CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
PUBLIC HEALTH SERVICES

Division of Disease Control

ANNUAL SURVEILLANCE SUMMARY

JANUARY 1 – DECEMBER 31, 2001

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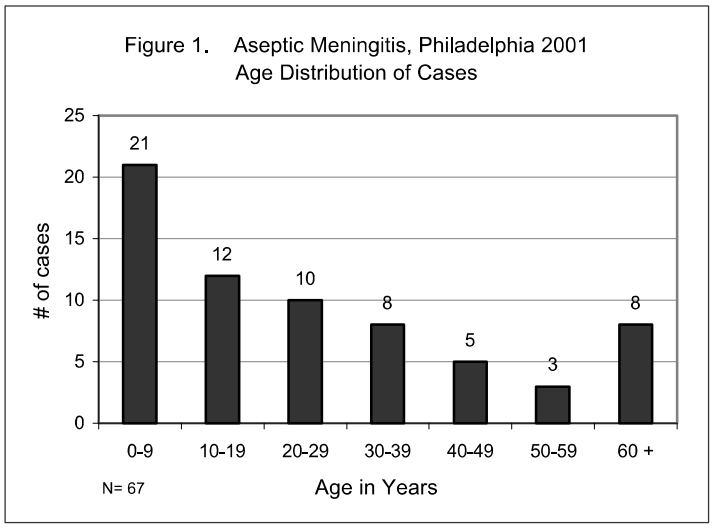
Central Nervous System Infections

Aseptic Meningitis

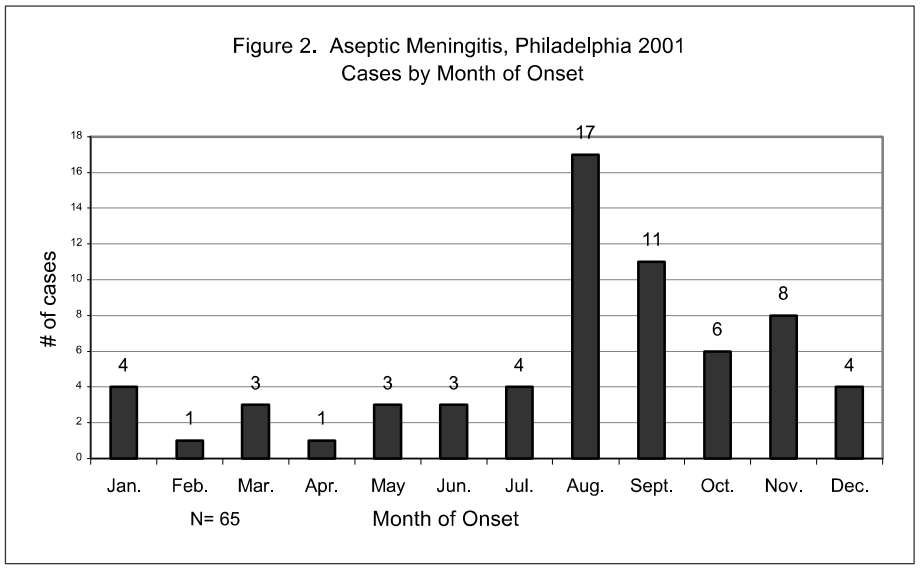
In 2001, 71 cases of aseptic meningitis were confirmed in Philadelphia residents. Active surveillance efforts conducted by the Division of Disease Control and scrutiny for emergence of West Nile Virus infection (see below) facilitated recognition of many of these. In addition, cases were often brought to attention because of an initial diagnosis of "rule-out bacterial meningitis" and/or the need for hospitalization. Among 53 cases for which information on hospitalization was available, 51 (96%) were admitted for at least 24 hours. Thus, we suspect that reported cases of aseptic meningitis represent persons with more severe clinical presentations. The true incidence of aseptic meningitis in Philadelphia is unknown.



Among the 71 cases of aseptic meningitis, 49% occurred in persons 19 years of age or younger (Figure 1); 56% of cases were male. There were no fatalities. Laboratory-confirmed etiologies were as follows: enterovirus, 12 cases; herpes simplex virus, 3 cases; and varicella-zoster virus, 1 case. Disease onset for more than half occurred between the months of July and October (Figure 2), suggesting that an enteroviral etiology was likely for many more than just those that were laboratory-confirmed. There were no clusters or relationship between reported cases.

Encephalitis

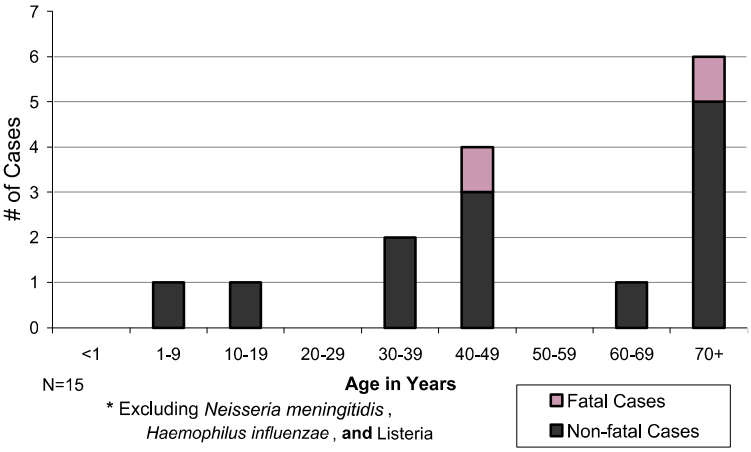
Five cases of encephalitis were identified in 2001 (exclusive of two cases caused by West Nile Virus infection, see below). All occurred in adults. Etiology was not established for any case, although serological testing for arboviral infection was negative in all. The five encephalitis cases were hospitalized with severe protracted illness; and four had profound residual neurological deficits.



Bacterial Meningitis

Fifteen microbiologically-confirmed cases of bacterial meningitis (excluding *Neisseria meningitidis, Haemophilus influenzae,* and *Listeria*) were identified in 2001. Based on an expected incidence of bacterial meningitis of approximately 2 cases/100,000, this disease category is significantly under-reported in Philadelphia. The age distribution of cases and fatalities is shown in Figure 3. *Streptococcus pneumoniae* accounted for 12 (80%) of the total, with one each of the following organisms: *Streptococcus bovis*, group B *Streptococcus,* and *Neisseria* non-*meningitidis*. Susceptibility data on isolates was not collected in 2001, but will be instituted as part of routine case investigation in 2002. Two fatalities (13%) were identified, both due to *S. pneumoniae* infection. Cases were distributed throughout the City and there were no unusual clusters of disease.

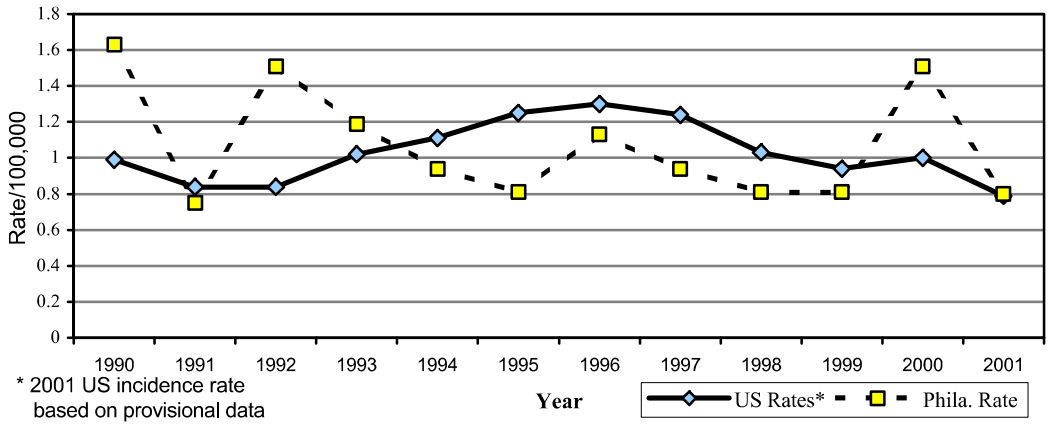
Figure 3. Bacterial Meningitis*, Philadelphia 2001
Age Distribution of Cases and Fatalities



Meningococcal Infection

In 2001, twelve cases of meningococcal infection were identified. Using CDC case definitions for meningococcal disease, nine were considered *confirmed*, based on isolation of *Neisseria meningitidis* from a normally sterile site. Three others were considered *probable*, based on the presence of meningococcal antigen in the CSF or clinical purpura fulminans. Cases presented with the following clinical syndromes: meningitis 8 (67%), primary bacteremia 3 (25%), and bacteremia with pneumonia 1 (8%). There was one fatality (8%) that occurred in a previously healthy 19 year-old. Age distribution for the 12 cases was: <1 yr, 0 (0%); 1-5 yrs, 2 (17%); 6-10 yrs, 0 (0%); 11-19 yrs, 1 (8%); 20-29 yrs, 1 (8%); 30-39 yrs, 3 (25%); 40-49 yrs, 0 (0%); 50-59 yrs, 4 (33%); and 80-89 yrs, 1 (8%). For 2001, meningococcal disease incidence in Philadelphia (0.8 cases per 100,000) was lower than in 2000 and lower than nationwide incidence as reported by the CDC (approximately 1-1.2 cases per 100,000 persons) (Figure 4). However, the ten-year average incidence for meningococcal infections in Philadelphia (1.1 per 100,000) is highly consistent with national rates. As in prior years, sero-group Y was most

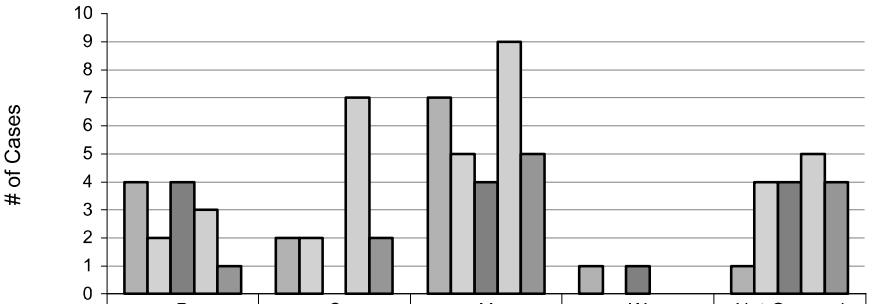
Figure 4. Meningococcal Infections, United States and Philadelphia, 1990-20(
Rates of Infection



common in Philadelphia (Figure 5).

In 2001, no cases of meningoccoccal infection occurred in children attending a Philadelphia school. One case occurred in a teacher who had frequent close contact with young children at a daycare center. In accord with CDC guidelines, antibiotic prophylaxis was recommended for 25 children who had significant exposure to the teacher. Another case occurred in a college student who resided in a dormitory. In accord with recent recommendations of the CDC Advisory Committee on Immunization Practices (ACIP), this student had received meningococcal vaccine prior to college entry. Unfortunately, infection in this student was caused by serogroup B which is not included in the current quadrivalent meningococcal vaccine (contains antigens of serogroups A, C, Y, and W-135).

Figure 5. Meningococcal Disease, Philadelphia 1997-2001
Reported Serogroups



	B	C	Y	W	Not Grouped
1997	4	2	7	1	1
1998	2	2	5	0	4
1999	4	0	4	1	4
2000	3	7	9	0	5
2001	1	2	5	0	4

Serogroup

Haemophilus influenzae

Invasive infection due to *Haemophilus influenzae*, all serotypes, was made reportable during the first quarter of 2001. Although disease due to type B strains has long been reportable, most clinical laboratories no longer perform serotype analysis. Thus, adequacy of surveillance for this important vaccine-preventable childhood disease could not be assured. The Philadelphia Board of Health added all serotypes of invasive *H. influenzae* (pathogen recovered from a normally sterile site) to the list of notifiable conditions in order to promote submission of strains for serotype analysis and to enhance regional surveillance. Seven cases of invasive *H. influenzae* infection were reported in 2001. Two cases occurred in infants less than 3 months of age, and five cases occurred in adults over the age of 50 years. There were 3 cases with primary bacteremia, 3 cases with bacteremic pneumonia, and 1 case with meningitis. DDC collected all isolates for serotype analysis in the Philadelphia Public Health Laboratory. Serogroup analysis of pathogens was as follows: type F, 3 cases; type A, 2 cases; type B, 1 case; and nontypeable, 1 case. The sole occurrence of type B infection occurred in an 81-year-old man.

Listeria

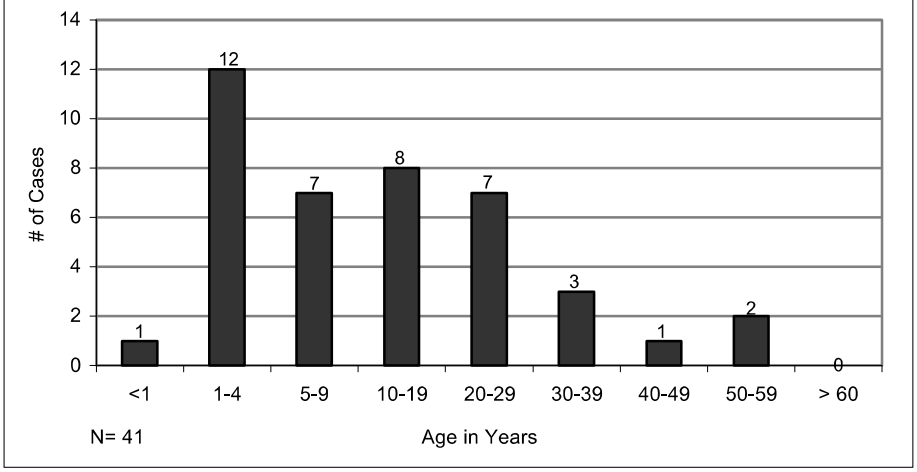
Eight cases of *Listeria* infection were reported in 2001. Clinical diagnoses were as follows: primary bacteremia, 6; meningitis, 1; and septic abortion, 1. Five infections occurred in men, and three in women. In contrast to recent prior years, several cases occurred in relatively young individuals, all of whom had predisposing conditions. Distribution of cases by age was as follows: 10-19 yrs, 1 case; 20-29 yrs, 1 case; 30-39 yrs, 2 cases; 60-69 yrs, 1 case; 70-79 yrs, 2 cases; and 80-89 yrs, 1 case. Unique risk factors were as follows: malignancy 3, solid organ transplant 1, corticosteroid treatment 1, pregnancy 1, and none/unknown 2. Two fatalities were reported, occurring in persons aged 77 and 82 years. Investigation of the 2001 Philadelphia cases failed to identify any association between *Listeria* infections and consumption of a specific food item.

Gastrointestinal Infections

E. coli O157:H7

The CDC definition of *E. coli* O157:H7 infection requires isolation of the organism from a clinical specimen or the presence of symptoms in a person who is epidemiologically linked to a culture-proven case or disease outbreak. Forty-two cases of *E. coli* O157:H7 infection were identified in 2001, a substantial increase compared to previous years. Twenty-nine of the cases occurred in association with documented disease outbreaks. Thirteen cases were sporadic. The male-female ratio was approximately equal. The age distribution is shown in Figure 6. Symptoms reported by cases were as follows: diarrhea 97%, abdominal cramps 76%, fever 52%, and bloody diarrhea 41%. Although there were no deaths or serious complications of infection (e.g., hemolytic-uremic syndrome), five persons were hospitalized due to the severity of symptoms.

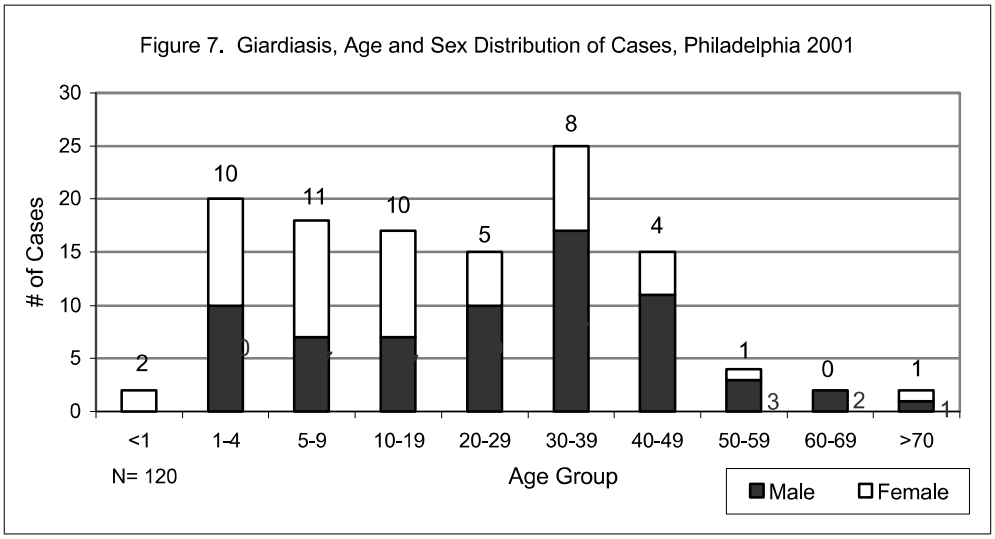
Figure 6. *E. coli* O157:H7 Infection, Philadelphia 2001
Age Distribution of Cases



Two confirmed outbreaks of *E. coli* O157:H7 infection accounted for 29 of the cases recorded in 2001. The first outbreak occurred among young children and their parents who had visited a Montgomery County petting zoo in the fall of 2000. This highly-publicized outbreak of *E. coli* O157:H7 infections prompted a CDC investigation, including environmental sampling and a case-control study. Fifteen cases related to contact with farm animals were identified in Philadelphia residents through active surveillance conducted as part of the study. Although infection was acquired in 2000, morbidity was not identified for reporting purposes until 2001. Findings from the CDC investigation and subsequent recommendations regarding petting zoos can be found in MMWR Vol 50, No 15; 293-297 (Apr 20,2001).

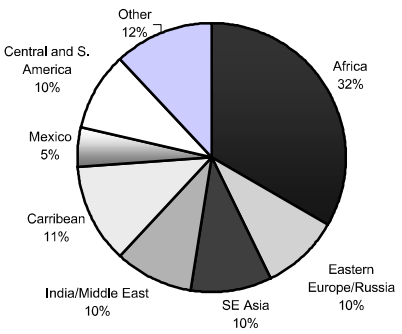
The second outbreak of *E. coli* O157:H7 infection occurred among students of a Philadelphia University. Because most of the

Figure 7. Giardiasis, Age and Sex Distribution of Cases, Philadelphia 2001



affected students lived in the same University-affiliated residence, a common-source outbreak was suspected and an investigation was conducted by DDC. The outbreak proved to be associated with attendance at a barbecue that had been privately arranged by students residing in the dormitory. Of the 41 students who were interviewed, 33 had attended the barbecue. Fourteen were deemed cases and 19 were controls. The case-control study was not able to implicate an individual food item as the source of infection, although several items had elevated odds ratios. No original food items from the barbecue were available for laboratory testing for the pathogen. Although this outbreak was almost certainly foodborne, it is unknown if food was delivered to the barbecue contaminated, or if it was accidentally contaminated on-site by a person unknowingly infected with *E. coli* O157:H7. No secondary cases were identified in the weeks following the barbecue.

Figure 8. Giardiasis, Presumed Location of Acquisition Following Travel, Philadelphia, 2001



Giardiasis

One hundred and twenty cases of laboratory-confirmed giardiasis were reported in Philadelphia residents in 2001. The age distribution of cases is shown in Figure 7. As in other recent years, a larger percentage of cases occurred in men (57%). More then 80% occurred in persons less than 40 years of age. Symptoms reported by the cases, included diarrhea 65%, abdominal pain 50%, nausea 42%, vomiting 30%, and fever 25%. Approximately 20% of cases were hospitalized due to the severity of illness, and there was one death for which giardiasis may have been a contributing factor. Travel to a foreign country in the month prior to illness onset was reported by 44 of 114 cases (39%). Most common geographic regions for presumed disease acquisition are shown in Figure 8.

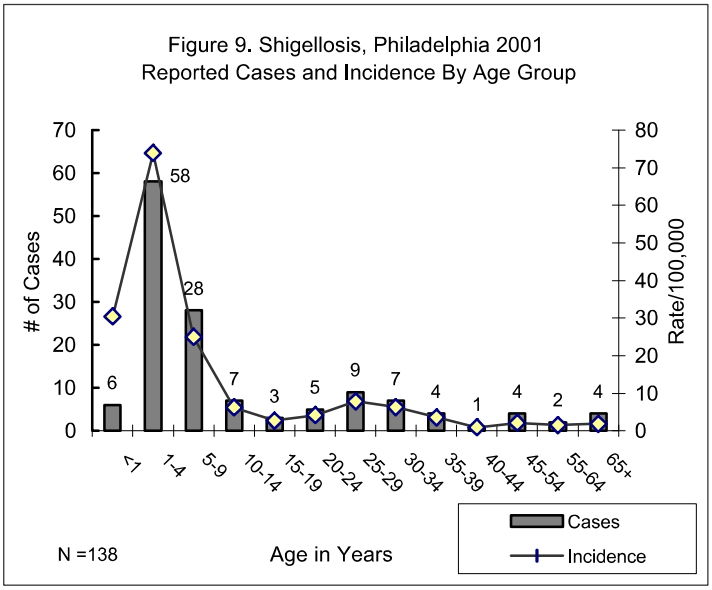
Cryptosporidiosis

In 2001, thirteen cases of cryptosporidiosis were laboratory-confirmed in Philadelphia residents, a 40% decrease from the prior year. Seven (54%) of the cases occurred in men. Although two cases required hospitalization, there were no fatalities. Age distribution for the 13 cases was: $\leq$ 9 yrs, 0 (0%); 10-19 yrs, 1 (8%); 20-29 yrs, 4 (31%); 30-39 yrs, 5 (38%); 40-49 yrs, 0 (0%); 50-59, 2 (15%); and 60-69, 1 (8%). Nine of the 13 cases reported at least one risk factor for acquisition of infection (non-exclusive), including male homosexual contact (5), immunocompromise (3), foreign travel (2), and exposure to sick farm animals (1). The four persons without a known risk factor were women. There was no seasonal trend in occurrence of cryptosporidiosis cases and no common source outbreaks were identified.

Shigella

One hundred thirty-nine reported cases of shigellosis met the CDC case definition in 2001. Fourteen (10%) cases did not have a confirmatory stool culture, but were epidemiologically linked to a culture-confirmed case of shigellosis. One hundred twenty-five cases (90%) were culture confirmed. Serotype data is as follows: *S. sonnei,* 82.4%(103); *S. flexneri*, 4.0%(5); *S. dysenteriae*, 0.8% (1); missing serotype data, 12.8%(16). Distribution of cases and disease rates by age group are represented in Figure 9.

The one reported case of serogroup A, *S. dysenteriae,* involved a child (seven years old) with no reported foreign travel exposures during the incubation period for disease. The strain was resistant to both ampicillin and trimethoprim-sulfamethoxazole. This case was excluded from his usual after-school childcare



program activities until submitted stool cultures were negative for the *Shigella*.

Campylobacter

Ninety cases of *Campylobacter* were reported among Philadelphia residents in 2001. Serotype data was confirmed for 41 reported cases – *C. jejuni* (40); *C. laridis* (1). Common reported risk factors during the incubation period for disease include: animal contact (43%) and travel (20%). There was one case in a homeless shelter resident. Disease was isolated to the single case and there was no evidence of disease transmission.

Salmonella

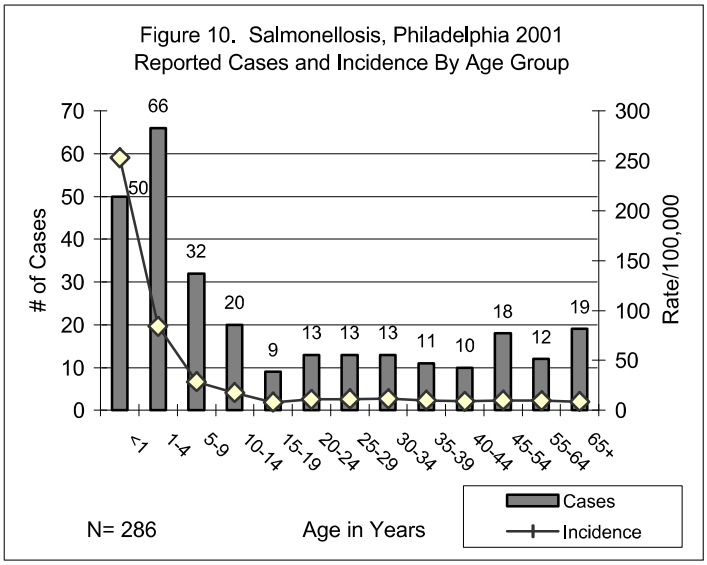
Two hundred eighty-seven reports met the CDC case definition for salmonellosis in 2001. Of these, 278 were culture confirmed as salmonellosis. The remaining nine did not have stool cultures performed, but were persons epidemiologically linked to a laboratory-confirmed case. There was one fatal case of *Salmonella*, involving an 86-year-old woman who was hospitalized for respiratory complications. Salmonellosis cases by age and case rate are plotted in Figure 10. (median age: 9 years; range: 2 weeks to 86 years). Consistent with the age distribution in previous years, the case rate among infants was substantially higher than any other age group. Children 5 years of age and younger comprised 40% of the total cases in 2001.

Of the two hundred thirty-one cases for which we have serotype data, *S. enteritidis* (36.9%) and *S. typhimurium* (25.4%) comprised a majority of the reported types in Philadelphia. Twenty-four isolates were identified as likely reptile-associated strains. Only two of these cases actually reported reptile contact. Ten other individuals reported reptile contact during the incubation period for salmonella infection; however, none had a strain considered to be uniquely associated with reptiles.

There was one cluster of *Salmonella* infections in 2001. This involved four students who attended a school for mentally challenged individuals. Disease was clustered to one classroom and investigation identified a class trip during the four days prior to disease onset as the likely source of infection. No further cases were identified within the school, nor spread of the outbreak to the community.

Typhoid

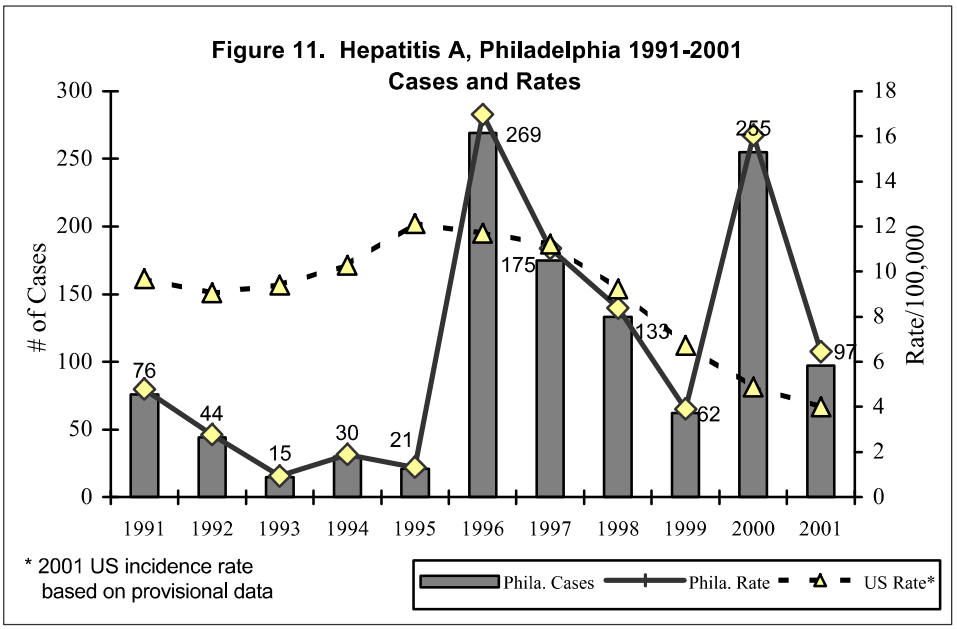
Two cases of typhoid fever were reported among Philadelphia residents in 2001. One case involved the caretaker of a child who had recently acquired disease during travel to Syria. The second case involved an individual who had traveled to India where he was first diagnosed and treated for *S. typhi*. This individual did not receive typhoid immunization prior to travel.



Hepatitis

Hepatitis A

Ninety-seven reports met the CDC case definition for hepatitis A in 2001. This represents a 62% decrease compared to reported cases in 2000. (n=255). There was one hepatitis A associated fatality.



The DDC has continued to receive reports of individuals with a positive laboratory test for recent hepatitis A infection (HAV-IgM positive) in the absence of overt hepatitis associated symptoms. Of the 157 reported cases, 41 were HAV-IgM positive on serologic testing; however, did not meet the CDC clinical criteria for hepatitis A which includes a) discrete onset of symptoms, and b) jaundice or elevated serum aminotransferase levels. Common reported clinical symptoms of cases are as follows: (nonexclusive) nausea/vomiting (47%); fever (42%); fatigue (70%); and jaundice (90%).

Cases were predominantly male – male: 86 (88.7%); female: 11 (11.2%). The median age was 38 years (range 5-83 yrs.). Among individuals 18 years of age and older (n=95), reported sexual orientation is as follows: bisexual, 2 (2%); heterosexual, 31 (32%); homosexual, 25 (26%); unknown, 35 (40%). Sexual encounter information is as follows: no partners, 30 (31.9%); one partner, 31 (32.9%); 2-5 partners, 16 (17%); 5 or more partners, 2 (2.1%); unknown, 15 (15.9%). The rate of hepatitis A disease in Philadelphia remains higher than the reported U.S. rate. (Figure 11)

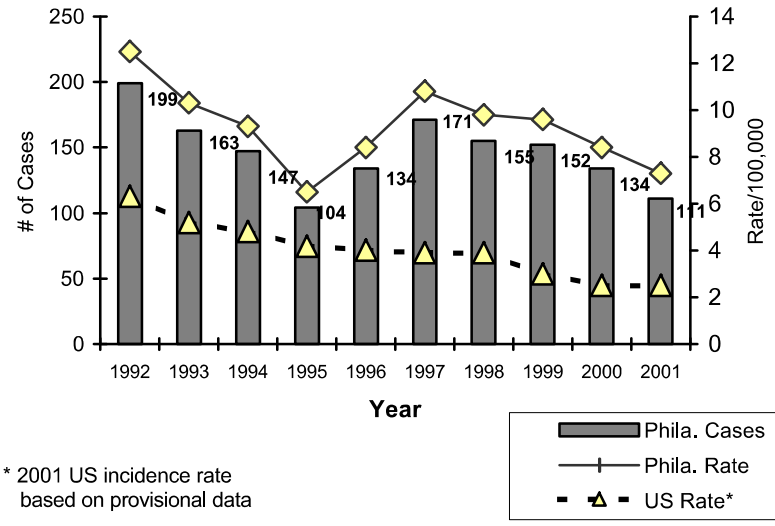
In response to surveillance findings, DDC has initiated efforts to control and prevent hepatitis A disease among identified at-risk populations. In addition to the existing program of routine hepatitis A immunization among children entering the homeless shelter system, DDC has now begun a hepatitis A vaccination and awareness collaborative program with community based organizations that provide services to the men who have sex with men community (MSM) in Philadelphia. As of 2001, the combined hepatitis A/hepatitis B vaccine (Twinrix®) has been made available to the MSM community free of charge. DDC anticipates hepatitis A vaccination among this population will result in an overall decrease in disease incidence in Philadelphia.

Hepatitis B

DDC received 1,197 reports of patients with a positive hepatitis B serology in 2001. One hundred and eleven (9.3%) were confirmed as having acute disease. The Centers for Disease Control and Prevention case definition for acute hepatitis B requires the presence of acute illness with a) discrete onset of symptoms, b) jaundice or elevated serum aminotransferase

levels, and c) IgM antibody to hepatitis B core or positive hepatitis B surface antigen. The overall acute hepatitis B case rate for Philadelphia is 7.3/100,000 in 2001 (compared with 8.45/100,000 in 2000). This rate is based on the 2001 population census data for Philadelphia. Provisional acute hepatitis B rate for the United States is 2.5/100,000. Of the 111 cases, 15 (13.5%) were hospitalized, and there was one hepatitis B-associated fatality.

Figure 12. Hepatitis B, Philadelphia 1992-2001
Cases and Rates

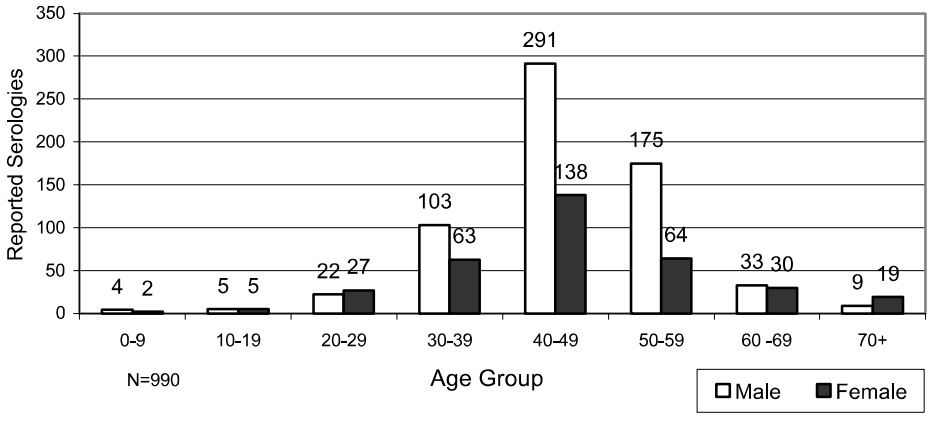


Common reported risk exposures during the six months prior to illness include: drug use 8 cases (7.2%) and greater than two sexual partners 25 cases (22.5%). Four cases reported a history of receiving hepatitis B vaccine – three recalled receiving at least one dose of the vaccine within the last four years (1997, 1998, 2001), but none were aware of their post-immunization hepatitis B serologic status. Two of the four individuals were employed in a healthcare related field.

Hepatitis C

Clinical laboratories are required to report all patients with serologic evidence of hepatitis C virus (HCV) infection, regardless of whether infection is acute or chronic. In addition, physicians and other health care providers are required to report cases of <u>acute</u> hepatitis C. The Division of Disease Control maintains a registry of persons with positive HCV laboratory results in order to facilitate counseling, education, and follow-up of infected persons. The HCV registry consists of Philadelphia residents reported since January 1998 who have serologic evidence of HCV infection, including any positive test by EIA, RIBA, and/or nucleic acid amplification. Reports may not include confirmatory test results and, therefore, DDC is unable to state with certainty that all reported morbidity indicates true infection. In 2001, DDC added 1,081 new patients to the hepatitis C registry. Of the 1,081 reports, only one could be identified as acute HCV infection based on accompanying clinical information.

Figure 13. Hepatitis C, Philadelphia 2001
Newly Reported Cases with Positive Hepatitis C Serologic Tests



Vector Borne Diseases

Lyme Disease

In 2001, 99 persons were confirmed as new cases of Lyme Disease, a decrease of 40% compared to the 165 cases recognized in 2000. This is the second consecutive year with a significant decline in reporting of new Lyme Disease cases. The decrease in Lyme cases in Philadelphia likely reflects a true decrease in disease incidence as no reporting bias or change in reporting procedures occurred. A similar decrease was seen in the number of positive serologic studies for Lyme Disease reported to the DDC in 2001. Clinical laboratories reported positive serologic studies (enzyme immunoassay, Western blot, immunoblot, etc.) for 488 unique patients in 2001, compared to 713 patients in 2000 (32% decline). Of these 488 patients, 389 (80%) could not be confirmed as Lyme cases, as defined by CDC criteria, for the following reasons: no clinical information obtained from the health care provider 238 (62%), clinical surveillance criteria not fulfilled 60 (15%), or case out of Philadelphia jurisdiction 91 (23%).

For surveillance purposes, CDC defined confirmation of Lyme Disease requires that a case have either (a) physician-diagnosed erythema migrans or (b) at least one late manifestation of disease with positive laboratory criteria for disease. Medical providers reported the following clinical findings (non-unique) in the 99 Philadelphia cases: arthritis, 49%; erythema migrans, 46%; facial palsy, 13%; radiculoneuropathy, 4%; lymphocytic meningitis, 3%; and carditis, 2%. According to the reporting health care providers, cases were most likely exposed in the following geographic areas: Philadelphia County, 58%; other counties in Pennsylvania, 4%; out-of-state, 7%, and unknown or unreported, 31%. Lyme disease cases, newly diagnosed in 2001, are depicted according to zip code of home residence in Appendix A (Map 1).

West Nile Virus

West Nile Virus (WNV) was first identified in the United States in 1999. In 2001, Philadelphia saw its first human cases. These three confirmed WNV infections occurred in men, aged 45 and 60 years, and a woman, aged 65 years. There were no fatalities. WNV in humans typically causes an aseptic meningitis or encephalitis. In 2001, 71 cases of aseptic meningitis, 7 cases of encephalitis, and 2 cases of Guillian-Barré were reported to the Division of Disease Control (DDC). All of these were investigated and recommended for WNV testing if indicated. Forty-five human specimens were referred for WNV testing. Thirty of these specimens were cerebrospinal fluid (CSF) and 15 were serum without corresponding CSF. (In 2000, only 12 specimens were tested for WNV. All were CSF.) In 2001, one CSF tested positive for WNV IgM antibody and one serum specimen tested positive for IgM antibody. Both patients had a clinical diagnosis that was consistent with aseptic meningitis and were linked epidemiologically to areas of high WNV activity.

In conjunction with other City Agencies, the Division of Environmental Health maintained an active mosquito control program in 2001. All of the city's approximate 70,000 stormwater catch basins were treated with larvacide at least twice during the season. Routine mosquito trapping was conducted using a combination of light traps and CO2 traps. (See Appendix B [Map 2]) In an effort to decrease adult mosquito populations, application of adulticide was done from ground level on several occasions at two water treatment sites. During the 2001 season, 376 mosquito pools were collected

and submitted for testing, 44 of which were positive for WNV.

The Division of Environmental Services also responded to reports of dead crows, raptors, and blue jays throughout the season. These bird species appear to be the most susceptible to WNV infection and therefore serve as the best markers of viral activity in a specific geographic region. Four hundred seventy-eight dead birds were sighted in Philadelphia in 2001. Of these, 136 were submitted for WNV testing. Ninety-three (68%) were found to be positive for WNV. Included in this total are four collection birds from the Philadelphia Zoo (1 flamingo, 2 penguins, and 1 pelican). A map detailing the areas in which WNV-positive birds were found is in Appendix B.

In addition, the Pennsylvania Department of Agriculture established sentinel chicken sites and sentinel horse sites in Philadelphia. None of the chicken or horse sentinels were found to be exposed to WNV as measured by WNV antibody testing in blood.

The Philadelphia Department of Public Health continues all components of the WNV Prevention and Control Plan. The DDC is available to coordinate and assist providers in ordering the appropriate diagnostic tests to evaluate persons suspected of having WNV infection.

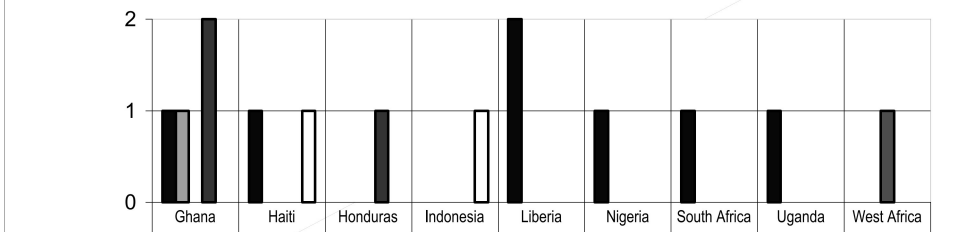
The following tests are available free of charge through the DDC:

Serum:	Igm and IgG by ELISA (paired acute and convalescent samples)
CSF:	IgM antibody
	Viral Culture
	RT-PCR
Tissue:	Viral Isolation

Malaria

In 2001, sixteen reported cases met the Centers for Disease Control and Prevention surveillance definition for malaria. Two cases were unable to be located for disease investigation. Surveillance data is provided for the remaining 14 cases. The median age of cases was 21 years (range: 3 weeks-45 years). Morbidity and mortality data are as follows: hospitalization (10), fatality (1). All cases were treated for malaria; specific anti-malarial treatment is as follows: chloroquine (5), quinine (6), quinine and primaquine (1), and unknown (2). Malaria cases by species was *P. falciparum* (7), *P. ovale* (1), *P. vivax* (2), *P. malariae* (1), unable to speciate (3). Malaria by presumed country of acquisition and species is shown in Figure 14. Five cases (35.7%) reported a previous history of malarial disease and had traveled recently to countries with documented resistance to chloroquine. (CDC, Health Information for International Travel 2001-2002) Use of malaria chemoprophylaxis prior to travel was as follows: chloroquine (4), doxycycline (1). Completion of prescribed chemoprophylaxis is unknown.

Figure 14. Malaria, Presumed Location of Acquisition and Species. Philadelphia 2001



	Ghana	Haiti	Honduras	Indonesia	Liberia	Nigeria	South Africa	Uganda	West Africa
Falciparum	1	1			2	1	1	1	
Malariae	1	0							
Ovale	0	0							1
Unable to Speciate	2	0	1						
Vivax	0	1		1					

Other Reportable Diseases and Conditions

Legionnaire's Disease

Only three cases met the CDC surveillance definition for Legionnaire's disease in 2001. This is a substantial decrease from the prior year when 19 cases were identified. The case definition requires laboratory confirmation of diagnosis, in addition to a compatible clinical illness. Since many, if not most, cases of pneumonia are treated empirically, surveillance data for Legionnaire's disease likely underrepresents true disease burden. It is unknown if the decrease in number of reported Legionnaire's cases for 2001 reflects a true change in disease incidence, a decrease in reporting, or a decrease in number of patients being tested for infection. The three reported cases occurred in adults over the age of 45 years, only one of whom had a known risk factor for acquisition of infection (corticosteroid use). All presented with a clinical syndrome of community-acquired pneumonia; none were fatal. Urine *Legionella* antigen testing was used to establish the diagnosis in all three cases. There were no nosocomial or institution-related clusters of *Legionella* infection.

Animal Bites

In 2001, PDPH received reports of 1,894 animal bites, a 4.1% decrease when compared to reported bites in 2000. 1,823 or 96% of the reported bites were inflicted by domestic animals (dogs, cats, hamsters, ferrets, gerbils), with dogs accounting for 76% of all bites reported. An owner of the biting animal was identified for 66% of biting incidents (1,205 events) involving domestic animals. In 415 instances (21.9 % of bite incidents), it is known that the victims were bitten by their own pets. Of bites inflicted by animals other than dogs or cats, the most common were mouse bites (14), followed by rat (13), squirrel (11), rabbit (5), raccoon (4), hamster (4) and snake (3) bites.

One of the animal bites reported to the Division of Disease Control in 2001 was a bite inflicted by a tiger. The tiger was part of a traveling zoo, which was being set up in Fairmount Park. The circumstances of the bite were never made entirely clear, but the victim was the brother of the tiger's trainer. He suffered a severe bite to the thigh, was hospitalized and treated at a local hospital, and presumably made a complete recovery. Although rabies vaccine is not licensed for use in wild animal species, it is likely to be effective. The tiger had recently received rabies immunization, and was deemed to be healthy. Therefore, post-exposure rabies prophylaxis was not recommended for the tiger's victim.

Age of the bite victim was available in 1,722 of the 1,894 (91%) incidents. Young children in Philadelphia suffer disproportionately more bites than older Philadelphia residents. 40.5% of reported biting incidents occurred to children under 15 years of age.

In 2001, the Philadelphia Public Health Laboratory tested 92 suspect animals for rabies. The tested animals included 52 cats, 23 dogs, nine bats, two each of raccoons, skunks, and wallabies, and one mouse and fox. One raccoon and the fox tested positive for rabies antigen by direct fluorescent antibody staining of brain tissue. The raccoon was found in the Holmesburg section of the city, where two Philadelphia residents who had contact with the raccoon were placed on rabies prophylaxis. The fox was found dead on a property in West Mount Airy; Disease Control staff verified that it had no contact with persons or pets residing on that property.

In the twelve year period, 1989 through 2000, DDC has confirmed 36 rabid animals in Philadelphia, 19 raccoons, six cats, four bats, four skunks, two woodchucks and one fox.

In recent years, most human cases of rabies in the United States have been caused by the rabies virus from bats. This is, in part, because victims of bat bites are not always aware of having been bitten. Therefore, rabies prophylaxis is indicated for any person exposed to a bat who cannot, with certainty, state that he/she was not bitten by the bat, and the bat is not available for testing. Thus, a person awakening at night to find a bat in the bedroom, even in the absence of a bite wound, should receive rabies prophylaxis, if the bat escapes. Also, if a bat is found in the bedroom of an unattended child and the bat escapes capture, the child should receive rabies prophylaxis.

To arrange for Rabies Fluorescent Antibody Testing of a captured bat, or other animal involved in a bite, contact the Division of Disease Control, 215-685-6741 (215-686-5665 after normal business hours, on weekends and holidays).

Sexually Transmitted Diseases

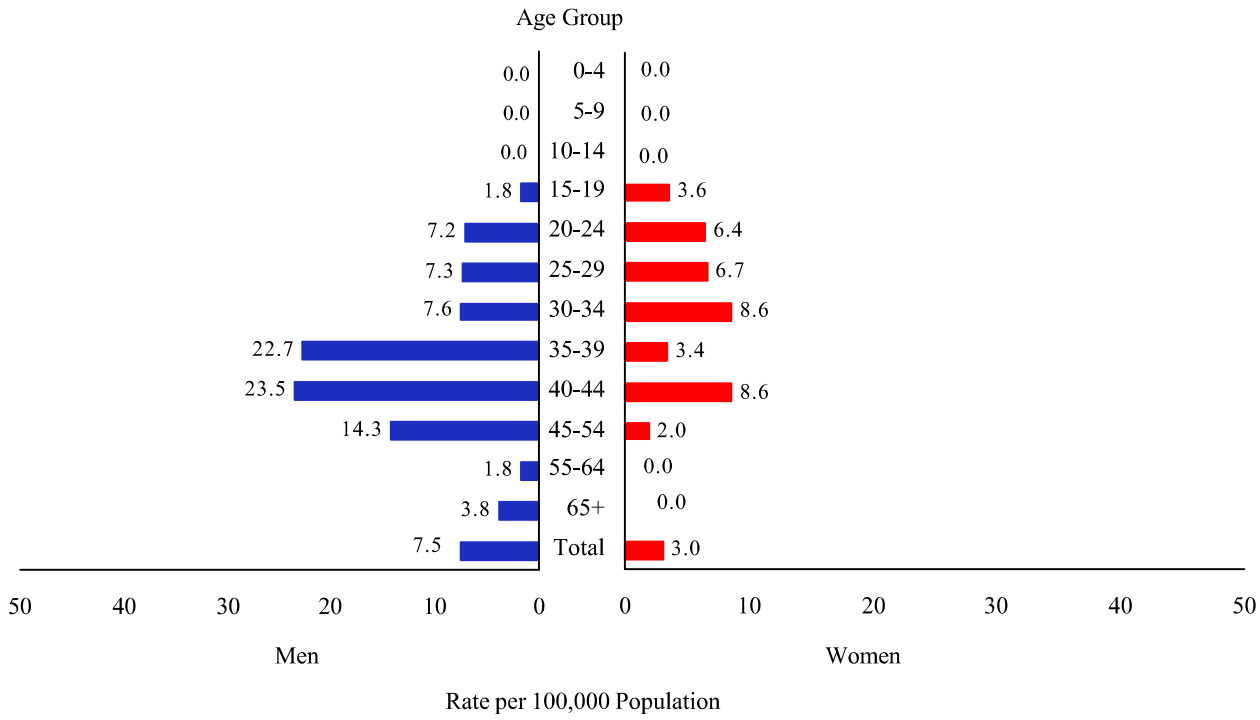
Early Syphilis

Reported primary and secondary (P&S) syphilis morbidity in 2001 increased 14.9%, from 67 to 77 cases, when compared to 2000. However, since 1990, the peak year of our most recent syphilis epidemic, there has been a 96.7% overall decrease in reported P&S syphilis from the 2,361 cases reported in that year. This overall decrease may be attributed to many factors including saturation of the at-risk population, increased use of condoms and reductions in unprotected sexual activity resulting from educational messages targeting HIV and STD prevention, and the disease intervention activities of the Philadelphia STD Control Program which aggressively provided testing and preventive treatment to contacts of early syphilis cases. Reported early latent syphilis cases have declined 94.0% (-3,671 cases) since the peak of the epidemic in 1990 when 3,907 cases were reported, to the current annual level of 236 cases.

Reported rates of P&S and early latent syphilis were higher among men than women in 2001. The cause of this may be multifactorial, including an increase in the percent of male cases attributable to men who have sex with men, from 0.9% in 1995 to 30.2% (16/53) in 2001, and an increased likelihood that a male will notice a lesion on his genitalia and be diagnosed. The rates of syphilis remain higher among Blacks than Whites and Hispanics, although this racial disparity is narrowing.

With rates of infectious syphilis being at an all time low in the United States, the Centers for Disease Control and Prevention has launched a National Plan to Eliminate Syphilis by 2005. The Philadelphia STD Control Program, in conjunction with this effort, initiated a weekly syphilis outbreak surveillance report and established thresholds for reported morbidity above which outbreak control activities are implemented. In addition, liaisons with community-based organizations have been established and intensified syphilis case management activities have been maintained.

Figure 15. Rate of Primary & Secondary Syphilis per 100,000 Population by Age and Gender: Philadelphia, 2001

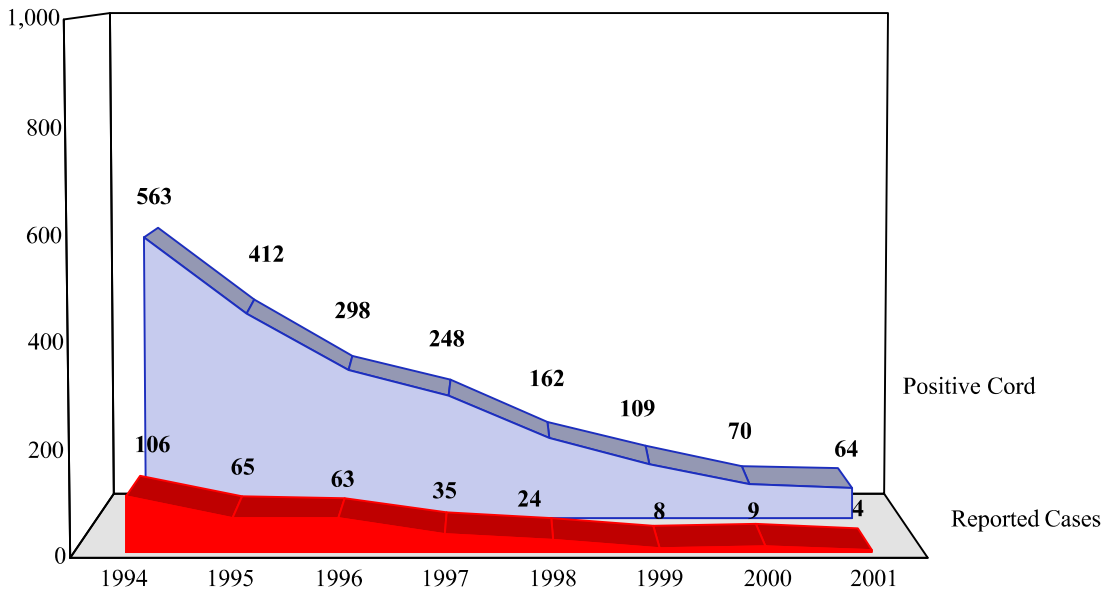


Congenital Syphilis

In 2001, 4 cases of syphilis in Philadelphia newborns met the current Centers for Disease Control and Prevention surveillance definition for congenital syphilis. This represents a 55.6% (-5 cases) decrease when compared to 2000 and a 98.7% (-297 cases) decrease when compared to 1991, the peak year since the reporting definition changed in 1990. Of particular note is the continued reduction in the number of reactive cord blood/maternal serologic tests for syphilis at delivery. In 2001, this number decreased from 70 in 2000 to 64 (-8.6%) in 2001. Since 1992, when 864 were reported, we have seen a 92.6% (-800 reports) decrease.

The occurrence of congenital syphilis is directly linked to the incidence of early syphilis occurring in the city. Adequate prenatal care, with routine screening and treatment of syphilis in pregnant women clearly plays a major role in preventing congenital syphilis. In 2001, a lack of prenatal care contributed to the failure to prevent 3 of the 4 cases reported. Had a routine third trimester serology been performed, the fourth case could have been prevented as well.

Figure 16. Reported Cases of Congenital Syphilis and Number of Positive Cord Blood Tests: Philadelphia, 1994-2001



Chlamydia trachomatis

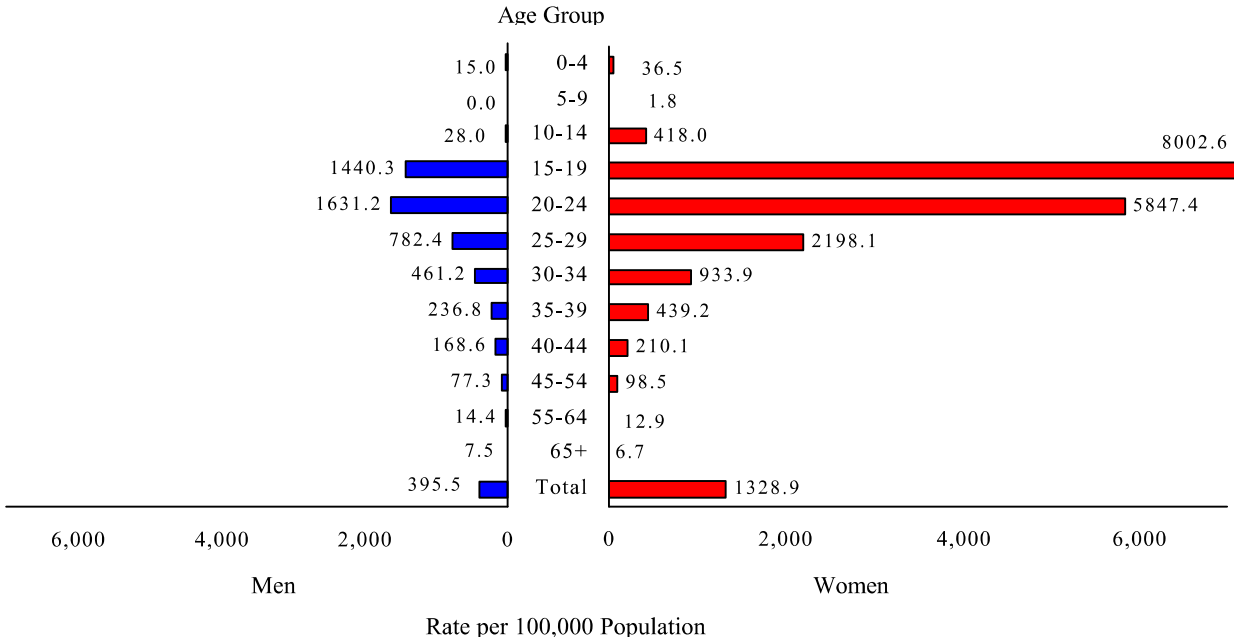
In 2001, 13,586 cases of *Chlamydia trachomatis* were reported, essentially unchanged (-7 cases) when compared to calendar year (CY) 2000. However, annual reported Chlamydia morbidity had increased 68.3% (+5,514 cases) from 8,079 cases in 1995 to 13,593 in 2000; the CY 2001 morbidity represents a reversal of this 5-year trend. Initial increases among males and females were fueled by implementation of more sensitive laboratory tests in November 1996. Since 1997, increases have occurred disproportionately among males; these increases may be attributed to increased screening of males in both the public and private sectors. However, in CY 2001, there was still a disproportionate number of females reported resulting in a F/M ratio of 3.9:1; this is due primarily to ongoing aggressive screening efforts among asymptomatic women with relatively little screening among males – in 2001, 6,647 tests among males were performed through PDPH citywide screening efforts while 83,723 tests among females were performed.

In spite of stable reported chlamydia morbidity, infection among adolescents (ages 15-19) and young adults (ages 20-24) remain staggeringly high with 72.1% (9,793/13,586) of all reported cases among 15-24 year olds; among females 15-19 years old, a rate of 8002.6 cases per 100,000 [Figure 17] was identified.

Untreated *Chlamydia* infection in women can lead to Pelvic Inflammatory Disease, chronic pelvic pain, ectopic pregnancies and is the leading cause of tubal infertility. In an effort to prevent these complications the PDPH-supported screening tests for women in 2001 resulted in the identification of 6,199 (7.4%) cases of *Chlamydia*; this accounts for more than 57% (6,199/10,797) of the total chlamydia cases reported in women.

Screening of asymptomatic men and women in both traditional and nontraditional venues has become feasible and is now widely available with noninvasive, urine-based tests using nucleic acid amplification methods. Much of the increase in testing and reporting in men is due to an enhanced effort by the PDPH to screen asymptomatic adolescent males. Urine based screening of young men which was initiated at the end of 1999 primarily in the Youth Study Center has been expanded during 2001 to include District Health Care Center clinics, Recreation Centers and Health Resource Centers in selected high schools. In 2001, 6,647 urine-based tests for chlamydia were conducted among males with 345 (5.2%) found to be positive.

Figure 17. Rate of Chlamydia per 100,000 Population by Age and Gender: Philadelphia, 2001.

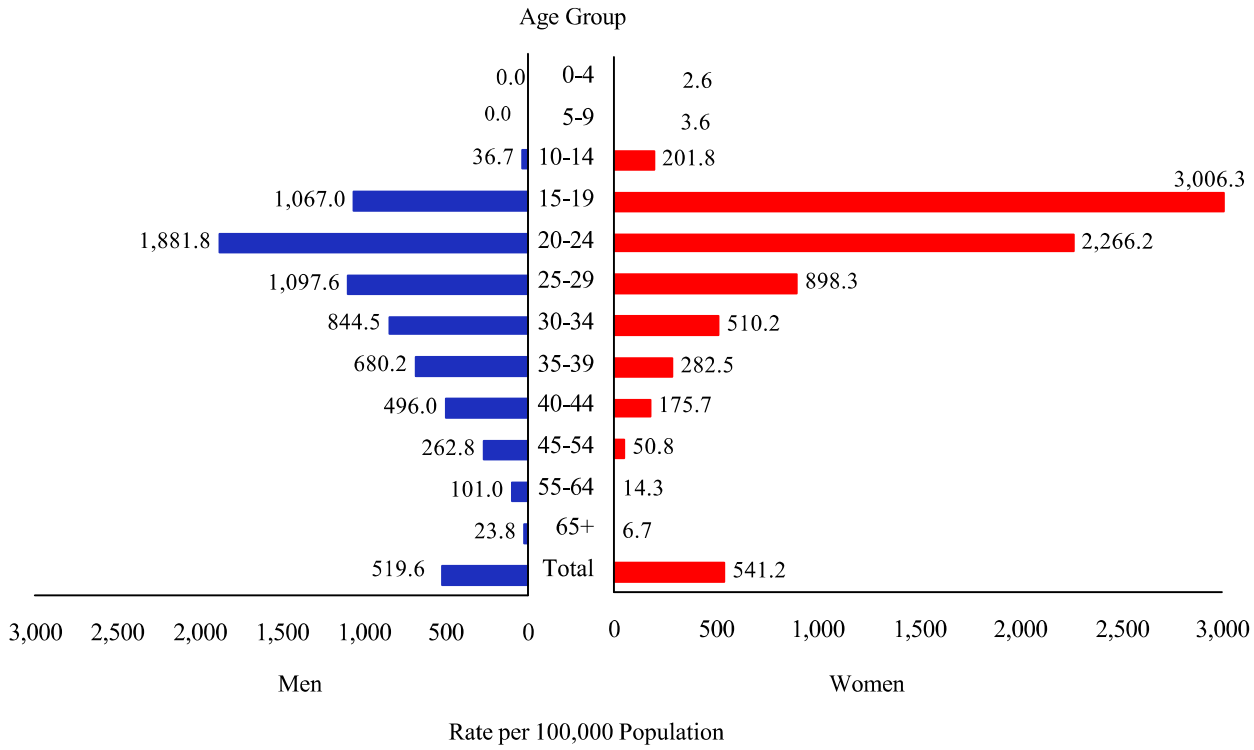


Gonorrhea

In 2001, 8061 cases of Gonorrhea were reported, a small decrease (1.3%, -109 cases) when compared to 2000. This is the first decrease in reported cases of gonorrhea in over five years. Teenagers and young adults remain disproportionately affected with 58.5% (4,715/8,061) of the cases among 15-24 year-olds.

While there was little PDPH-supported routine screening of asymptomatic men for gonorrhea in 2001 (1,991 tests; 25+) when compared to *Chlamydia* (6,647; 345+), a large proportion of men infected with gonorrhea will be symptomatic and seek medical care. Routine screening in women remains necessary as women are likely to have subtle or no symptoms. In 2001, the PDPH provided/supported 83,375 screening tests for gonorrhea resulting in the identification of 2,118 (2.5%) infected women; this accounted for more than 48%(2,118/4,397) of the total cases of gonorrhea reported in women. As with *Chlamydia*, women with Gonorrhea who are untreated are at risk of developing complications including Pelvic Inflammatory Disease that may lead to infertility and increase the chance of ectopic pregnancy. Increased screening and educational efforts targeted at young, asymptomatic men and women will be needed to have a favorable impact on this disease.

Figure 18. Rate of Gonorrhea per 100,000 Population by Age and Gender: Philadelphia, 2001

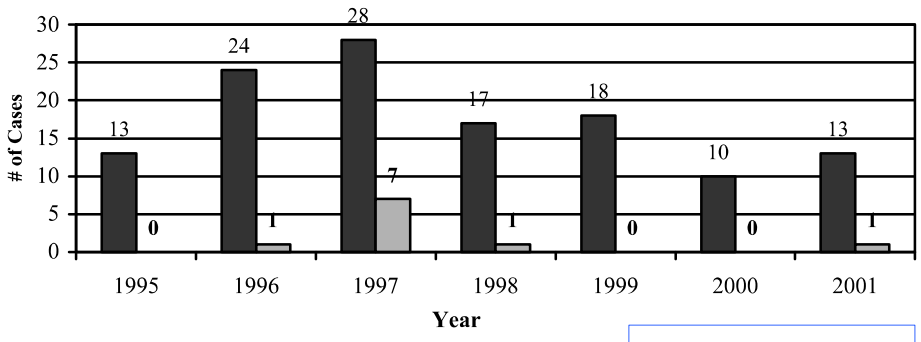


Vaccine Preventable Diseases

Measles

Fourteen suspected measles cases were reported to DDC in 2001; 13 were ruled out based on a negative serologic test (IgM) and/or a clinical case presentation that was incompatible with measles. The sole confirmed case of measles occurred in a 25 year old female graduate student, who had newly arrived from Mongolia on 7/25/01. She developed symptoms of sore throat followed immediately by facial rash on 7/29/01. On 7/30/01, she attended orientation for new students at the university. Of the 637 attendees at this orientation session, 40% were foreign-born. The patient was subsequently hospitalized for a febrile rash-illness with interstitial pneumonia from 8/1 – 8/5/01. The diagnosis of measles was confirmed by serum measles IgM titer and a positive measles DFA on nasopharyngeal swab. Although the patient's student health record contained information that she had received two prior doses of measles-containing vaccine, this was self-reported and not confirmed by a medical provider. Vaccination of susceptible contacts was performed. No secondary cases were confirmed.

Figure19. Measles, Philadelphia 1995-2001
Ruled Out and Confirmed Cases



Among the 13 individuals who were reported but not confirmed as measles cases, ten had alternative diagnoses, including scarletina, Kawasaki, viral exanthem, and pityriasis rosea. Three persons were reported for positive measles serologic tests that were done solely for screening of immunity. The number of suspected and confirmed measles cases reported from 1995 to 2001 is shown in Figure 19. Nationally, there were 108 (61 indigenous/47 imported) confirmed cases of measles in 2001.

Mumps

Sixteen suspected mumps cases were reported to DDC in 2001. Of these, one was confirmed and one was considered probable according to CDC case definitions. The *confirmed* case occurred in a 31-year-old unimmunized woman from Russia who presented with unilateral parotid swelling. Her mumps IgM titer at the time of presentation was positive. The *probable* case of mumps occurred in a six-year old child who presented with fever and bilateral parotid swelling. This child, who had an age-appropriate immunization history (two prior doses of mumps-containing vaccine), met the clinical CDC case description. However, no laboratory testing was performed so the case could not be considered confirmed. Since other viral illnesses, such as coxsackie and parainfluenza, may also present with parotitis, diagnosis of mumps can only be confirmed by viral cultures of urine and/or nasopharyngeal aspirate, or positive serologic tests (IgM).

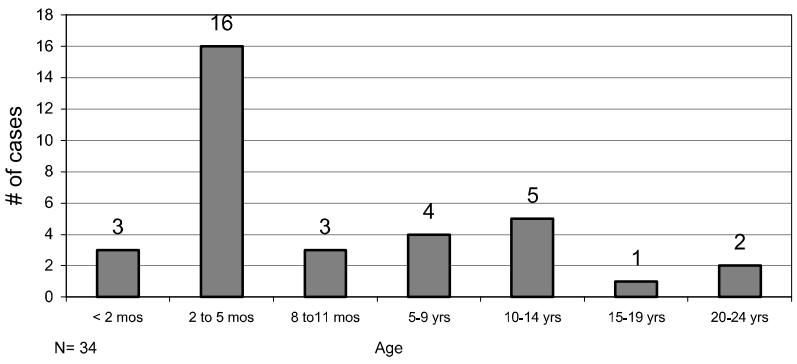
Pertussis

In 2001, 34 reported cases of pertussis met the CDC surveillance definition. Of these 34, 27 symptomatic individuals were confirmed by either a laboratory test (PCR = 14, culture = 7,

serology = 2) or epidemiologic link to a laboratory-confirmed case (epi link = 4). Seven cases were considered probable cases; these were cases that met CDC clinical case definition, but no laboratory testing or epidemiologic link could be established. Of the 34 cases, none resulted in death.

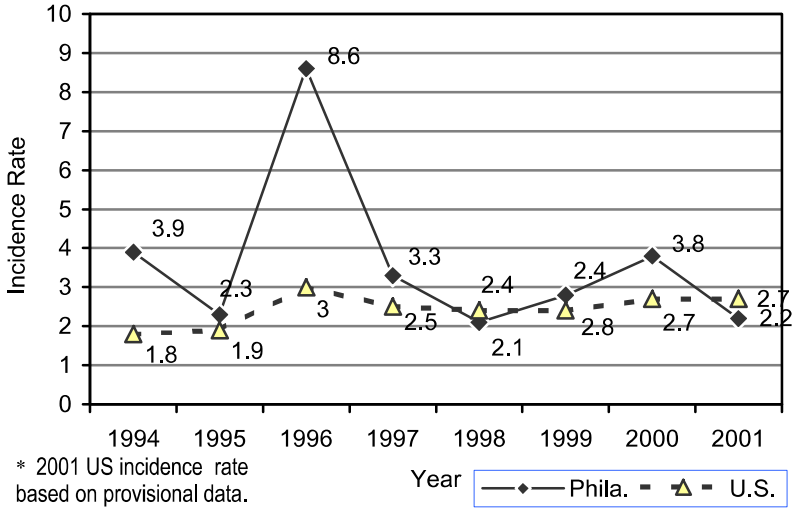
Twenty-two (65%) of the cases were less than one year of age, four (12%) were children 5 to 9 years of age, and 8 (23%) cases ranged from 10 to 24 years. Of the children less than one year of age, two (9%) had zero doses, six (27.2%) had 1 dose, three (13.6%) had 2 doses and one (4.5%) had 3 doses of pertussis-containing vaccine. The remaining 10 (45.7%) infants had no documentation. Of the children 5 to 9 years of age (n=4), three had received 5 doses of pertussis-containing vaccine. Age distribution of confirmed and probable cases of pertussis is shown in Figure 20.

Figure 20. Pertussis Cases , Philadelphia 2001
Age Distribution



Seventeen (50%) of the cases were male and seventeen were (50%) female. Sixteen (47%) of the cases required hospitalization. Hospitalization duration ranged from one to 16 days (mean = 5.6 days). Symptoms were characterized by cough in 97% of cases, with duration of cough ranging from 3 to 77 days (median = 28 days). Other reported symptoms included whoop (44%), apnea (17%), posttussive vomiting (58%), and paroxysms (47%). Ninety-one percent (31/34) were prescribed antibiotics. Of these, 88% received erythromycin or another macrolide. The 2001 annual pertussis incidence per 100,000 persons for Philadelphia was 2.2 and for the United States was 2.7. The incidence rate for Philadelphia and the United States is shown in Figure 21.

Figure 21. Pertussis, Philadelphia 1994-2001*
Philadelphia and US Incidence Rates



Rubella

There were 20 suspected cases of rubella reported to DDC in 2001. All of these cases were ruled out, as they did not meet the CDC case definition for rubella. In the majority of cases, serum IgM testing was mistakenly requested instead of IgG testing for serologic screening of immunity. Eleven suspected cases were female, with ages ranging from one (a rule out congenital rubella) to 46 years. One prenatal screen of a 32 year old identified the patient as rubella susceptible; the physician was notified to administer rubella vaccine post delivery. Five rubella serologic tests were ordered on men; all such testing was performed for employment screening.

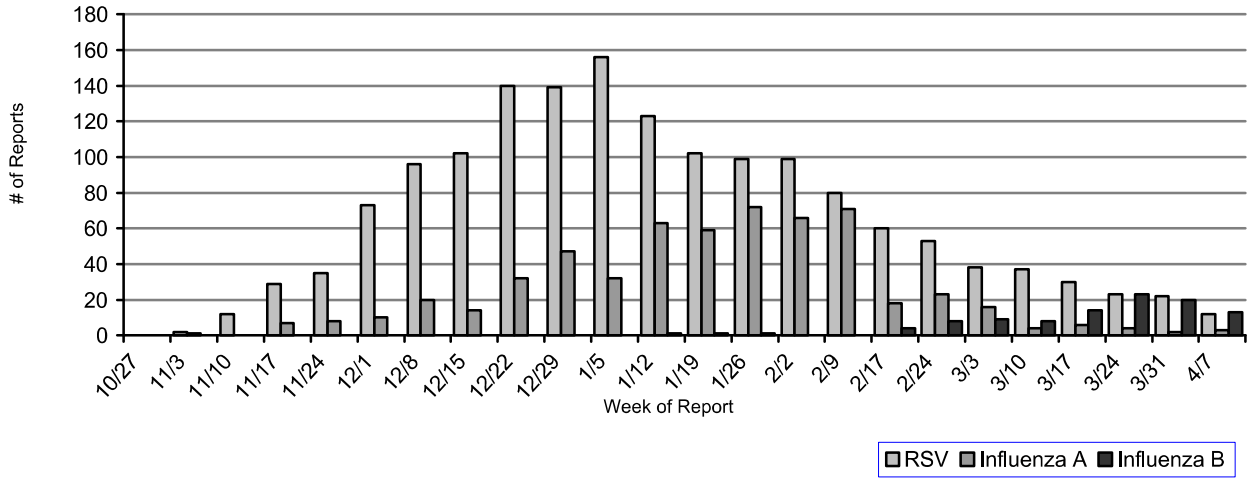
Division of Disease Control – Special Projects

Sentinel Surveillance for Respiratory Viruses (including Influenza*)*

DDC conducts laboratory-based surveillance of respiratory viruses each year during the cold weather seasons. Diagnostic virology laboratories from three Philadelphia hospitals and one reference site submit aggregate data to DDC weekly. Laboratories report the total number of isolates of influenza A and B, and respiratory syncytial virus (RSV) from the preceding week. Positive results from either viral culture or antigen-based assays are counted. No identifying or demographic information on patients is collected, thus surveillance likely represents disease burden beyond Philadelphia boundaries. Because this is a sentinel surveillance system it does not measure disease incidence. Rather, the objectives of surveillance are to monitor trends in virus circulation throughout the area, and determine which respiratory viruses predominate during a given season.

Numbers of isolates reported through Respiratory Virus Surveillance for the period of October 2001 – April 2002 are depicted in Figure 22. Influenza A was the predominant influenza virus circulating in the Philadelphia region. Transmission appears to have peaked during the end of January 2002. Influenza B was first detected in January but continued to circulate through late April 2002. The majority of influenza isolates that were subtyped by the Pennsylvania Bureau of Laboratories were confirmed as influenza A (H3N2), Moscow-like. Occasional isolates of influenza A (H1N1), New Caledonia-like were also identified. Both of these strains of influenza A were similar to those contained in the 2001-2002 influenza vaccine. All isolates of influenza B were characterized as Hong Kong-like, which is antigenically distinct from the influenza B/Sichuan strain that was contained in the 2001-2002 vaccine. B/Hong Kong/330/2001 is to be included in the 2002-2003 flu vaccine for the U.S.

Figure 22. Respiratory Virus Surveillance, Philadelphia, 2001-2002



Bioterrorism Preparedness

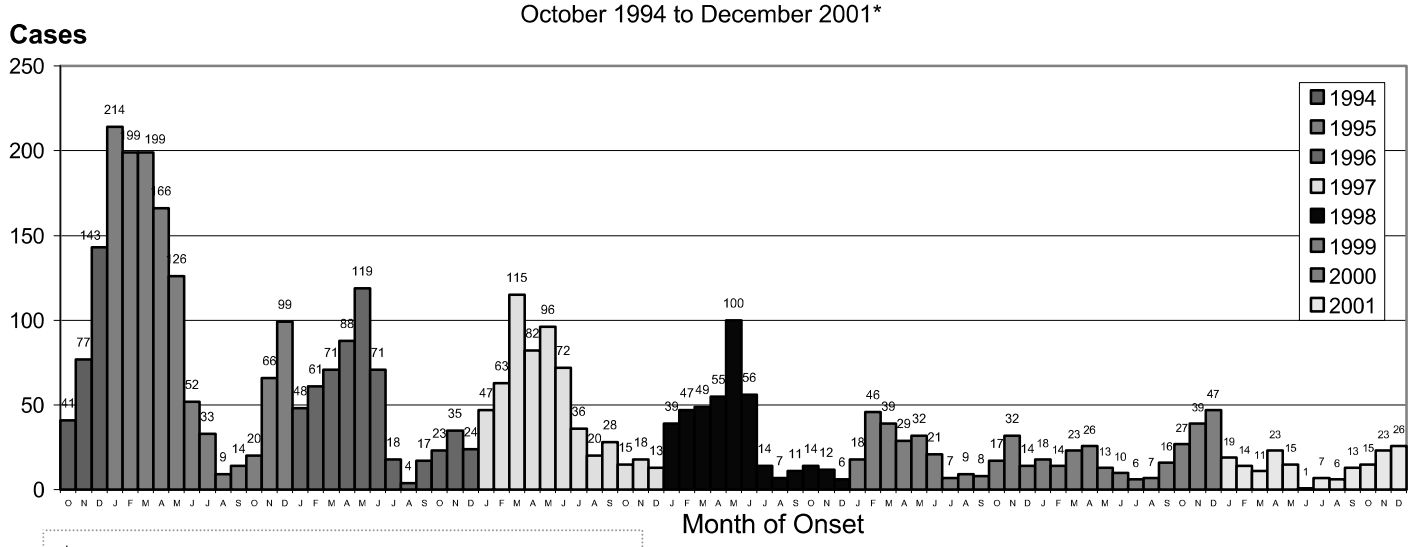
Bioterrorism preparedness has been a program priority for the Division of Disease Control for the last five years, although the year 2001 is likely to be remembered as the year that defined this issue for the medical community and general public. The multi-state outbreak of intentional anthrax in September and October 2001, occurring only weeks after the September 11 terrorist attacks, affected health departments throughout the United States. That outbreak resulted in 11 confirmed cases of inhalational anthrax and 11 cutaneous anthrax cases in residents of Florida, New Jersey, New York City, Washington DC and Connecticut, including 5 deaths. The source of that outbreak is believed to be exposure to contaminated mail distributed through the U.S. Postal Service. Since that time, the U.S. Postal Service has implemented control measures to remove microbiological threats from the mail, and media and governmental agencies have instituted measures to minimize exposure to these threats. The FBI is currently conducting an investigation to identify the perpetrator of this crime.

Because of concerns regarding the possibility of biological terrorism, on September 12, 2001, the Division of Disease Control (DDC) instituted an active surveillance system for certain infectious disease syndromes, working with a sentinel network of Infectious Disease specialists throughout the city. Every day, seven groups of Infectious Disease specialists working at ten hospitals throughout Philadelphia reported the total number of consults performed, and the number that fell into one of 6 syndrome categories that were consistent with illnesses caused by known bioterrorist agents. DDC staff investigated suspicious reports or clusters of illness, and no unusual infectious disease cases or outbreaks were identified through this system.

After the identification of anthrax cases in New Jersey and Bucks County, Pennsylvania in November 2002, DDC closed this surveillance project and at the request of the Pennsylvania Department of Health and the Centers for Disease Control and Prevention, joined an enhanced surveillance program for inhalational anthrax that was underway in parts of the region. Infection Control Practitioners (ICPs) from hospitals in New Jersey, Delaware, Bucks County and the City of Philadelphia reviewed ICU admissions and ER visits on a daily basis, and reported those numbers as well as detailed clinical information on any case that could possibly represent inhalational anthrax. ICPs from ten Philadelphia hospitals participated in this surveillance. Between November 13 and December 18, which was the last day of the project, a total of 833 ICU and 19,811 ER visits from 10 Philadelphia hospitals were reviewed. No cases of inhalational anthrax were identified through this surveillance.

Throughout the months of October, November and December 2001, the Philadelphia Department of Public Health received numerous questions from the medical community and general public regarding the signs and symptoms of anthrax, as well as reports of suspected exposures to unidentified or suspicious powders or substances. DDC issued several health alerts to the Philadelphia medical community regarding the diagnosis of anthrax and management of possible exposures. Nineteen reports of suspected anthrax were entered into the DDC communicable disease registry, although none were confirmed. Because of the overwhelming number of reports of exposure to suspicious substances, the Philadelphia Fire and Police Departments, in conjunction with the Philadelphia Department of Public Health, created multi-agency “rapid assessment teams” that operated from Fire stations throughout the City. At the height of the anthrax outbreak, 8 teams were functioning 24 hours a day, 7 days each week. These teams made a total of 1,150 responses, and collected 764 specimens which were evaluated by the FBI, and if necessary, the Pennsylvania Bureau of Laboratories. No anthrax or other biological agents were identified through any of these activities.

Figure 23. Varicella Cases by Month of Onset,
October 1994 to December 2001*



* Removal of stratified sampling of childcare sites after year 1999. All West Philadelphia childcare centers with 15 or more attendees were included as surveillance sites starting in year 2000.

Before any of these events took place, DDC had completed a Biological Response Plan for the City of Philadelphia Office of Emergency Management in May 2001. DDC had also organized a regional bioterrorism preparedness working group consisting of directors of public health agencies and epidemiologists at the local and state levels in Delaware, New Jersey and southeastern Pennsylvania. Planning, developing new approaches to communicable disease surveillance, and promoting regional collaboration will continue to define bioterrorism preparedness activities in 2002.

Varicella Active Surveillance Project

The West Philadelphia Varicella Active Surveillance Project (VASP) is a cooperative agreement funded by the Centers for Disease Control and Prevention (CDC) and implemented by the Philadelphia Department of Public Health (PDPH), Division of Disease Control (DDC), since October 1994. The primary purpose of VASP is to monitor and document the epidemiology of varicella-zoster viral infection among the approximate 300,000 persons in the target area of West Philadelphia before and after the varicella vaccine, VARIVAX®, became available. VASP was awarded an additional five years of funding from CDC in October 1999 to continue its work to maintain active varicella disease surveillance with community-based reporting sites in West Philadelphia. Along with comprehensive surveillance of varicella, an emphasis also has been placed on monitoring herpes zoster (shingles) among individuals younger than 20 years of age and conducting varicella specific epidemiologic studies for the new project cycle. New studies that will enhance the understanding of risk factors associated with breakthrough varicella infection (varicella-like rash occurring more than 42 days after vaccination) and varicella susceptibility in women of childbearing age were initiated by VASP during 2001.

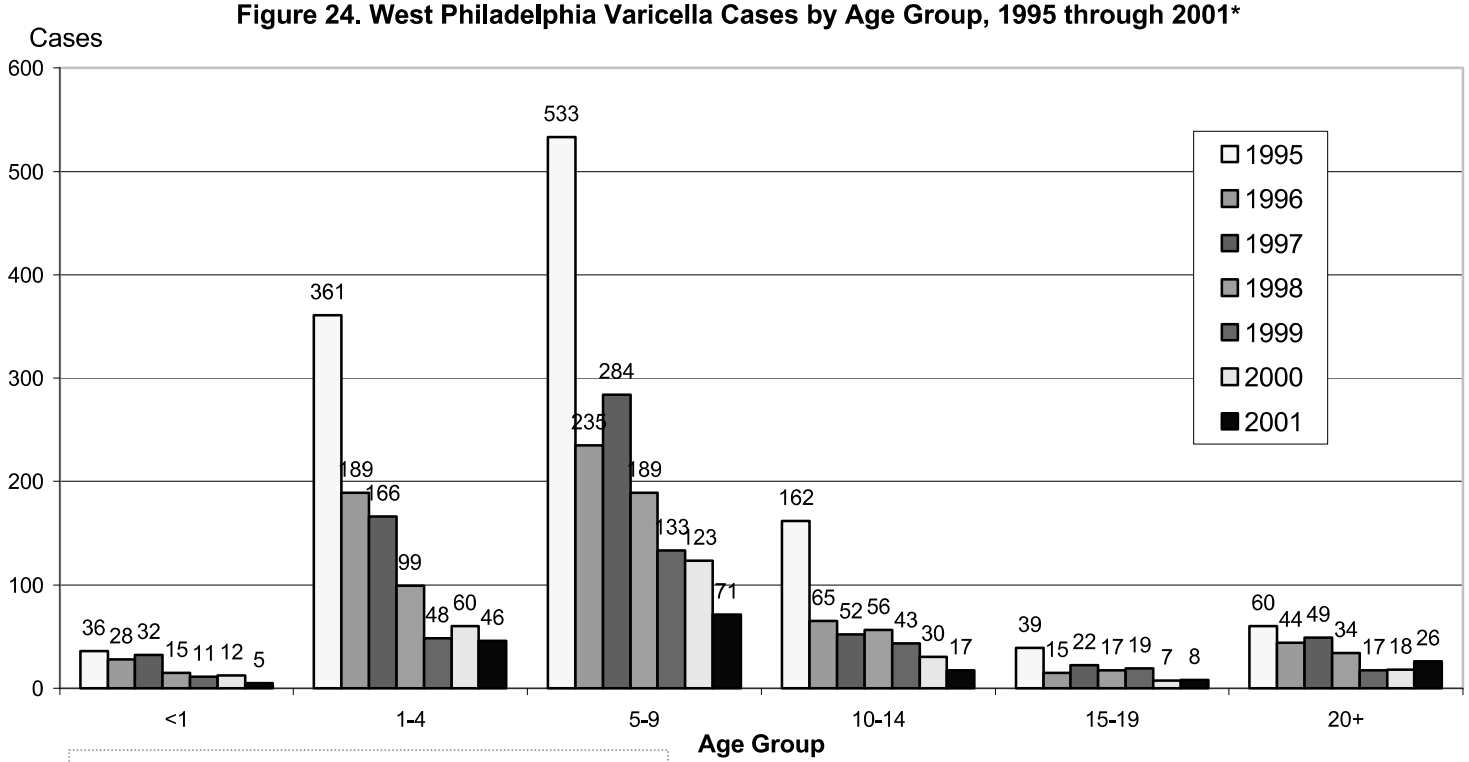
All cases of varicella and herpes zoster occurring in the city of Philadelphia are reportable to the Department of Public Health; however, only cases residing in the West Philadelphia area receive an extensive investigation. Additionally for reported cases of herpes zoster, only those cases under 20 years of age receive an extensive investigation. Investigations are conducted to confirm diagnosis and establish epidemiological links, as well as to obtain information regarding history of varicella vaccine, presence of complications, description of illness and spread of disease within households. Data are also

collected on varicella-related hospitalizations and deaths (VZV deaths are nationally reportable). Cases of varicella and herpes zoster are reported by over 300 participating surveillance sites in the target area, including hospitals, public and private schools, primary care practitioners, public health clinics, licensed child-care facilities, homeless shelters, and recreation centers. Case identification is facilitated through a standardized site-specific surveillance system. After notification, each case, or his/her parent/guardian, is interviewed via telephone. The interviewer also assesses whether there are additional cases or susceptible contacts within the household. A case investigation is completed for each newly identified case of varicella.

In 2001, a total of one hundred seventy-three confirmed cases of varicella were reported from the VASP surveillance area of West Philadelphia, a 30.8% decline from year 2000 (250 vs. 173) and the lowest number of reported cases since 1995 (1197), the first full year of active varicella surveillance (Figure 23). Schools were the greatest source of varicella case reports received by the DDC, accounting for 27.2% of all reported cases during the year. Primary care providers reported 26.0% of the varicella cases, while family members and households reported 13.9% of the cases. The age distribution of confirmed varicella cases continued to follow a similar pattern as demonstrated in previous years, with the majority of cases (50.8%) occurring among the school–age population of 5-14 year old children (Figure 24).

Four of the confirmed varicella cases occurring in 2001 from West Philadelphia were hospitalized during the course of their illness, marking a decrease from 2000 when there were 7 hospitalizations. One case involved an unvaccinated 10-year-old asthmatic African-American boy hospitalized for gastrointestinal bleeding and increased liver enzymes. A vaccinated 22-month-old asthmatic African-American boy also was hospitalized for a severe asthma attack during the time of rash. A 12-month-old boy with a rash onset 19 days after varicella vaccination was admitted for fever and cellulitis. Lastly, an 18-year-old pregnant woman with asthma and anemia was hospitalized for intravenous acyclovir treatment.

Figure 24. West Philadelphia Varicella Cases by Age Group, 1995 through 2001*



* Removal of stratified sampling of childcare sites after year 1999. All West Philadelphia childcare centers with 15 or more attendees were included as surveillance sites starting in year 2000.

No varicella-related deaths in Philadelphia residents were reported to VASP in 2001.

Twenty-four confirmed herpes zoster cases in individuals under 20 years of age were reported to VASP from West Philadelphia in 2001. These cases ranged in age from 2 to 19 years, with a median age of 11 years. Hospital emergency departments reported the majority of the herpes zoster cases (n=11, 45.8%). Two of the herpes zoster cases were hospitalized: a 6 year old boy admitted for pain management and a 16 year old boy with severe aplastic anemia admitted for intravenous acyclovir treatment.

Perinatal Hepatitis B Prevention Program

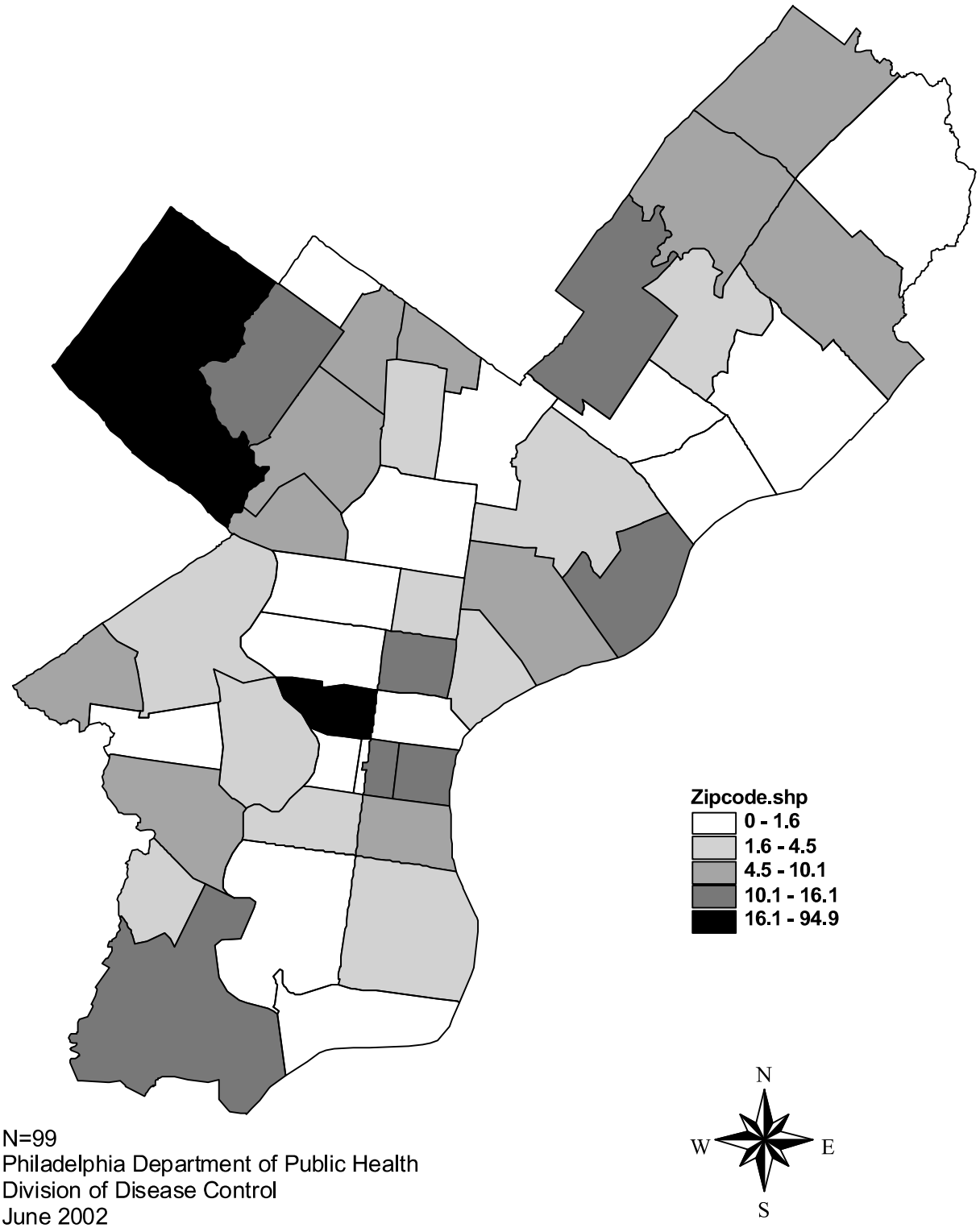
In 1994, the Philadelphia Board of Health passed a regulation requiring all pregnant women to be screened for hepatitis B surface antigen (HBsAg) and positive test results reported to the PDPH. On receipt of a positive test result, a public health nurse initiates case management of the pregnant woman and her family. This involves identifying contacts who are susceptible to disease, screening for presence of antibodies, and facilitating administration of hepatitis B vaccine series as indicated. The pregnant woman is then followed to assure that her infant receives hepatitis B immune globulin (HBIG) after delivery, and that the hepatitis B vaccine series is initiated. The infant is also followed until he/she completes hepatitis B immunization and post-vaccination screening. This process often takes up to two years. In the nine-year history of the program, 1,057 cases have been successfully completed. The number of individuals who are lost to follow-up, move, or are unlocatable, has decreased in the last three years, thanks to the cooperation of some primary care sites seeing children. Since 1997, a total of 12 infants (1% of 595) have been found to be HBsAg positive on post-vaccination screening, despite adherence to the protocol for management of infants of HBsAg positive mothers. In 2001, 3 of the 64 infants tested were found to be HBsAg positive to date. Most of the infants born in 2001 still have their serologic status pending.

Of the 140 positive perinatal HBsAg screens reported in 2000, 65 (50%) were foreign-born. For the year 1/1/2000 to 12/31/2000, the data are as follows: 118 live births (and one stillbirth) were reported as born to known HBsAg-positive women. 118 were given the first dose of vaccine and HBIG at birth or within 2-7 days of birth. Ninety seven of the 118 live births have received HBIG at birth and completed the three-dose series of hepatitis B vaccine to date. To date, 3 infants born in 2000 are positive for the hepatitis B surface antigen. Of the 64 tested, 7 did not seroconvert upon post vaccination serologic screening. These 7 children are receiving additional doses of vaccine.

Preliminary data for 2001 are as follows There were 1,254 live births of which 124 received hepatitis B vaccine dose 1 and HBIG within the appropriate interval, and 50 have completed 3 doses of hepatitis B vaccine within 12 months. Post vaccination serologies are pending. Three infants have moved out of Philadelphia.

Appendices

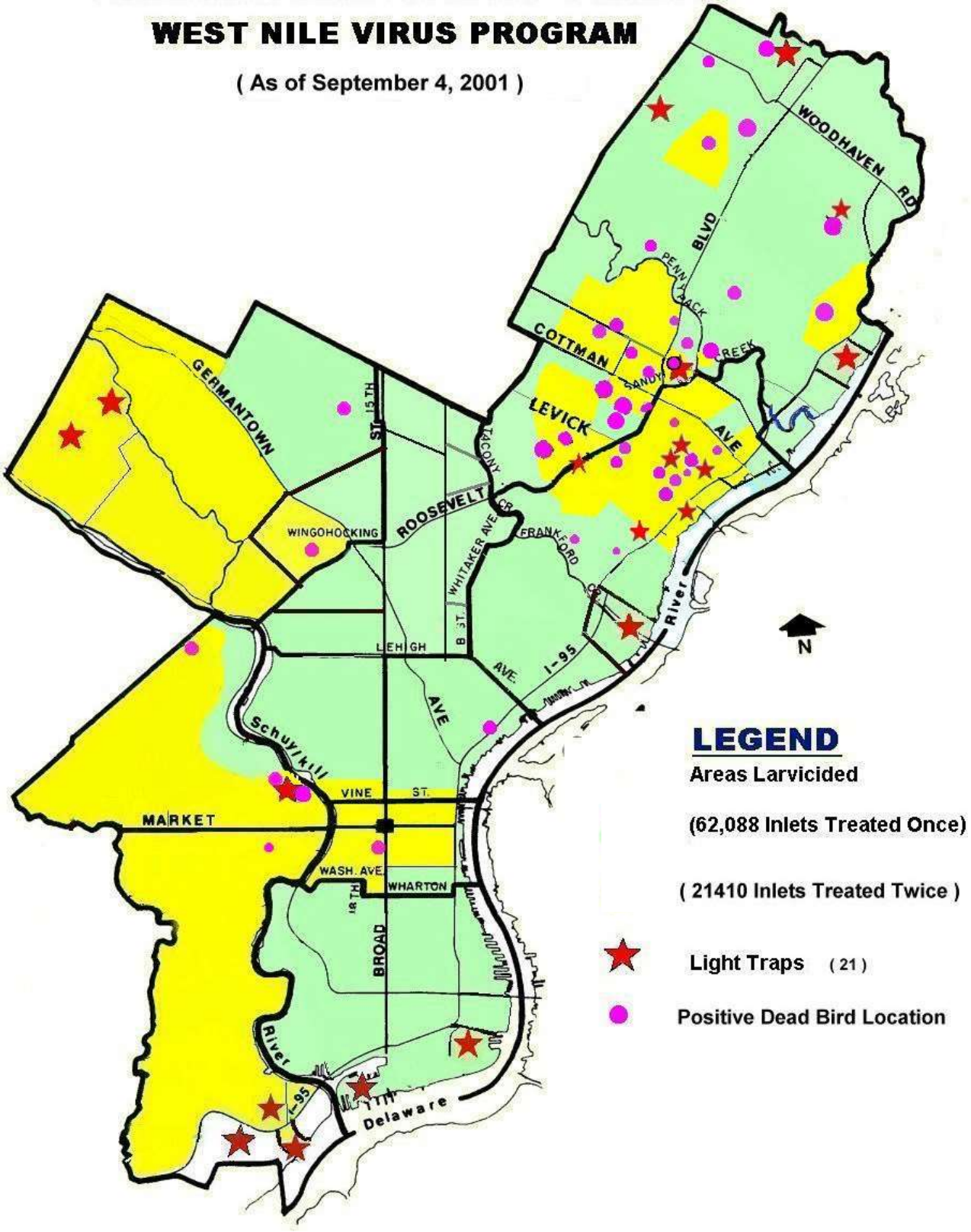
Lyme Disease, Philadelphia 2001
Rates per 100,000 by Zipcode of Residence



N=99
Philadelphia Department of Public Health
Division of Disease Control
June 2002

PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SERVICES
WEST NILE VIRUS PROGRAM

(As of September 4, 2001)



CITY OF PHILADELPHIA, DEPARTMENT OF PUBLIC HEALTH

DIVISION OF DISEASE CONTROL

24-hour REPORTING HOTLINE

FOR COMMUNICABLE DISEASES

Telephone: 215-685-6748 **Facsimile: 215-545-8362**

Evening/Weekend Consultation available by calling Division of Disease Control "on call" staff at **215-686-1776**

REPORTABLE DISEASES AND CONDITIONS

1. *Acquired Immune Deficiency Syndrome (AIDS)* •
2. *Amebiasis*
3. *Animal Bites (wild/stray/domestic)*
4. *Anthrax* ♦
5. *Botulism* ♦
6. *Brucellosis*
7. *Campylobacteriosis*
8. *Chlamydia trachomatis*
9. *Chancroid*
10. *Cholera* ♦
11. *Creutzfeldt-Jakob disease*
12. *Cryptosporidiosis*
13. *Cyclosporiasis*
14. *Diphtheria* ♦
15. *Ehrlichiosis*
16. *Encephalitis*
17. *Escherichia coli O157/H7*
18. *Food poisoning*
19. *Giardiasis*
20. *Gonococcal infections*
21. *Guillain-Barré syndrome*
22. *Haemophilus influenzae, invasive disease* ♦
23. *Hantavirus Pulmonary Syndrome*
24. *Hepatitis A*
25. *Hepatitis B*
26. *Hepatitis C*
27. *Hepatitis, other viral*
28. *Histoplasmosis*
29. *Lead poisoning*
30. *Legionnaires' disease*
31. *Leptospirosis (Weil's disease)*
32. *Listeriosis*
33. *Lyme disease*
34. *Lymphogranuloma venereum*
35. *Malaria*
36. *Measles (rubeola)* ♦
37. *Meningitis - all types*
38. *Meningococcal infections* ♦
39. *Mumps*
40. *Neonatal hypothyroidism*
41. *Pelvic inflammatory disease*
42. *Pertussis (whooping cough)*
43. *Phenylketonuria*
44. *Plague* ♦
45. *Poliomyelitis* ♦
46. *Psittacosis (ornithosis)*
47. *Rabies* ♦
48. *Rickettsial diseases*
49. *Rubella (German Measles) and Congenital Rubella Syndrome*
50. *Salmonellosis*
51. *Shigellosis*
52. *Smallpox* ♦
53. *Streptococcal Disease, invasive group A*
54. *Streptococcus pneumoniae, invasive disease*
55. *Syphilis*
56. *Tetanus*
57. *Toxic shock syndrome*
58. *Toxoplasmosis*
59. *Trichinosis*
60. *Tuberculosis* ¤
61. *Tularemia* ♦
62. *Typhoid* ♦
63. *Varicella, including zoster*
64. *Yellow Fever*

When calling to report or fax a communicable disease, please include:

Patient's name
Address
Date of Birth
Gender
Disease and onset date

Physician name
Address
Telephone #

♦ Reportable to the Division of Disease Control ***immediately***

• Report to AIDS Activities Coordinating Office at **215-685-6671**

¤ Report to the Tuberculosis Control Program at **215-685-6744 or 685-6873**

LIST OF REPORTABLE COMMUNICABLE DISEASES

DIVISION OF DISEASE CONTROL
PHILADELPHIA, PA

ANNUAL COMMUNICABLE DISEASE TOTALS

(NR = Not reportable, NA = Not available)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ACQUIRED IMMUNODEFICIENCY SYNDROME	633	737	1,825	1,413	1,294	1,297	1,223	909	1,383	1,077	1,127
AMEBIASIS	9	13	21	10	4	9	27	4	15	31	30
ANIMAL BITES	1,601	1,626	2,012	2,210	1,911	2,184	2,120	2,345	2,130	2,096	1,894
ANTHRAX	0	0	0	0	0	0	0	0	0	0	0
BOTULISM	0	0	0	0	0	0	0	0	1	1	1
BRUCELLOSIS	0	0	0	0	0	0	0	0	0	0	0
CAMPYLOBACTERIOSIS	179	178	220	211	138	193	157	142	132	148	90
CHLAMYDIA TRACHOMATIS	NR	8,716	10,053	9,956	8,079	8,118	10,480	11,763	12,660	13,593	13,586
CHOLERA	0	0	0	0	0	0	0	0	0	0	0
CRYPTOSPORIDIOSIS	NR	NR	NR	NR	24	20	14	14	24	22	13
CYCLOSPORIASIS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1
DIPHTHERIA	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS [DUE TO WEST NILE VIRUS]	2 [0]	1 [0]	2 [0]	0 [0]	0 [0]	1 [0]	5 [0]	0 [0]	1 [0]	1 [0]	8 [3]
ESCHERICHIA COLI O157:H7	NR	NR	NR	NR	7	5	3	6	7	6	42
GIARDIASIS	181	164	172	165	182	180	179	130	105	132	120
GONORRHEA	15,398	11,914	10,580	8,026	6,565	6,415	6,504	7,271	7,776	8,170	8,061
GUILLIAN-BARRE SYNDROME	2	1	1	1	2	1	1	0	2	3	2
HAEMOPHILUS INFLUENZAE [type b]	NR [4]	NR [0]	NR [1]	NR [1]	NR [5]	NR [4]	NR [2]	NR [0]	NR [0]	NR [0]	7 [1]
HEPATITIS A	76	44	15	30	22	269	176	133	62	255	97
HEPATITIS B	122	199	163	147	104	134	171	155	152	134	111
HEPATITIS (Non-A and Non-B) [C as of 1999]	2	3	1	4	1	0	7	0	3	1	1
HISTOPLASMOSIS	0	0	0	0	0	0	1	0	0	2	1
LEGIONELLOSIS	5	13	4	4	4	8	9	15	15	19	3
LEPTOSPIROSIS	0	0	0	0	0	0	0	0	0	0	1
LISTERIOSIS	NR	NR	NR	NR	NR	3	6	5	10	12	8
LYME DISEASE	78	118	115	152	206	225	184	179	220	165	99
LYMPHOGRANULOMA VENEREUM (LGV)	0	0	0	0	0	0	0	0	0	0	0
MALARIA	1	7	8	11	4	8	10	11	10	11	16
MEASLES	1,401	4	0	2	0	1	7	1	0	0	1
MENINGITIS, aseptic	45	15	11	10	16	11	39	26	25	68	71
MENINGITIS, bacterial	20	30	19	23	20	10	32	12	15	23	15
MENINGOCOCCAL INFECTIONS	12	24	19	15	13	18	15	13	13	24	12
MUMPS	29	8	8	4	7	9	5	1	5	2	2
PELVIC INFLAMMATORY DISEASE	0	0	0	0	0	NA	NA	NA	NA	NA	NA
PERTUSSIS	20	21	130	58	29	100	46	31	44	61	34
PLAGUE	0	0	0	0	0	0	0	0	0	0	0
POLIOMYELITIS	0	0	0	0	0	0	0	0	0	0	0
PSITTACOSIS	0	5	0	0	1	0	0	0	0	0	0
RABIES (Human)	0	0	0	0	0	0	0	0	0	0	0
RICKETTSIAL DISEASES, including RMSF	1	0	0	0	0	1	1	1	4	0	2
RUBELLA, including congenital rubella syndrome	0	0	2	0	0	1	0	1	0	0	0
SALMONELLOSIS	467	438	388	332	472	424	395	319	346	328	287
SHIGELLOSIS	226	240	196	91	293	412	361	123	129	115	139
STREPTOCOCCUS, INVASIVE Gp. A [# with TSS]	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	14 [7]
SYPHILIS - PRIMARY & SECONDARY	1,411	907	515	298	199	141	108	89	69	77	77
SYPHILIS - CONGENITAL	290	271	153	106	65	63	35	24	8	4	4
SYPHILIS - TOTAL	4,904	4,811	3,752	2,006	1,299	1,298	1,091	796	826	639	639
TETANUS	1	0	0	0	0	0	1	0	0	0	0
TOXIC SHOCK SYNDROME	0	1	1	0	0	0	2	1	0	0	0
TOXOPLASMOSIS	0	0	0	0	0	0	1	2	3	3	3
TUBERCULOSIS	308	345	333	276	309	250	233	179	184	144	144
TULAREMIA	0	0	0	0	1	1	0	0	0	0	0
TYPHOID & PARATYPHOID FEVER	0	5	1	0	6	2	1	4	1	2	2
YELLOW FEVER	0	0	0	0	0	0	0	0	0	0	0