAND	1	4	24	5	24	8	4	18	1	7	28	-
Maine	-	-	-	-	-	-	-	3	-	5	17	-
N.H.	-	2	7	1	2	-	1	2	-	2	8	-
Vt.	-	1	16	-	-	-	-	1	-	-	-	-
Mass.	-	-	-	2	10	5	1	6	1	-	3	-
R.I.	-	-	1	-	2	-	2	2	-	-	-	-
Conn.	1	1	-	2	10	3	-	4	-	-	-	-
MID. ATLANTIC	16	45	34	15	39	25	10	32	1	8	36	-
Upstate N.Y.	4	22	9	3	12	13	4	11	1	4	15	-
N.Y. City	5	8	25	-	-	6	3	6	-	1	5	-
N.J.	-	5	-	7	16	4	-	5	-	3	14	-
Pa.	7	10	-	5	11	2	3	10	-	-	2	-
E.N. CENTRAL	-	4	40	8	22	24	32	101	4	14	33	1
Ohio	-	-	8	1	6	11	1	16	-	-	-	-
Ind.	-	-	-	1	4	3	6	17	3	3	13	-
Ill.	-	-	4	-	1	2	4	11	-	5	7	-
Mich.	-	4	20	6	11	8	14	39	1	2	5	1
Wis.	-	-	8	-	-	-	7	18	-	4	8	-
W.N. CENTRAL	-	-	36	13	24	5	3	31	1	-	5	2
Minn.	-	-	18	9	16	1	-	-	1	-	-	1
Iowa	-	-	-	1	4	-	2	8	-	-	-	-
Mo.	-	-	16	-	1	3	-	-	-	-	-	1
N. Dak.	-	-	-	-	-	1	-	-	-	-	-	-
S. Dak.	-	-	-	1	1	-	-	-	-	-	-	-
Nebr.	-	-	2	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	2	2	-	1	23	-	-	5	-
S. ATLANTIC	8	19	106	31	78	44	16	53	1	1	11	1
Del.	-	-	-	2	4	-	-	2	-	-	-	-
Md.	-	-	1	2	2	7	5	12	-	-	-	-
D.C.	-	-	-	-	1	-	-	-	-	-	-	-
Va.	-	-	12	3	8	6	3	11	-	-	5	-
W. Va.	-	2	1	1	4	3	6	15	-	1	3	-
N.C.	-	-	1	7	13	7	1	3	-	-	2	-
S.C.	-	-	-	6	11	5	-	1	-	-	-	1
Ga.	2	8	73	3	14	6	-	2	1	-	-	-
Fla.	6	9	18	7	21	10	1	7	-	-	1	-
E.S. CENTRAL	-	-	36	7	21	21	-	10	3	-	3	-
Ky.	-	-	17	-	5	5	-	5	3	-	2	-
Tenn.	-	-	1	1	9	6	-	3	-	-	1	-
Ala.	-	-	6	5	5	9	-	2	-	-	-	-
Miss.	-	-	12	1	2	1	-	-	-	-	-	-
W.S. CENTRAL	3	8	5	18	42	18	2	20	-	2	9	-
Ark.	-	-	1	1	5	2	-	-	-	-	-	-
La.	-	-	-	1	2	2	-	-	-	-	-	-
Okla.	-	1	1	-	-	1	-	-	-	-	-	-
Tex.	3	7	3	16	35	13	2	20	-	2	9	-
MOUNTAIN	1	5	18	1	18	17	7	15	1	2	2	1
Mont.	-	-	-	-	1	1	-	-	-	-	-	-
Idaho	-	-	-	1	2	1	-	1	-	-	-	-
Wyo.	-	-	-	-	-	1	-	-	-	-	-	-
Colo.	-	-	-	-	3	6	2	7	-	-	-	-
N. Mex.	-	-	-	-	4	1	-	-	-	-	-	-
Ariz.	-	-	8	-	6	4	3	4	-	1	1	1
Utah	-	-	9	-	2	1	1	1	-	1	1	-
Nev.	1	5	1	-	-	2	1	2	1	-	-	-
PACIFIC	10	47	49	9	28	38	20	84	1	12	39	-
Wash.	-	-	10	1	4	7	2	28	1	3	7	-
Oreg.	-	-	-	1	1	3	1	5	-	-	-	-
Calif.	10	46	37	6	19	28	15	47	-	9	32	-
Alaska	-	-	-	-	1	-	1	1	-	-	-	-
Hawaii	-	1	2	1	3	-	1	3	-	-	-	-
Guam	NA	-	-	-	-	-	NA	-	NA	NA	-	-
P.R.	4	7	1	1	1	1	1	4	-	-	-	-
V.I.	NA	-	-	-	-	-	NA	-	NA	NA	-	-
Pac. Trust Terr.	NA	-	2	-	-	-	NA	-	NA	NA	-	-

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 January 31, 1981 and January 26, 1980 (4th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	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	456	1,568	9	6	30	2	6	17,317	75,595	73,425	540	2,197	1,982	335
NEW ENGLAND	11	45	–	–	1	–	–	544	2,085	2,188	16	52	42	–
Maine	3	7	–	–	–	–	–	32	105	145	–	1	–	–
N.H.	–	–	–	–	–	–	–	15	78	95	–	–	–	–
Vt.	–	1	–	–	–	–	–	6	38	66	1	1	–	–
Mass.	4	27	–	–	1	–	–	203	806	758	7	31	27	–
R.I.	1	1	–	–	–	–	–	23	98	96	7	8	2	–
Conn.	3	9	–	–	–	–	–	265	960	1,038	1	11	13	–
MID. ATLANTIC	72	255	–	2	4	–	–	2,063	7,652	7,300	92	346	298	–
Upstate N.Y.	15	47	–	–	1	–	–	250	756	824	8	33	13	–
N.Y. City	27	93	–	2	3	–	–	850	3,175	2,887	55	206	220	–
N.J.	15	70	–	–	–	–	–	582	1,681	1,331	15	44	27	–
Pa.	15	45	–	–	–	–	–	381	2,040	2,258	14	63	38	–
E.N. CENTRAL	82	225	–	1	2	–	–	2,140	11,293	12,822	4	81	176	37
Ohio	12	43	–	–	–	–	–	714	4,636	3,854	–	28	29	1
Ind.	22	23	–	–	–	–	–	206	1,010	1,303	3	10	16	4
Ill.	26	96	–	1	2	–	–	249	1,995	3,815	–	23	101	7
Mich.	22	59	–	–	–	–	–	745	2,671	2,505	–	9	23	–
Wis.	–	4	–	–	–	–	–	226	1,031	1,345	1	11	7	25
W.N. CENTRAL	15	35	–	–	1	–	1	942	4,046	3,312	8	35	15	144
Minn.	3	3	–	–	–	–	–	119	603	634	2	7	4	30
Iowa	1	9	–	–	–	–	–	89	382	423	1	1	2	55
Mo.	8	8	–	–	–	–	1	446	1,887	1,342	5	22	9	11
N. Dak.	–	4	–	–	–	–	–	6	41	45	–	–	–	34
S. Dak.	1	5	–	–	1	–	–	14	101	96	–	–	–	–
Nebr.	–	–	–	–	–	–	–	49	295	242	–	2	–	6
Kans.	2	6	–	–	–	–	–	219	737	530	–	3	–	8
S. ATLANTIC	130	386	2	2	4	1	3	4,748	19,053	18,204	186	576	443	25
Del.	1	2	1	–	–	–	–	72	342	268	–	1	1	–
Md.	17	40	–	–	–	–	–	600	2,009	1,690	13	45	34	–
D.C.	25	43	–	1	1	–	–	382	1,263	1,221	11	55	33	–
Va.	–	24	–	–	–	–	–	438	1,952	1,565	23	47	38	6
W. Va.	4	15	–	–	2	–	–	67	249	243	–	–	1	2
N.C.	16	85	–	1	1	1	3	832	3,282	2,740	12	51	42	–
S.C.	10	30	1	–	–	–	–	466	1,727	1,799	23	49	11	1
Ga.	15	40	–	–	–	–	–	1,069	4,197	3,411	42	144	122	11
Fla.	42	107	–	–	–	–	–	822	4,032	5,267	62	184	161	5
E.S. CENTRAL	26	127	2	–	1	1	2	1,758	6,437	5,491	11	157	177	13
Ky.	12	36	2	–	–	–	–	242	859	948	3	11	14	3
Tenn.	6	38	–	–	–	–	1	680	2,359	2,063	–	47	83	6
Ala.	8	53	–	–	–	–	–	730	2,095	1,182	3	54	24	4
Miss.	–	–	–	–	1	1	1	106	1,124	1,298	5	45	56	–
W.S. CENTRAL	43	109	1	–	–	–	–	2,797	12,288	8,884	147	584	394	69
Ark.	5	5	–	–	–	–	–	192	632	648	–	6	9	18
La.	6	27	–	–	–	–	–	354	1,670	1,082	32	108	83	5
Okla.	9	29	–	–	–	–	–	238	1,127	1,064	2	14	3	11
Tex.	23	48	1	–	–	–	–	2,013	8,859	6,090	113	456	299	35
MOUNTAIN	15	35	4	1	1	–	–	594	2,634	2,774	28	61	33	5
Mont.	–	1	1	1	1	–	–	25	96	93	1	1	–	5
Idaho	–	3	1	–	–	–	–	68	129	111	–	2	2	–
Wyo.	1	1	–	–	–	–	–	18	74	85	–	1	2	–
Colo.	–	4	1	–	–	–	–	136	812	692	2	14	15	–
N. Mex.	–	9	–	–	–	–	–	57	321	490	8	15	7	–
Ariz.	14	14	–	–	–	–	–	168	646	672	17	17	–	–
Utah	–	–	1	–	–	–	–	52	141	149	–	–	4	–
Nev.	–	3	–	–	–	–	–	70	395	492	–	11	3	–
PACIFIC	62	351	–	–	16	–	–	1,731	10,107	12,450	48	305	404	42
Wash.	3	18	–	–	–	–	–	NA	713	1,123	NA	–	23	–
Oreg.	2	12	–	–	–	–	–	164	709	757	1	8	7	–
Calif.	55	316	–	–	14	–	–	1,427	8,166	10,164	47	288	370	40
Alaska	1	1	–	–	–	–	–	75	267	265	–	1	1	2
Hawaii	1	4	–	–	2	–	–	65	252	141	–	8	3	–
Guam														
P.R.	NA	–	–	NA	–	NA	–	NA	–	12	NA	–	–	–
V.I.	–	–	–	–	–	–	–	33	204	103	24	39	31	2
Pac. Trust Terr.	NA	–	–	NA	–	NA	–	NA	–	7	NA	–	3	–
	NA	–	–	NA	–	NA	–	NA	–	56	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 January 31, 1981 (4th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	782	525	162	52	24	89
Boston, Mass.	238	143	59	20	11	27
Bridgeport, Conn.	53	35	11	4	1	0
Cambridge, Mass.	24	16	6	2	–	3
Fall River, Mass.	32	26	6	–	–	1
Hartford, Conn.	46	27	14	4	–	2
Lowell, Mass.	35	23	7	5	–	1
Lynn, Mass.	28	22	5	1	–	2
New Bedford, Mass.	22	15	4	2	1	2
New Haven, Conn.	60	37	13	4	5	6
Providence, R.I.	104	68	17	7	4	9
Somerville, Mass.	10	9	–	1	–	–
Springfield, Mass.	53	43	8	–	1	8
Waterbury, Conn.	24	18	4	2	–	4
Worcester, Mass.	53	43	8	–	1	5
MID. ATLANTIC	2,947	1,934	667	181	86	193
Albany, N.Y.	63	43	15	2	3	1
Allentown, Pa.	30	21	9	–	–	2
Buffalo, N.Y.	139	90	32	6	7	18
Camden, N.J.	35	25	7	2	–	1
Elizabeth, N.J.	36	28	5	3	–	3
Erie, Pa.†	38	26	9	3	–	1
Jersey City, N.J.	82	46	28	2	5	5
Newark, N.J.	75	36	21	2	9	5
N.Y. City, N.Y.	1,606	1,064	352	104	42	90
Paterson, N.J.	37	15	15	4	2	3
Philadelphia, Pa.†	310	184	78	33	7	26
Pittsburgh, Pa.†	71	43	24	2	1	5
Reading, Pa.	34	31	3	–	–	4
Rochester, N.Y.	143	110	20	4	4	19
Schenectady, N.Y.	22	15	7	–	–	2
Scranton, Pa.†	30	22	7	1	–	1
Syracuse, N.Y.	105	70	18	8	3	–
Trenton, N.J.	37	21	10	3	2	–
Utica, N.Y.	20	17	2	1	–	1
Yonkers, N.Y.	34	27	5	1	1	6
E.N. CENTRAL	2,633	1,631	652	168	88	119
Akron, Ohio	75	52	15	5	2	–
Canton, Ohio	50	35	9	2	3	3
Chicago, Ill.	606	381	140	42	18	23
Cincinnati, Ohio	181	102	60	12	3	16
Cleveland, Ohio	205	108	66	10	11	4
Columbus, Ohio	139	76	45	10	2	4
Dayton, Ohio	124	72	36	6	2	4
Detroit, Mich.	305	196	60	22	13	5
Evansville, Ind.	43	32	10	–	1	3
Fort Wayne, Ind.	60	39	13	3	1	5
Gary, Ind.	24	13	4	4	2	3
Grand Rapids, Mich.	49	32	9	1	5	4
Indianapolis, Ind.	180	93	62	14	4	7
Madison, Wis.	44	22	10	7	3	5
Milwaukee, Wis.	169	112	39	11	5	1
Peoria, Ill.	48	28	13	2	4	4
Rockford, Ill.	51	31	12	3	3	6
South Bend, Ind.	64	51	9	3	1	8
Toledo, Ohio	158	113	29	9	4	10
Youngstown, Ohio	58	43	11	2	1	3
W.N. CENTRAL	827	575	144	45	25	55
Des Moines, Iowa	68	56	8	2	1	4
Duluth, Minn.	36	24	7	2	1	7
Kansas City, Kans.	31	23	3	2	1	2
Kansas City, Mo.	135	93	28	6	7	14
Lincoln, Nebr.	30	21	6	1	1	1
Minneapolis, Minn.	79	60	11	3	5	3
Omaha, Nebr.	89	65	18	3	1	6
St. Louis, Mo.	178	112	42	19	1	2
St. Paul, Minn.	94	73	14	–	5	8
Wichita, Kans.	87	48	27	7	2	8
S. ATLANTIC	1,896	1,148	469	139	84	129
Atlanta, Ga.	205	108	55	25	12	15
Baltimore, Md.	473	272	136	38	15	16
Charlotte, N.C.	98	51	26	6	1	9
Jacksonville, Fla.	136	92	26	6	5	9
Miami, Fla.	151	93	38	10	4	10
Norfolk, Va.	72	43	19	2	7	7
Richmond, Va.	101	60	25	6	7	9
Savannah, Ga.	80	49	15	7	4	4
St. Petersburg, Fla.	122	102	13	4	1	11
Tampa, Fla.	97	65	15	6	8	19
Washington, D.C.	311	169	90	26	20	15
Wilmington, Del.	60	44	11	3	–	5
E.S. CENTRAL	1,022	647	262	47	37	81
Birmingham, Ala.	179	121	37	5	13	10
Chattanooga, Tenn.	76	47	18	5	3	3
Knoxville, Tenn.	60	40	15	2	2	3
Louisville, Ky.	124	72	40	4	5	13
Memphis, Tenn.	285	182	74	13	5	24
Mobile, Ala.	78	49	22	4	3	7
Montgomery, Ala.	59	37	18	1	2	3
Nashville, Tenn.	161	100	38	13	4	18
W.S. CENTRAL	1,441	927	342	94	28	89
Austin, Tex.	59	45	12	–	–	6
Baton Rouge, La.	41	24	12	1	1	–
Corpus Christi, Tex.	72	47	20	2	3	–
Dallas, Tex.	239	148	57	22	5	15
El Paso, Tex.	52	31	15	3	–	5
Fort Worth, Tex.	94	70	19	4	–	10
Houston, Tex.	230	138	58	17	2	9
Little Rock, Ark.	94	70	12	5	3	13
New Orleans, La.	194	114	60	13	3	1
San Antonio, Tex.	179	116	39	13	6	19
Shreveport, La.	66	42	14	5	4	4
Tulsa, Okla.	121	82	24	9	1	7
MOUNTAIN	668	402	152	49	32	43
Albuquerque, N. Mex.	90	36	17	15	4	8
Colo. Springs, Colo.	38	22	10	6	–	6
Denver, Colo.	135	83	29	7	11	7
Las Vegas, Nev.	68	41	21	1	3	4
Ogden, Utah	16	11	2	1	1	1
Phoenix, Ariz.	151	98	31	13	6	7
Pueblo, Colo.	19	15	3	1	–	2
Salt Lake City, Utah	48	25	15	1	5	2
Tucson, Ariz.	103	71	24	4	2	6
PACIFIC	1,966	1,308	419	121	63	130
Berkeley, Calif.	21	13	8	–	–	–
Fresno, Calif.	102	62	21	6	9	4
Glendale, Calif.	25	21	–	–	2	4
Honolulu, Hawaii	63	45	11	6	–	6
Long Beach, Calif.	132	83	34	6	7	11
Los Angeles, Calif.	458	303	96	38	5	36
Oakland, Calif.	109	77	13	9	7	4
Pasadena, Calif.	33	22	10	–	1	6
Portland, Oreg.	136	97	18	11	6	3
Sacramento, Calif.	82	47	25	5	2	8
San Diego, Calif.	162	99	44	7	4	7
San Francisco, Calif.	167	112	36	12	2	4
San Jose, Calif.	183	126	38	9	7	19
Seattle, Wash.	177	119	44	7	5	9
Spokane, Wash.	67	50	10	3	2	0
Tacoma, Wash.	49	32	11	2	4	1
TOTAL	14,182	9,097	3,299	896	467	927

*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.

Rubella – Continued

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Replaces previous recommendation on this subject, "Rubella Vaccine" (MMWR 1978;27:451-4, 459).

Epidemiologic Notes and Reports

Rabies in a Pet Skunk – Minnesota

The Minnesota State Department of Health recently reported laboratory-confirmed rabies in a pet skunk from New Ulm, Minnesota. The skunk was one of a mixed lot of approximately 226 skunks distributed by a Minnesota animal dealer during June-July 1980. Skunks were distributed to at least 7 states (Florida, Iowa, Kentucky, Maryland, Minnesota, Missouri, and Utah) and the District of Columbia. The dealer's operation is licensed and inspected by the U.S. Department of Agriculture (USDA), and all distributed skunks were reportedly pen-raised. The rabid skunk was found dead on December 24, 1980, and was diagnosed as positive by the fluorescent-antibody test. The owner of the skunk underwent antirabies prophylaxis in January; he had been bitten by the pet in late fall.

Rabies – Continued

Reported by Meeker-McLeod-Sibley Community Health Services Agency, Gaylord, Minnesota; University of Minnesota College of Veterinary Medicine, St. Paul; Minnesota State Dept of Health; Minnesota Board of Animal Health; USDA, St. Paul; Respiratory and Special Pathogens Br, Viral Diseases Div, Center for Infectious Diseases, CDC.

Editorial Note: Rabies in skunks continues to increase in the United States; over 3,000 laboratory-confirmed cases were reported in 1979 and approximately 3,600, during 1980.

CDC strongly recommends that wild animals not be kept as pets and encourages states to make it unlawful to ship, sell, or retain as pets wild animals such as skunks and raccoons, especially those captured from the wild, because they are potential sources of rabies.

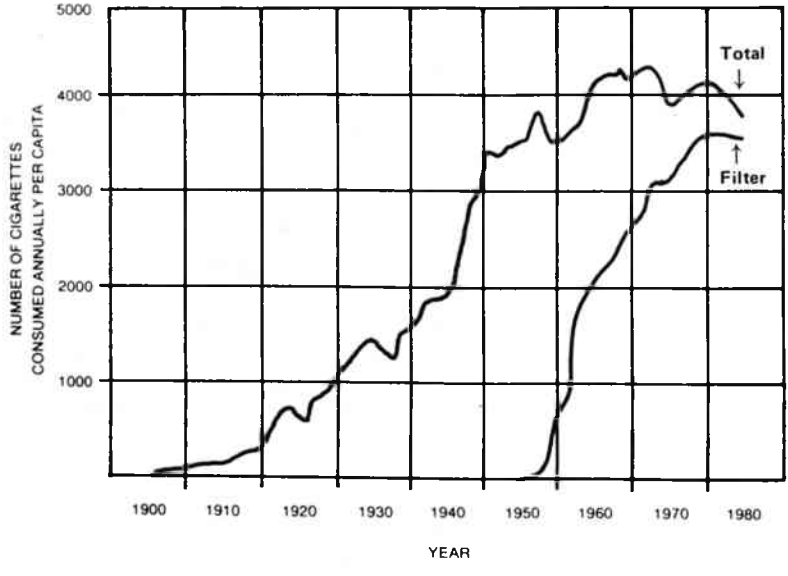
Current Trends

The Health Consequences of Smoking -- The Changing Cigarette

On January 12, 1981, the Surgeon General's annual report on the health consequences of smoking was released. It reviewed current scientific data to examine the relative health hazards resulting from use of cigarettes with different levels of "tar" (a majority of the particulate matter in cigarettes), nicotine, carbon monoxide, and additives.

There have been marked changes in the type of cigarettes smoked since the early 1950s, when the health effects of smoking were first widely recognized. One change is that the average yield of tar in a cigarette consumed in the United States has declined from 38 mg in 1954 to 19 mg in 1975. The nicotine yield has also declined: from 2.3 mg to 1.3 mg per cigarette. Cigarettes yielding less than 15 mg tar accounted for 2% of cigarette sales in 1967; the comparable figure for 1980 is expected to approach 50% (*1*).

FIGURE 1. Annual per capita consumption of total cigarettes and filter-tipped cigarettes in the United States, for persons aged 18 and older, 1900-1979



Smoking – Continued

The percentage of smokers who buy filtered cigarettes has also progressively increased (Figure 1). The effects of these changes are summarized below.

1. Lower-tar and -nicotine cigarettes are associated with fewer lung cancers than their higher-tar predecessors, but the lung cancer rates for smokers of such cigarettes are still much higher than those for nonsmokers.
2. The occurrence of cancer of the larynx may also be lower among smokers of lower-yield products than among smokers of higher-tar and -nicotine products.
3. There are no data on the relative risk of other cancers associated with the use of lower-yield cigarettes.
4. There is insufficient evidence that lower-tar or -nicotine cigarettes reduce the excess risk of cardiovascular disease in smokers—the largest cause of excess mortality related to cigarette smoking.
5. There is insufficient evidence available to assess the impact of lower-yield cigarettes on the risk of chronic obstructive lung disease, including emphysema.
6. No evidence has been published on the effect of varying cigarette yields upon the pregnant woman or the fetus.
7. When persons switch to lower-yield cigarettes, they sometimes change their smoking habits as well (perhaps to compensate for lower yield). However, this behavior has not been clearly defined, and its impact on the health risks of smoking is not fully known.
8. It has not been proven that lower-yield cigarettes encourage starting or continuing smoking, or that they ease the process of stopping.
9. Carbon monoxide has been identified as a harmful constituent of cigarette smoke. However, the data are insufficient to determine variations in the excess risks of diseases that might result from variations in carbon monoxide levels.
10. Special concern is being raised about the potential for new or increased health hazards of cigarette smoking due to the use of additives in cigarettes. The identity and quantity of such additives in cigarettes are not presently known, nor are the nature or the biologic effects of their pyrolytic products.

Reported by the Office on Smoking and Health, U.S. Public Health Service, Dept of Health and Human Services.

Editorial Note. A dose-response relationship between cigarette smoking and a number of diseases—including cancer, cardiovascular disease, and non-neoplastic bronchopulmonary disease—has been clearly established (*2*). Some of the elements that have been determined to contribute to this complex relationship are the number of cigarettes smoked, the age at initiation of smoking, the number of years of smoking, the depth of inhalation, and the type of cigarette smoked.

The Public Health Service policy regarding cigarette smoking remains unchanged. There is no safe cigarette; the only way to avoid the hazards of smoking is to stop entirely. However, until the cigarette smoker actually stops smoking, some lessening of the risk of lung cancer may be obtained by the use of lower-tar and -nicotine, rather than higher-yield, cigarettes.

References

1. U.S. Department of Agriculture. Tobacco situation. U.S. Department of Agriculture, Economic, Statistics and Cooperative Service, Sept 1980.
2. CDC. Highlights of the Surgeon General's report on smoking and health. MMWR 1979; 28:1-4, 9-12.

▲A copy of the report from which these data were derived is available on request from the Office on Smoking and Health, U.S. Public Health Service, 5600 Fishers Lane, Park Building, Room 1-58, Rockville, Maryland 20857.

Urban Rat Control — United States, July-September 1980

During the fourth quarter of fiscal year 1980, Urban Rat Control Programs in 68 communities were responsible for 2,726 blocks being reclassified as environmentally improved blocks (EIBs). This is the largest number of EIBs identified in a single quarter in over 3 years.

EIBs document the success of these programs in developing and sustaining rat-free environments. EIB status also indicates that increasing local resources are being used to sustain the progress of a program. This local commitment has enabled the redirection of federal funds to other community neighborhoods with severe rat infestation and environmental deterioration. For example, during 1980, 4 new program communities initiated

(Continued on page 52)

TABLE 1. Status of target-area blocks in Urban Rat Control Programs, fourth quarter fiscal year 1980 (July 1-September 30)

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	712	519	157	36	60	1,125
Hartford	314	219	83	12	36	313
Boston	398	300	74	24	24	24
Previously funded programs	. . . . .					788
REGION II	3,661	1,332	1,038	878	559	4,534
Atlantic City	200	0	0	0	0	0
Camden	254	135	63	56	0	97
Jersey City	240	25	42	89	110	203
Newark	219	27	175	17	0	0
New York City	1,284	597	383	304	250	977
Rochester	203	63	36	104	27	367
Yonkers	66	8	17	41	0	83
Aguadilla, P.R.	202	92	63	24	41	166
Arecibo, P.R.	79	18	37	24	57	236
Guayama, P.R.	216	84	26	0	0	0
Mayaguez, P.R.	199	139	39	21	0	193
Ponce, P.R.	249	66	56	127	0	253
San Juan, P.R.	250	78	101	71	74	305
Previously funded programs	. . . . .					1,654
REGION III	3,388	1,376	1,496	516	468	7,087
"War on Rats," D.C.	984	577	294	113	0	1,072
Baltimore	369	158	156	55	44	306
Chester	80	13	39	28	40	95
Harrisburg	190	14	37	139	177	177
N.E. Pa. V.C. Assn.†	288	89	199	0	23	1,182
Philadelphia	1,079	397	624	58	70	1,501
Pittsburgh	256	46	104	106	77	1,275
Norfolk	121	66	38	17	26	1,329
Portsmouth	21	16	5	0	11	72
Previously funded programs	. . . . .					78
REGION IV	4,472	1,862	1,717	305	516	6,625
Mobile	340	75	197	68	0	399
Tuscaloosa	344	89	109	0	0	0
Miami	1,167	645	435	87	0	873
Pensacola	534	331	203	0	40	55
Atlanta, Ga.‡	721	297	163	20	0	0
DeKalb Co., Ga.	334	208	126	0	406	406

Urban Rat Control — Continued

TABLE 1. Status of target-area blocks in Urban Rat Control Programs, fourth quarter fiscal year 1980 (July 1-September 30) — *Continued*

Program community	Target-area blocks				Environmentally improved blocks*	
	Total	In attack phase	In maintenance phase		New this quarter	Cumulative
			<12 months	≥ 12 months		
Lexington	317	64	253	0	0	0
Louisville	330	113	119	98	30	602
Memphis	385	40	112	32	40	432
Previously funded programs	. . . . .					3,858
REGION V	4,706	2,500	1,634	274	317	4,363
Chicago	493	420	63	10	0	7
Peoria	324	64	260	0	0	0
Gary	381	155	82	144	0	0
Indianapolis	351	282	69	0	156	417
Benton Harbor	190	82	73	35	0	0
Detroit	184	13	166	5	0	538
Highland Park	220	128	86	6	0	0
Saginaw	333	177	138	18	0	0
Washtenaw Co.-Ypsilanti	236	101	49	0	0	0
Wayne Co.-Ecorse	193	76	26	0	0	0
Akron	289	62	106	0	81	575
Barberton	212	106	106	0	0	85
Cincinnati	74	21	34	19	17	131
Cleveland	365	259	102	4	21	682
Columbus	326	194	99	33	33	239
Toledo	180	95	85	0	9	158
Youngstown	220	146	74	0	0	0
Milwaukee	135	119	16	0	0	0
Previously funded programs	. . . . .					1,531
REGION VI	1,390	616	658	116	442	6,524
Little Rock	403	282	107	14	0	0
Pine Bluff	218	148	70	0	100	190
New Orleans	355	99	154	102	108	2,970
Houston	414	87	327	0	234	2,106
Previously funded programs	. . . . .					1,258
REGION VII	968	166	428	374	313	3,644
Kansas City, Kan.	54	0	54	0	119	1,187
Kansas City, Mo.	118	19	28	71	10	653
St. Louis	340	21	149	170	147	916
Omaha	456	126	197	133	37	492
Previously funded programs	. . . . .					396
REGION IX	758	272	389	97	51	1,382
Los Angeles	307	77	184	46	51	258
Oakland	247	158	74	15	0	219
San Bernardino	63	4	49	10	0	130
San Francisco	141	33	82	26	0	293
Previously funded programs	. . . . .					482
REGION X						830
Previously funded programs	. . . . .					830
TOTAL	20,055	8,643	7,517	2,596	2,726	36,114

*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.
†Northeastern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazelton.
‡Target-area blocks are confined to public housing projects.

Urban Rat Control — Continued

comprehensive rat-control activities, and 15 existing programs extended services to additional areas (2,900 blocks) within their communities.

In fiscal year 1980, local programs served almost 4 million people living on over 27,000 blocks and identified over 7,000 as EIBs. As of September 30, 1980, programs had provided services in more than 56,100 blocks; over 36,100 of these eventually achieved "environmentally improved" status. Since the inception of the program in 1969, the areas that 6.9 million people live in have been made rat free and environmentally improved.

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

Errata, Vol. 29, No. 51

p613. In the article "Chromobacteriosis — Florida," there were 2 errors in the credits: The Special Pathogens Br, Bacterial Diseases Div, should have been credited, and the first initial for BG Yangco, MD, MPH, was omitted.

p627. In the article "Measles — Florida," Table 2, the relative risk for persons vaccinated at 13-14 months is 0.71, not 0.17.

Vol. 30, No. 3

p34. In the article, "Measles Mortality — United States, 1960-1980," the following names of contributors were inadvertently omitted: L Hatcher, RN, MA Roberts, PhD, State Epidemiologist, Oklahoma State Dept of Health.

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