Acquired Immunodeficiency Syndrome (AIDS)

The first AIDS cases in Virginia were reported in December 1982, when a total of six cases were reported. Twenty-four cases were reported in 1983, 39 in 1984, 102 in 1985, 166 in 1986, and 270 in 1987 (Figure 1). Of the 376 cases reported during 1988, 196 (52.1%) are known to have died. A cumulative total of 983 AIDS cases have been reported as of the end of 1988 with 704 (71.6%) known to be dead.

REPORTED CASES OF AIDS IN VIRGINIA
BY VITAL STATUS AND REPORT YEAR

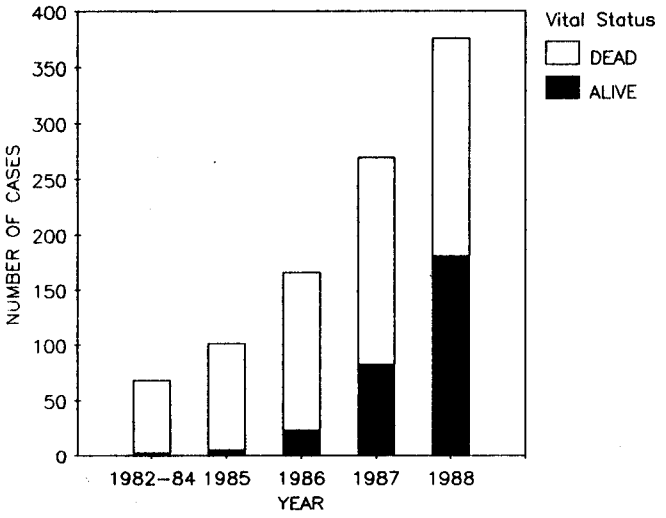

FIGURE 1

The Human Immunodeficiency Virus (HIV) which causes AIDS is a blood-borne virus. The most common routes of transmission are unprotected sexual intercourse (especially anal intercourse) and intravenous (IV) drug use. During 1988 the majority of AIDS cases indicated homosexual activity (64.4%) (Figure 2). The next largest transmission category was IV drug use accounting for 15.2% of AIDS cases during 1988. A combination category of homosexual/IV drug use contributed 4.8%. Although blood banks have been screening donated blood since March 1985, persons infected from transfusions prior to blood screening are now developing AIDS. During 1988, 22 (5.9%) transfusion-associated cases were reported. No AIDS cases resulting from transfusions of screened blood have been reported in Virginia.

REPORTED CASES OF AIDS IN VIRGINIA
BY ROUTE OF TRANSMISSION, 1988

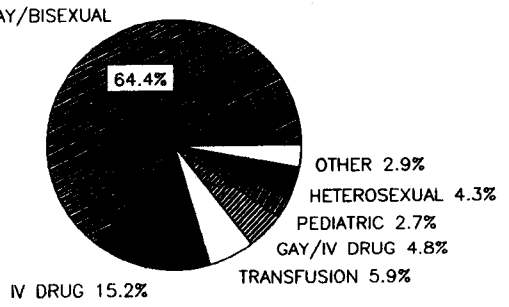

FIGURE 2

The majority of AIDS cases occur during the ages of 20 to 49 (87.4% in 1988). During 1988, the age group with the highest percentage of reported cases was persons 30 to 39 years of age (45.7%) (Figure 3). Ten (2.7%) children under 13 years of age were reported with AIDS in 1988. The majority of these children (70%) were infected via perinatal transmission. Three children received blood products through transfusion or treatment for hemophilia.

During 1988, 56.9% (214 cases) were reported among whites. While 39.6% of the cases were reported among blacks, only approximately 25%

REPORTED CASES OF AIDS
IN VIRGINIA BY AGE, 1988

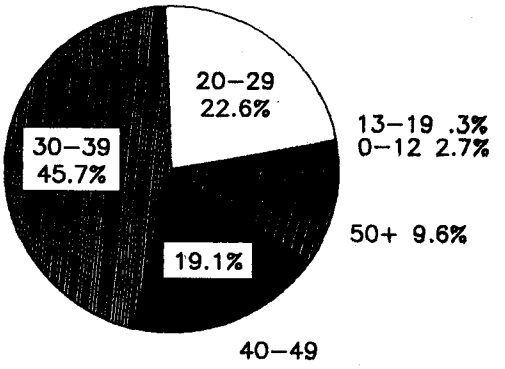

FIGURE 3

of the Virginia population is black. Therefore, blacks are disproportionately affected. In addition, 90.7% of the cases reported in 1988 were male (Figure 4).

REPORTED CASES OF AIDS
IN VIRGINIA BY SEX, 1988

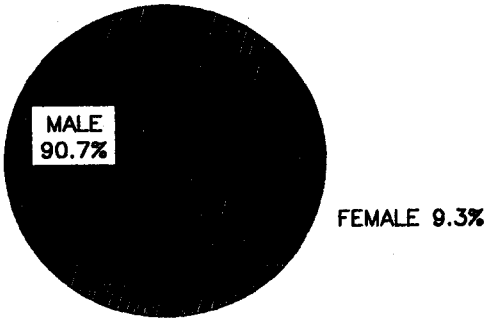

FIGURE 4

AIDS cases are primarily concentrated in Virginia's urban areas. Richmond City (14.6%) and Fairfax County (13.0%) reported the highest percentage of cases during 1988.

On a regional level, the Northern Region reported the highest percentage of cases (35.1%), although this is lower than the 45.6% reported from this region in 1987. This area contributes the Virginia part of the District of Columbia's standard metropolitan statistical area (SMSA). The Eastern Region reported 28.7% of the cases with the majority of cases reported from the Norfolk (29.6%), Virginia Beach (19.4%), and Peninsula (18.5%) Health Districts. The Central Region reported 22.1% of the AIDS cases in 1988 with most of its morbidity in the Richmond City Health District (66.3%). The percentage reported from the Southwest Region in 1988 (6.9%) was similar to the 7.0% reported in 1987. The Northwest Region reported 7.2% of the cases in 1988, double the percentage reported from this region in 1987 (3.3%).

Persons with AIDS develop a variety of life-threatening opportunistic infections due to immunosuppression. The most commonly diagnosed infection is Pneumocystis carinii

OPPORTUNISTIC INFECTIONS EXPERIENCED BY
AIDS PATIENTS BY REPORT YEAR, VIRGINIA, 1988

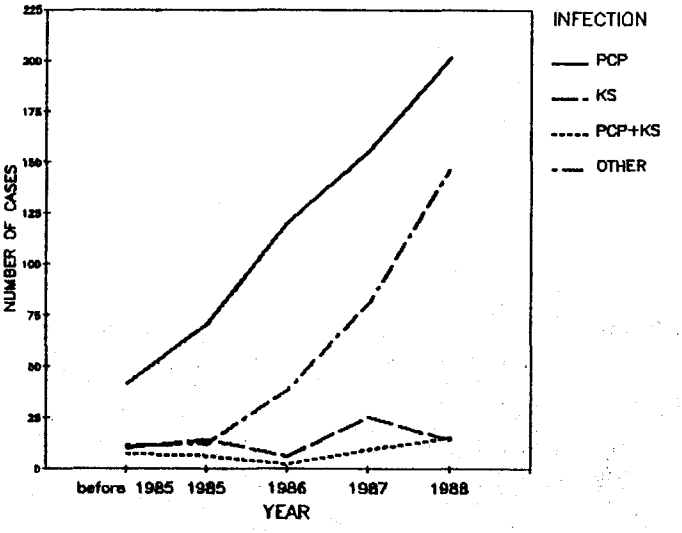

FIGURE 5

pneumonia (PCP). Of the cases reported during 1988, 53.5% developed PCP during the course of their illness (Figure 5). The percentage of cases reported with Kaposi's sarcoma (KS) has decreased from 13.7% in 1985 to 3.7% in 1988. On the other hand, an increase occurred in the percentage of cases reported with opportunistic infections other than KS and PCP. This percentage increased from 11.8% in 1985 to 38.8% in 1988. Examples of such infections are cryptococcal meningitis, Mycobacterium avium, Candida esophagitis, and toxoplasmosis.

Amebiasis

Nineteen persons were reported with amebiasis in 1988. The ages of the cases were fairly evenly distributed throughout the first five decades of life (Figure 6). "Other" was the most frequently reported race group (47.4%); 26% were white and another 26% of the reports did not include race.

REPORTED CASES OF AMEBIASIS
IN VIRGINIA BY AGE, 1988

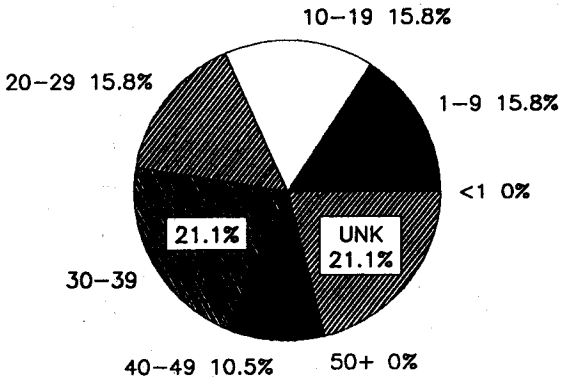

FIGURE 6

Nine cases were male, seven female, and three sex unknown.

Over half (52.6%) of the cases occurred in the Central Region of the state (Figure 7). Four cases were reported from the Eastern Region, three from the Northern, and one each from the Northwest and Southwest. Half the cases

REPORTED CASES OF AMEBIASIS
IN VIRGINIA BY REGION, 1988

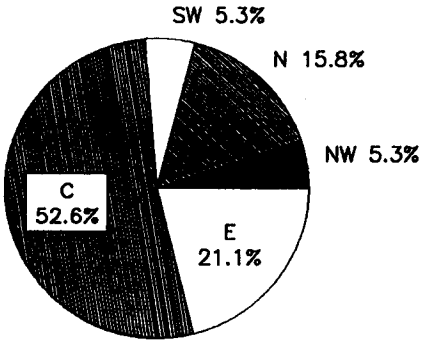

FIGURE 7

REPORTED CASES OF AMEBIASIS
IN VIRGINIA BY DATE OF ONSET, 1988

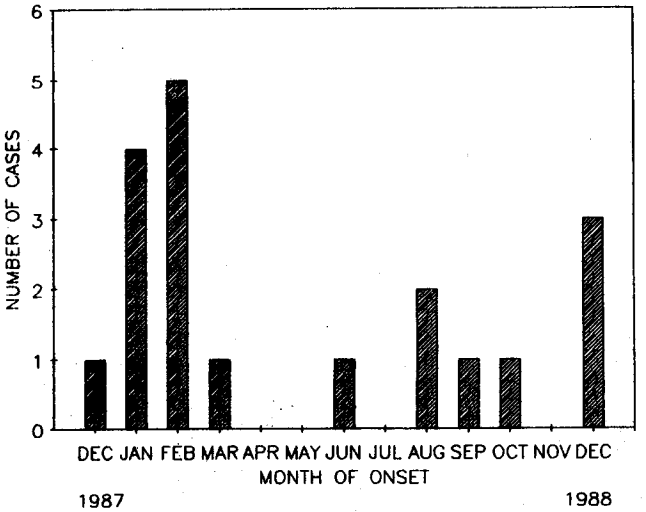

FIGURE 8

experienced onset within the first two months of the year (Figure 8).

Aseptic Meningitis

For the third year in a row, the number of cases of aseptic meningitis decreased, with 210 cases reported in 1988 (Figure 9). All age groups were affected (Figure 10). The three deaths which were attributed to aseptic meningitis occurred in the 50+ age group. The male to female ratio of reported cases was 1.2:1. Over one-half (55.7%) of the cases were white, 15.2% were black, and 3.3% were another race. Race was not reported

TREND IN REPORTED CASES OF ASEPTIC MENINGITIS IN VIRGINIA, 1979–1988

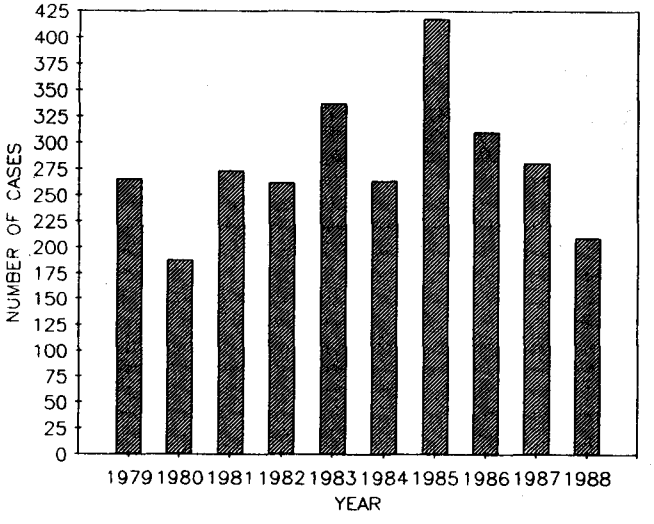

FIGURE 9

for 25.7% of the cases.

Although cases occurred in every month of the year, nearly half (48.1%) of the cases had onset during the months of August, September, or October (Figure 11). The Northern and Eastern Regions of the state had the most cases (72 and 69,respectively), followed by the Northwest (30), Central (25) and Southwest (14).

REPORTED CASES OF ASEPTIC MENINGITIS IN VIRGINIA BY AGE, 1988

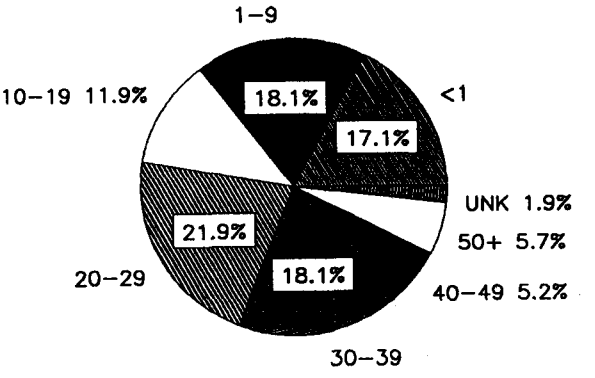

FIGURE 10

The etiologic agent was reported for 10 of the cases: 7 were echoviruses and one was a coxsackie virus.

ONSET MONTH OF CASES OF ASEPTIC MENINGITIS REPORTED IN VIRGINIA DURING 1988

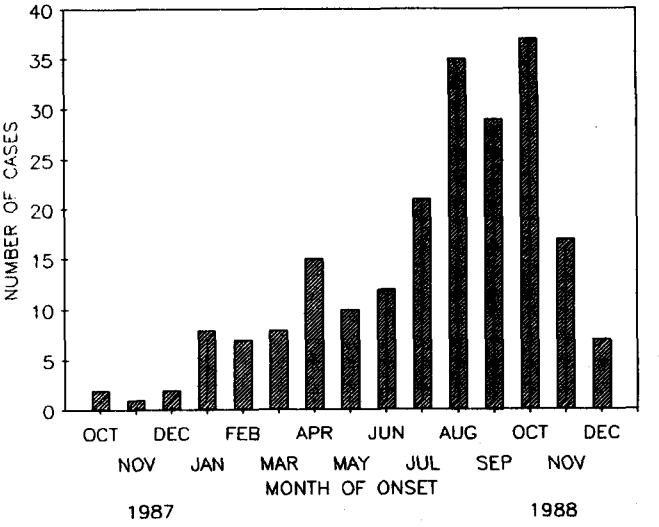

FIGURE 11

Bacterial Meningitis

Almost one-half (45.6%) of the 184 cases of bacterial meningitis reported in 1988 were caused by Haemophilus influenzae. An additional 26.6% were streptococcal. The distribution of types of bacterial meningitis cases reported in 1988 is presented in Table 2. Meningococcal meningitis is discussed elsewhere and is therefore not included in this section.

Table 2. Etiology of Bacterial Meningitis Reported in Virginia, 1988

Organism	Number of Cases	Percent of Cases
Citrobacter diversus	1	0.5
Escherichia coli	5	2.7
Haemophilus influenzae	84	45.6
Klebsiella pneumoniae	2	1.1
Listeria monocytogenes	4	2.2
Mycobacterium tuberculosis	2	1.1
Staphylococcus	10	5.4
S. aureus	(5)	(2.7)
S. epidermidis	(2)	(1.1)
unspecified	(3)	(1.6)
Streptococcus	49	26.6
Group A	(2)	(1.1)
Group B	(6)	(3.3)
S. pneumoniae	(38)	(20.6)
unspecified	(3)	(1.6)
Unspecified	27	14.7

Infants accounted for 39.1% of the cases. The next most commonly affected age group was that for age 1-9, responsible for 29.3% of the cases. The age distribution of persons reported with bacterial meningitis is shown in Figure 12.

Males were more likely than females (1.4:1) to have bacterial meningitis. Reported cases were twice as likely to be white as nonwhite.

The number of reports of bacterial meningitis increased between 1979 and 1985, but have been decreasing in the last three years (Figure 13). No seasonal trend was apparent for month of onset for the 1988 cases.

REPORTED CASES OF BACTERIAL MENINGITIS IN VIRGINIA BY AGE, 1988

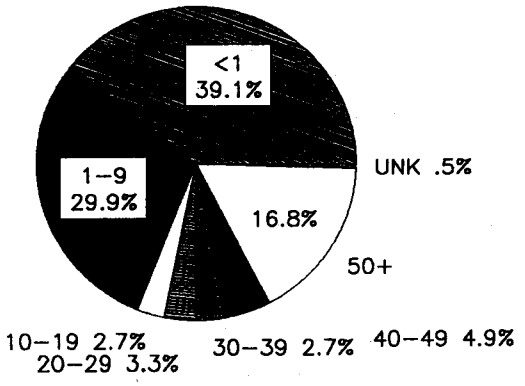

FIGURE 12

TREND IN REPORTED CASES OF BACTERIAL MENINGITIS, VIRGINIA, 1979–1988

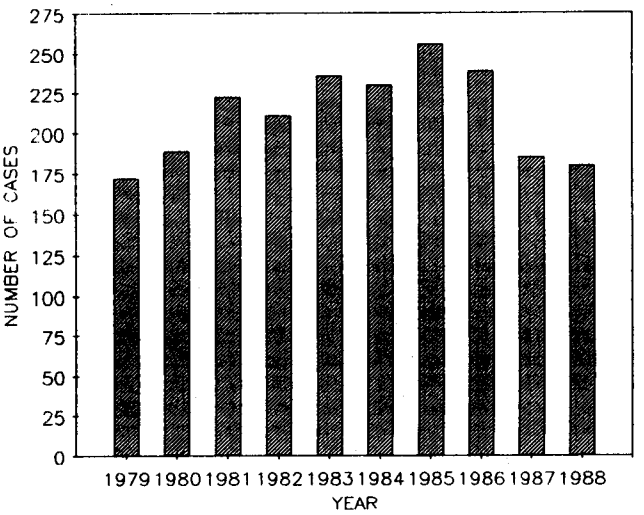

FIGURE 13

Twenty-five deaths caused by bacterial meningitis were reported. Ten were in infants, two were 1-5 years old, and 13 were age 40 or older.

Eleven of the persons who died were female and fourteen were male.

Of the cases of Haemophilus influenzae meningitis, 48.8% were infants, 48.8% were age 1-9, and the remaining two cases were between age 10 and 29. Twenty-six cases were reported as type B. Fourteen were reported to be ampicillin resistant.

Campylobacteriosis

The number of reported cases of Campylobacter infections increased 14% between 1987 and 1988, continuing the general increase observed throughout this decade (Figure 14).

TREND IN REPORTED CASES OF CAMPYLOBACTERIOSIS IN VIRGINIA, 1980–1988

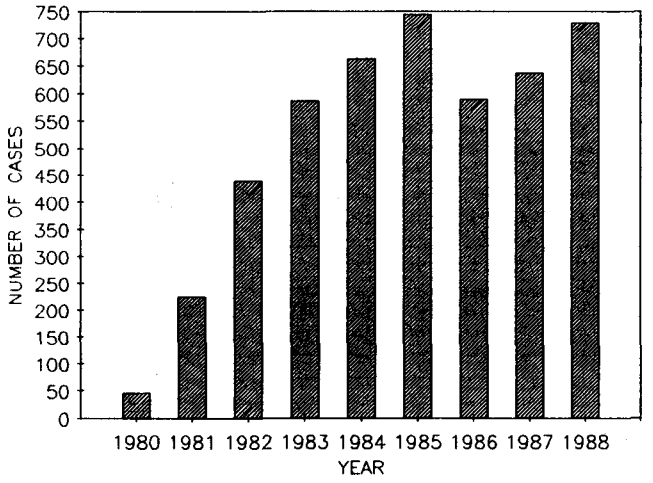

FIGURE 14

The age distribution of the 731 cases reported in 1988 is shown in Figure 15. Over one-fourth of the cases occurred in 20-29 year olds. The number of female cases (334) was only slightly less than the number of male (346). Race was unknown for 61% of the cases, while 7% were black, 31% white, and 1% other race.

REPORTED CASES OF CAMPYLOBACTERIOSIS IN VIRGINIA BY AGE, 1988

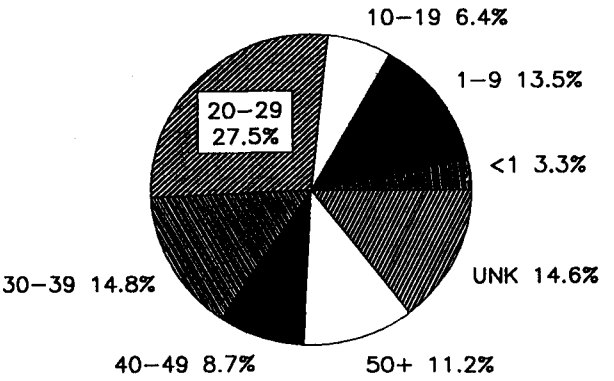

FIGURE 15

Cases occurred during each month of the year, with a peak in the summer months (Figure 16).

REPORTED CASES OF CAMPYLOBACTERIOSIS IN VIRGINIA BY MONTH OF ONSET, 1988

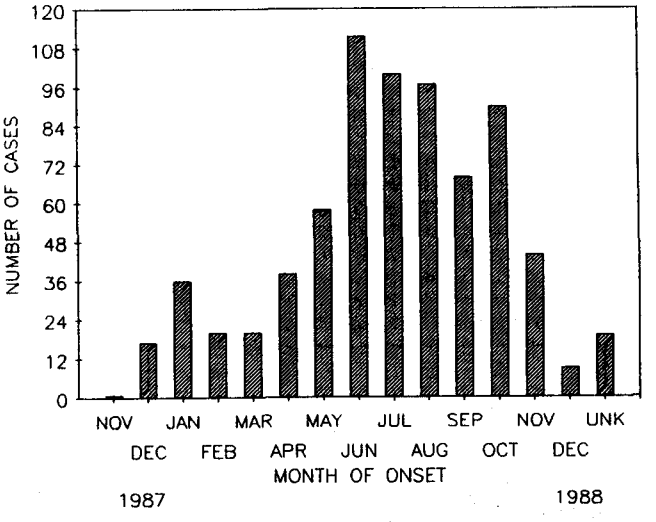

FIGURE 16

The majority of infections were caused by C. jejuni (406 cases). C. coli caused 21 infections, while C. fetus accounted for 13 and C. pylori for 3. The species was not specified in 288 reports. No deaths were reported.

Chickenpox

The majority (68.8%) of the 1,733 cases of chickenpox reported in 1988 were from the Eastern Region. Virginia Beach reported 799 cases, for a rate of 233 per 100,000 population. Although only 40 cases were reported from Williamsburg, that equated to a rate of 357. Other localities experiencing a rate of more than 50 per 100,000 population were Brunswick, Charles City, Rappahannock, and Warren counties and the cities of Hopewell, Newport News, and Norfolk.

Cases were reported throughout the year, with 65% reported during April through July (Figure 17).

REPORTED CASES OF CHICKENPOX
IN VIRGINIA BY MONTH OF REPORT, 1988

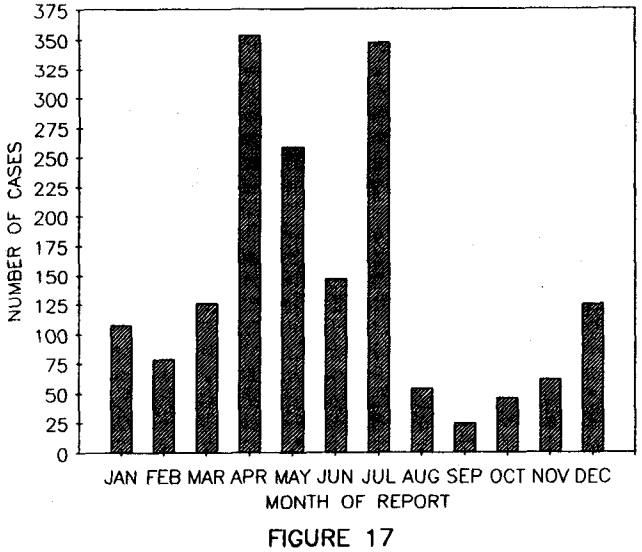

FIGURE 17

Encephalitis

Of the 44 reported cases of encephalitis, four were subsequent to a bout of chickenpox and 40 represented primary encephalitis. This summary will discuss the latter.

The age group with the most cases of primary encephalitis was persons 50 and older. The next most common age group was 1-9 year olds (Figure 18). Twenty-five cases were white, 12 black, and three of other or unknown race. Cases were divided evenly between the sexes (22 female, 18 male).

REPORTED CASES OF PRIMARY ENCEPHALITIS
IN VIRGINIA BY AGE, 1988

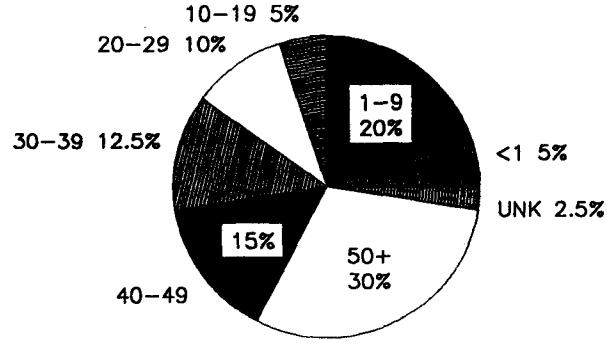

FIGURE 18

Cases occurred throughout the state in the following regional distribution: Northwest 5, Northern 7, Southwest 9, Central 6, Eastern 13. Ten of the cases reported in 1988 had onset during the latter half of 1987. Of those with onset in 1988, 11 occurred in the first quarter, seven in the second, five in the third, and five in the fourth.

The etiologic agent was specified for seven cases. Of these, six were herpes viruses and one was cytomegalovirus.

The number of cases of primary encephalitis reported during the last ten years has not varied much. The range of cases reported between 1979 and 1988 has been 28 to 61, with a mean of 40.2 cases per year.

Sixteen deaths were attributed to encephalitis in 1988, for a case fatality ratio of 39.0%. Four of the persons who died were children. Eleven were female. Twelve were white and four were black.

Foodborne Outbreaks

Foodborne outbreaks reported in 1988 are summarized in Table 3. The number of persons ill ranged from two to over seventy. Seven of the 15 outbreaks reported were caused by Salmonella, five of which were caused by S. enteritidis. Four outbreaks of S. enteritidis infection were related to the consumption of raw or undercooked eggs. An outbreak of restaurant associated hepatitis A was traced to poor personal hygiene of a worker responsible for handling food which was not cooked.

Fungal Infections

Although fungal infections other than histoplasmosis are not reportable in Virginia, laboratory and other reports are sometimes submitted to the health department for these diseases. Five types of fungal infection were reported in 1988, for a total of 145 cases. Torulopsosis was the most frequently reported fungal infection, accounting for 72 cases, or 49.7% of the total. Aspergillosis followed with 65 cases or 44.8% of the total. The remaining cases included three of blastomycosis, two of cryptococcosis and two of mucormycosis. These counts do not include fungal meningitis which is discussed later under "other meningitis" or histoplasmosis which is under "diseases of low frequency." Fungal infections led to six deaths. The two most common types will be summarized below.

Torulopsosis (infection by Torulopsis glabrata) - All cases of torulopsosis were age 20 or older, with 79.2% age 50 or older. Age was not reported for 13.9%. Ten cases were white and five were black. Race was not reported for the remaining 79.2%. The disease was fairly evenly divided between the sexes - 52.8% were female, 45.8% were male.

Over half of the cases (54.2%) were from the Central Region. The Southwest Region accounted for 19.4%, Eastern 16.7%, Northwest 6.9%, and Northern 2.8%. Cases occurred throughout the year. Seven cases had onset during December 1987, 17 had onset during the first quarter of 1988, 14 during the second quarter, 17 during the third, and 17 during the fourth. One death was attributed to this disease.

Aspergillosis - Ninety-eight percent of cases of aspergillosis were 20 or older, with 40 cases (61.5%) occurring in persons age 50 and older. Only one case occurred in the less than 20 age group. Race was often unreported. Thirteen cases were white and six black. Cases were evenly distributed between the sexes. This disease caused one death.

Forty percent of the cases were from the Central Region, 23.1% from the Eastern, 20.0% from the

Southwest, and 16.9% from the Northwest. No cases were reported from the Northern Region. Cases clustered in the early part of the year, with 36.9% occurring during the first quarter compared to 13.8% occurred during the last quarter.

A. fumigatus was responsible for 21.5% of the cases; A. niger for 13.8%; and A. flavus and A. ochraceus each for 7.7%. Species was not identified for 36.9% of the cases.

Giardiasis

Two hundred fifty cases of giardiasis were reported in 1988, continuing a three-year downward trend (Figure 19), however, the peak in 1985 may have been an artifact of the disease becoming reportable in 1984. Giardiasis was most common in 1-9 year olds, who accounted for 41.6% of the cases reported (Figure 20). Cases were distributed evenly between the sexes (female 48.8%, male 47.2%). Over half (52%) of the cases were white, 2% were black, 12% were another race, and 34% had no race reported.

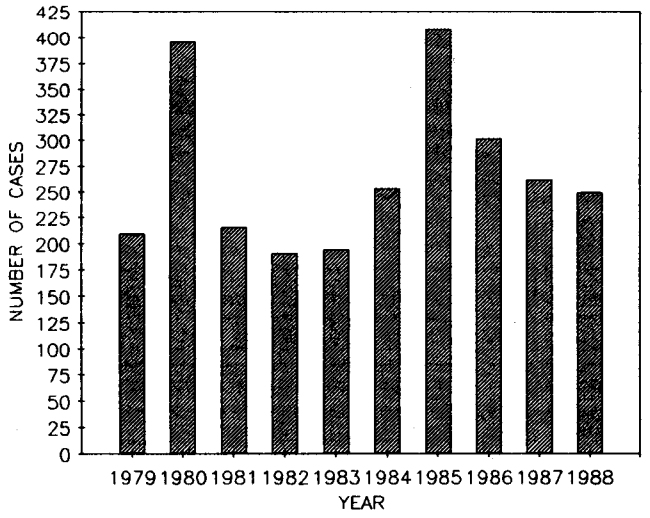

FIGURE 19

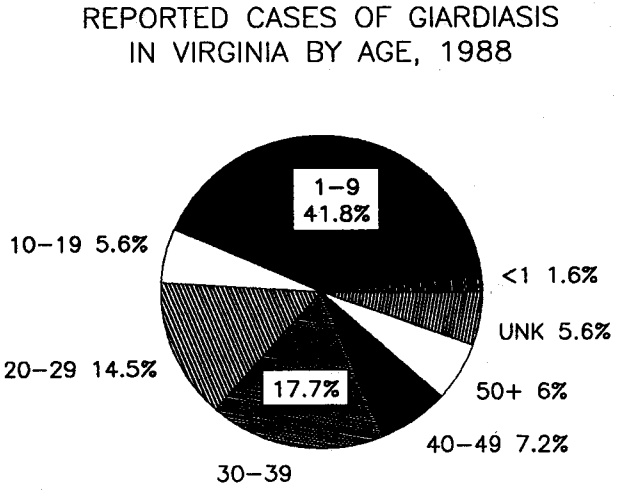

FIGURE 20

Disease onset occurred every month. The distribution of onset by quarter of the year was as follows: January-March 19.2%, April-June 16.4%, July-September 38.4%, October-December 26.4%, other or unknown 6.4%. Cases were evenly distributed between the regions of the state, ranging from 34 cases in the Northwest to 60 cases in the Eastern Region, with an average of 50 cases per region.

Gonorrhea

In 1988, 14,464 cases of gonorrhea were reported in Virginia. Gonorrhea morbidity had been steadily declining with minor increases since 1981. The rate of decline had slowed by June of 1988; and by the end of the year, it had reversed itself to

show a 0.87% increase over 1987. The current increases in gonorrhea are expected to continue as heterosexuals and minorities fail to adopt risk reduction behaviors and resistant gonorrhea becomes more prevalent.

The Eastern Region reported the most cases (7,359/51%), followed by the Central (2,390/17%), Northern (2,141/15%), Southwest (1,942/13%), and Northwest (632/4%).

The male to female ratio was 1.3 to 1. Ten percent of the cases were white and 90% were nonwhite. The 20-29 age group was the most frequently affected (Figure 21).

REPORTED CASES OF GONORRHEA
IN VIRGINIA BY AGE, 1988

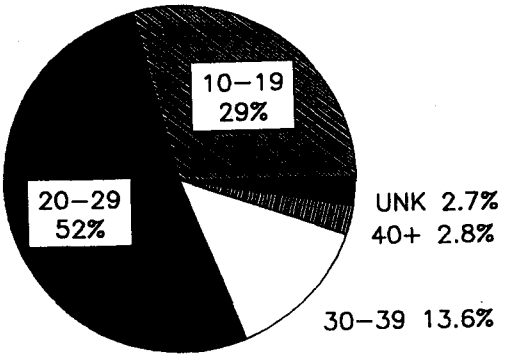

FIGURE 21

Pennicillinase-Producing Neisseria Gonorrhoeae (PPNG)

The gonococcal organism produces an enzyme called penicillinase which alters the structure of penicillin, causing it to be ineffective. In 1988, 549 cases of PPNG were reported in Virginia. This is a 261% increase over the previous year; PPNG now comprises 3.8% of the state's gonorrhea morbidity.

The Northern Region reported the most cases (340/62%), followed by the Eastern (139/25%), Central (36/7%), Southwest (18/3%), and the Northwest Region (16/3%). Seventy-five percent of the cases occurred in persons between the ages of 15-29. There were five cases in the 10-14 age group.

The male to female ratio was 1.3 to 1. Ninety-two percent of the cases were black, 7% white, and 1% other.

The Northern and Eastern Regions plan to use ceftriaxone as the drug of choice by the end of 1989. It is anticipated that the other regions will do the same as they move from endemic to hyperendemic incidence levels.

Hepatitis A

The number of cases of hepatitis A reported in 1988 (362) was the largest number reported since 1975. Figure 22 shows the trend in cases over the last ten years. The large case count was due to outbreaks in the Hampton Roads area of the state. The outbreaks included 63 restaurant associated cases and 41 day-care associated cases. No deaths occurred.

The age distribution presented in Figure 23 shows that the age groups at greatest risk of acquiring hepatitis A in 1988 were 20-29 and 30-39 years olds. Sixty percent of the reported cases were male. The races of reported cases were as

follows: 83% white, 5% black, 5% other, and 7% unknown.

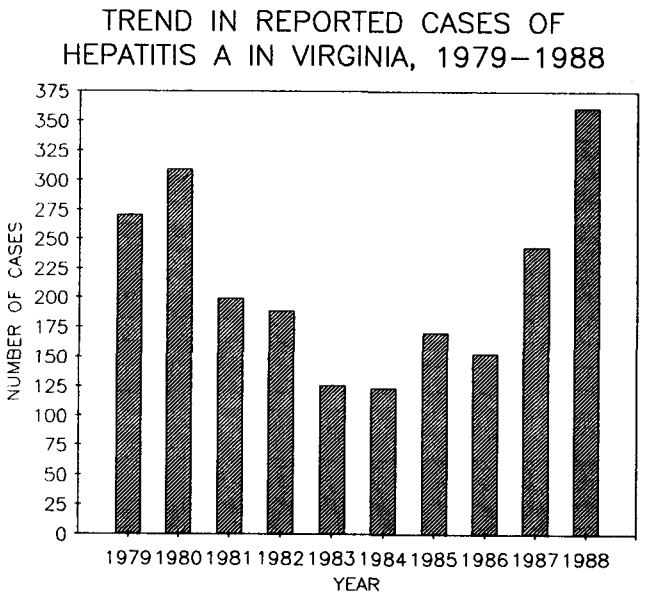

FIGURE 22

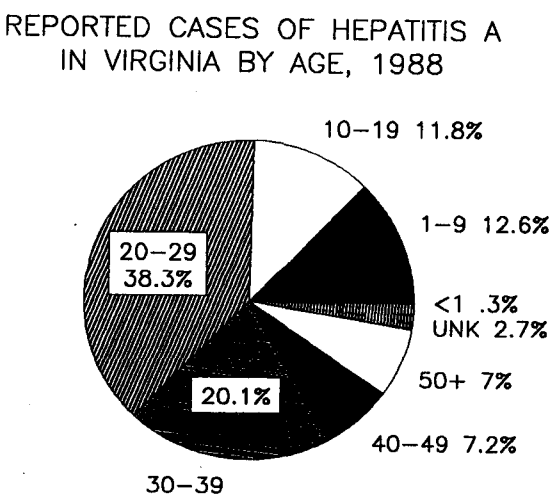

FIGURE 23

The month of onset of the cases is shown in Figure 24. The spike that occurred in February represents the restaurant associated outbreak. Onset date was not reported for 44 cases.

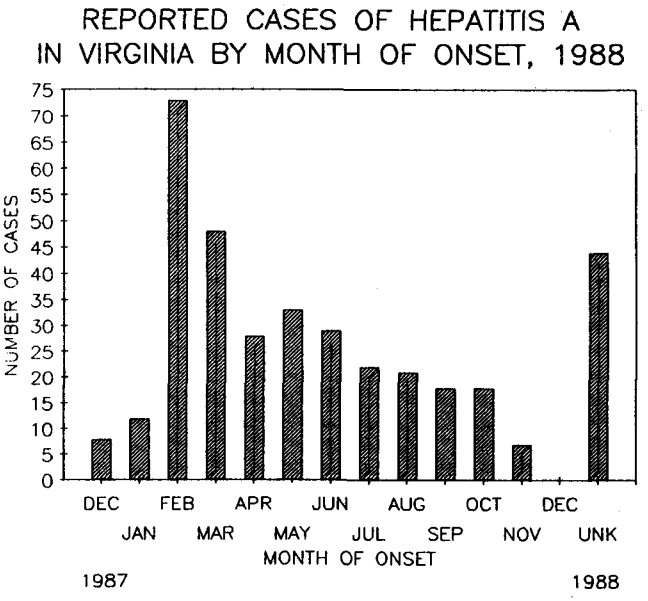

FIGURE 24

Risk factors for disease acquisition and further transmission included 104 with personal contact with a person with hepatitis A, 61 household contacts of a child/employee of day care, 35 foodhandlers, 30 children in/employees of day care, and 21 with international travel.

Hepatitis B

In 1988, 343 cases of hepatitis B were reported in Virginia. This is the smallest number of cases reported since 1978. The ten year trend in reported cases is presented in Figure 25. This decline may be due to the hepatitis B vaccine, screening of blood prior to transfusion, or a revised case definition. Beginning in 1987, the Office of Epidemiology accepted as official morbidity only those cases with evidence of newly acquired disease.

TREND IN REPORTED CASES OF HEPATITIS B IN VIRGINIA, 1979–1988

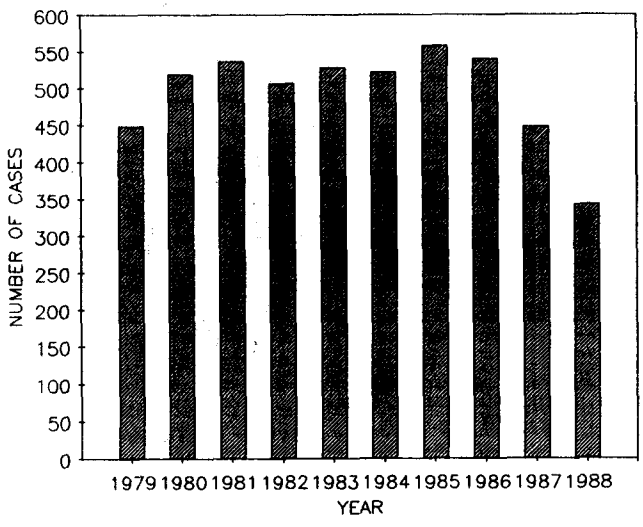

FIGURE 25

REPORTED CASES OF HEPATITIS B IN VIRGINIA BY MONTH OF ONSET, 1988

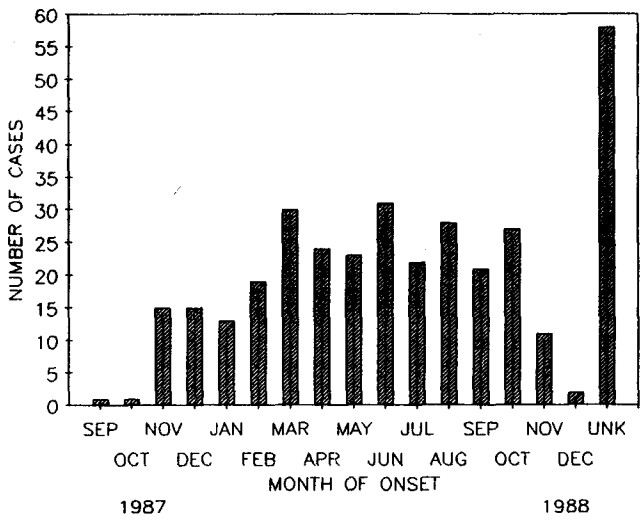

FIGURE 26

The Eastern Region reported the most cases (150), followed by the Southwest (63), Central (57), Northern (51) and Northwest (22) Regions. Persons in their twenties and thirties accounted for 71% of the cases. Only two cases occurred in children less than nine years old.

The male to female ratio was 1.5:1. Sixty percent of the cases were white, 34% black, 2% other, and 4% of unknown race.

Of the cases reported in 1988, 32 had onset in 1987. Cases occurred fairly consistently throughout the year, as shown in Figure 26. Onset date was not reported for 58 cases.

Seven (2%) of the persons with hepatitis B died. The age of one person who died was unknown. Two of the others were in their forties, two in their fifties, and two in their sixties.

Five cases were associated with an outbreak in a dialysis unit of a hospital.

Hepatitis Non-A Non-B

Seventy-seven cases of hepatitis non-A non-B were reported in 1988. Only twelve cases (15.6%) were under the age of twenty. Twenty to 29 year olds accounted for more cases (29.9%) than any other age group (Figure 27).

REPORTED CASES OF HEPATITIS NON–A NON–B IN VIRGINIA BY AGE, 1988

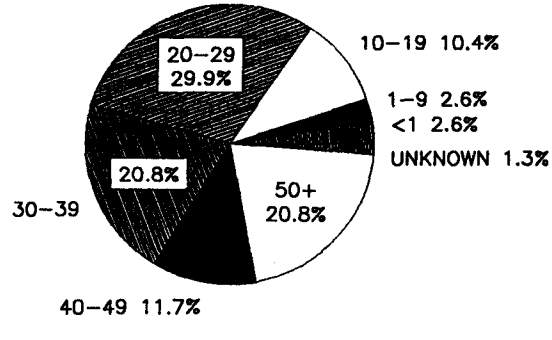

FIGURE 27

The majority (76.6%) of cases were white; 14.3% were black; 2.6% were another race; and 6.5% had no race reported. The male to female ratio was 1.6:1. Males accounted for 61.0% of the total.

Over half (55.8%) of the cases were reported from the Eastern Region. Virginia Beach alone accounted for 24.7%. (This was probably due to increased testing for hepatitis as a result of an increased level of suspicion raised by an outbreak of hepatitis A).

Onset of illness occurred fairly evenly during the first three quarters of the year (19, 17, and 16 cases, respectively). Only three cases had onset during the fourth quarter. Onset date was not reported for 23.4%.

Ten hepatitis non-A non-B deaths were reported in 1988. Seven were in the 50 + age group, two were 30-39 and one was an infant. Eight of the persons who died were male. Four deaths were from the Central Region, three from the Southwest, and one in each of the remaining three regions.

REPORTED CASES OF HEPATITIS UNSPECIFIED IN VIRGINIA BY AGE, 1988

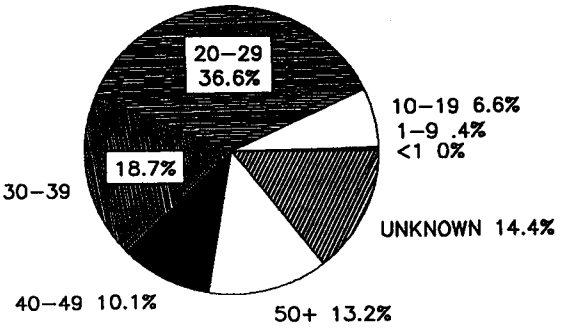

FIGURE 28

The Central and Eastern Regions of the state each accounted for 29% of reported cases. The Northern Region reported 20% of the cases, Northwest 13% and Southwest 8%. Date of onset was reported for one-fourth of the cases.

REPORTED CASES OF HEPATITIS UNSPECIFIED IN VIRGINIA BY RACE, 1988

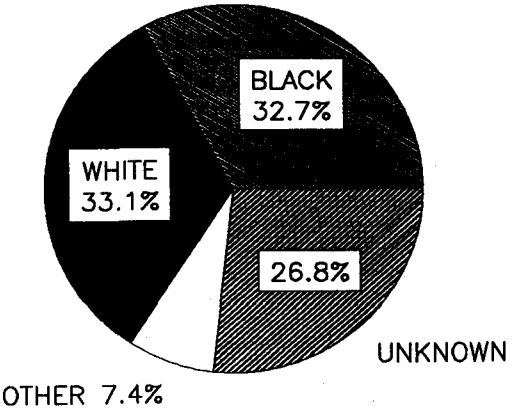

FIGURE 29

Hepatitis Unspecified

The number of reported cases of hepatitis unspecified totaled 257 in 1988. Most of the persons affected were adults; 78.6% were over the age of 20. Only 7% of the cases were age 0-19 (Figure 28).

One-third of the cases were black (32.7%), one-third were white (33.1%), and 7.4% were of another race. Race was unreported for 69 persons (26.8%) (Figure 29). The male to female ratio was 1.5:1.

Two persons died from hepatitis unspecified. One was from the Northern Region. The other was from the Eastern Region.

Influenza

February was a significant month for influenza - 1,510 (59.8%) of the 2,524 cases reported during 1988 were reported that month (Figure 30). That was double the number reported in any other month.

REPORTED CASES OF INFLUENZA
IN VIRGINIA BY MONTH OF REPORT, 1988

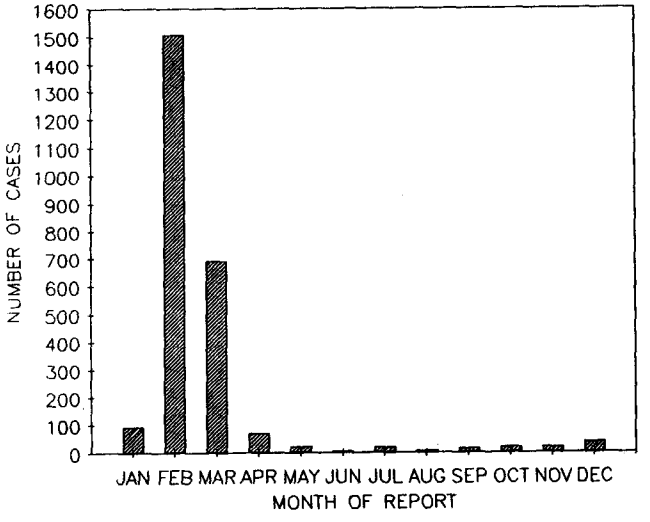

FIGURE 30

Influenza reporting varied greatly by locality. Eighty-eight localities did not report any influenza activity, while three (Appomattox, Lee, and Lynchburg) had rates close to 1,500 per 100,000 population. The Southwest Region experienced a reported influenza rate of 137 per 100,000 compared to rates of 38 for the Northwest, 16 for the Eastern, 14 for the Central and 2 for the Northern Region.

Kawasaki Syndrome

Fourteen confirmed cases of Kawasaki syndrome were reported in 1988, continuing a downward trend in the reporting of this disease in Virginia (Figure 31). Four of the cases (28.6%) were infants. The other ten were in the 1-9 age group, with the oldest being six years of age. Nine of the children were white, three black, and two of another race. Seven were female and seven were male.

TEN YEAR TREND IN REPORTED CASES OF
KAWASAKI SYNDROME IN VIRGINIA, 1979–88

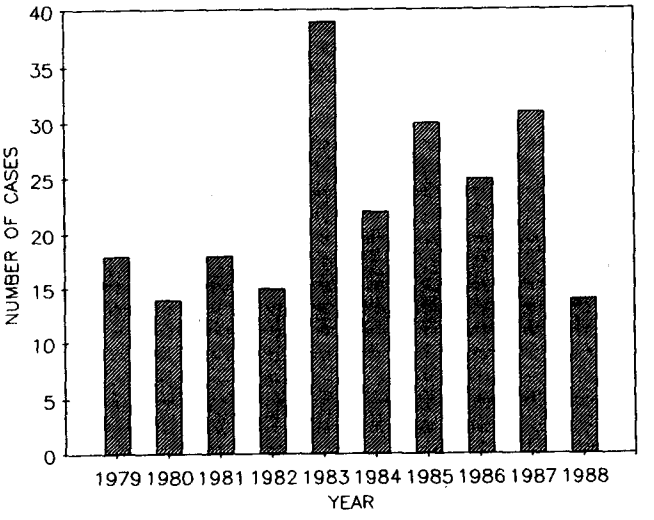

FIGURE 31

Half of the cases were reported as residing in the Eastern Region. Of the remaining, three lived in the Northwest, two in the Southwest, and two in the Central. No children from the Northern Region were reported with this disease.

Half of the cases had onset within the first three months of the year, with five cases experiencing onset in February. No cases occurred during the last two months of the year (Figure 32).

REPORTED CASES OF KAWASAKI SYNDROME
IN VIRGINIA BY MONTH OF ONSET, 1988

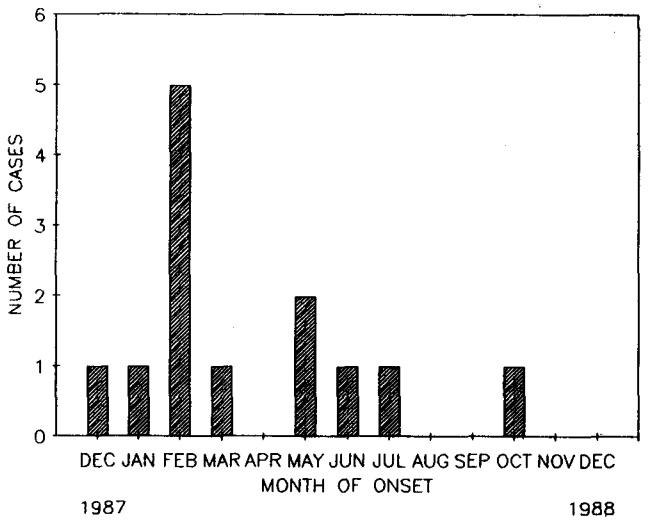

FIGURE 32

Legionellosis

Eight of the eleven cases of legionellosis reported in 1988 were age 50 or older. No cases were younger than 30. Ten were white and one was black. The male to female ratio was 2.7:1. Two of the cases died.

Five cases were reported from the Northwest Region and two each from the Southwest, Central, and Eastern Region. No cases came from Northern Virginia.

Five cases occurred during the first half of the year and three in the second half. Three of the cases reported in 1988 had onset in November of 1987. The cases were sporadic, not related to outbreaks.

Lyme Disease

Although Lyme disease was not reportable in 1988, disease reports were received and tallied.

Twenty-nine of the reported cases of Lyme disease met the case definition to be counted as official morbidity. While cases occurred in every age group except infancy, 69% were age 30 or older (Figure 33).

REPORTED CASES OF LYME DISEASE
IN VIRGINIA BY AGE, 1988

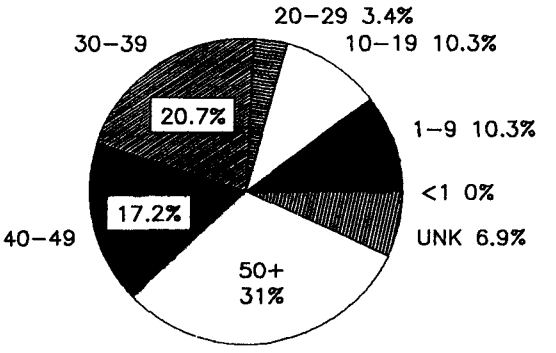

FIGURE 33

All of the cases whose race was reported were white. Race was not reported for six (20.7%) cases. Eighteen persons with Lyme disease were male and eleven were female for a male:female ratio of 1.6:1.

Over half of the cases resided in the Eastern Region (17 cases, 58.6%). Eight (27.6%) were from the Central Region, two from the Northwest and one each from the Northern and Southwest Regions.

Only ten of the 29 cases reported in 1988 had onset during the year of report. Two had onset in 1986 and 16 in 1987. The onset date was unknown for one person.