



West Virginia

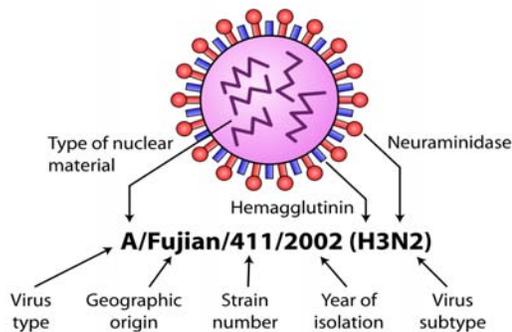
EPI-LOG

West Virginia is fifth state to uncover H3N2 influenza virus

The Bureau for Public Health's confirmation of two influenza A (H3N2)v cases in Mineral County in December made West Virginia the 5th state to uncover the novel virus that contained the matrix (M) gene from the influenza A (H1N1) pandemic virus. CDC reported in the January 6, 2012, MMWR {60(51);1741-1744} report that 11 of the 12 patients infected with the H3N2v virus have been children. Six of the 12 patients were hospitalized, and all recovered. Only the adult case was reported to have had occupational exposure to swine. This indicated that limited human-to-human transmission had occurred.

Mineral County's cases involved two children less than 5 years of age that were linked through daycare attendance. Extensive investigation conducted by the Division of Infectious Disease Epidemiology, the Mineral County Health Department and local health care providers have turned up no additional cases at the affected daycare, other daycares, and nearby schools. No increased absences were reported in those facilities. Both confirmed cases in West Virginia were considered mild cases; however, influenza-illness typically ranges from mild to severe.

(See **H3N2**, page 7)



Statewide Disease Facts & Comparisons

A quarterly publication of the West Virginia Office of Epidemiology & Prevention Services

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- New electronic disease surveillance system debuts
- 2011 year-end HIV and AIDS surveillance report
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Office of Epidemiology & Prevention Services

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Earl Ray Tomblin, Governor
Michael J. Lewis, Secretary (DHHR)



Transitioning to the new West Virginia Electronic Disease Surveillance System (WVEDSS)

The West Virginia Code of State Rule 64-7 mandates the reporting of selected diseases and conditions to WVDHHR's Bureau for Public Health. To facilitate compliance to the legislative rule, the state is transitioning from the old electronic disease surveillance system to a new system that utilizes the *National Electronic Disease Surveillance System* (NEDSS)-based framework to report infectious diseases for public health surveillance. The new WVEDSS allows public health to receive reports from local health and healthcare providers as well as communicate nationally notifiable infectious disease conditions to the Centers for Disease Control and Prevention (CDC).

The new WVEDSS, sometimes called NBS-WVEDSS, is similar to the old system in some ways:

- The system is web-based, so a designated user can report a disease as long as he/she has a secured internet connection.
- There are varying levels of user access, so only selected individuals can view or share disease reports.
- User names and passwords are required to access the network.

On the other hand, the new WVEDSS has unique characteristics that set it apart from the old system:

- Data in the new WVEDSS is patient-centered (disease information is linked to the master patient index). As such, demographic information for a patient with multiple reportable infectious disease conditions need to be transcribed only once to WVEDSS, during the initial disease report, unless changes are noted. Subsequent disease reports associated with the patient are entered into the system and easily linked to the latter.

- The new system is capable of accepting electronic laboratory reports (ELR); a feature that was not

available in the old system. Efforts are underway to make ELR a possibility.

- The new system has a *Page Builder*. The latter allows for the creation of new disease electronic reporting forms, thus permitting the incorporation of new diseases to the WVEDSS.

- The formatting of the new WVEDSS form is not printer-friendly. To address this, pdf versions of disease reporting forms have been created. The pdf forms are found at the DIDE website (see link below).

- The Division of Infectious Disease Epidemiology (DIDE) has begun using the new WVEDSS as the new repository for Hepatitis C reports. In the past, all hepatitis C reports were entered into an *Access* database (Hepatitis C Registry) that is not accessible to local health. Effective this year, all hepatitis C reports received in 2012 are entered into the new WVEDSS. This permits WVDHHR to share reports of acute and past/present hepatitis C with selected local health officials as well as the CDC.

The transition to the new system has been slow and tedious. In December 2011, the Office of Epidemiology and Prevention Services (OEPS) announced the launching of the new WVEDSS. However, due to unforeseen technical issues the launch has been postponed and is currently targeted for March.

In the meantime, local health and other WVEDSS users are advised to continue using the old WVEDSS until the new WVEDSS is up and running. Similarly, local health departments will continue to receive the scheduled new WVEDSS training provided by OEPS staff.

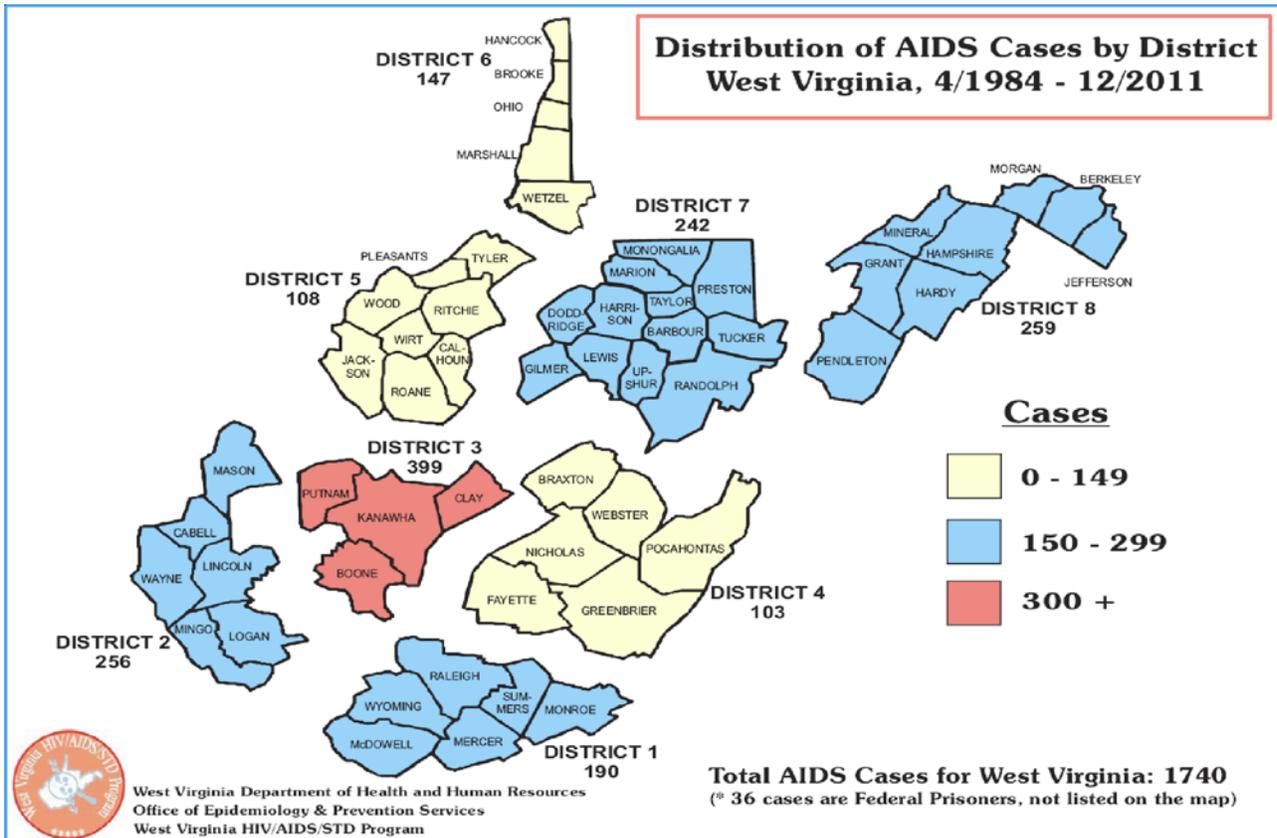
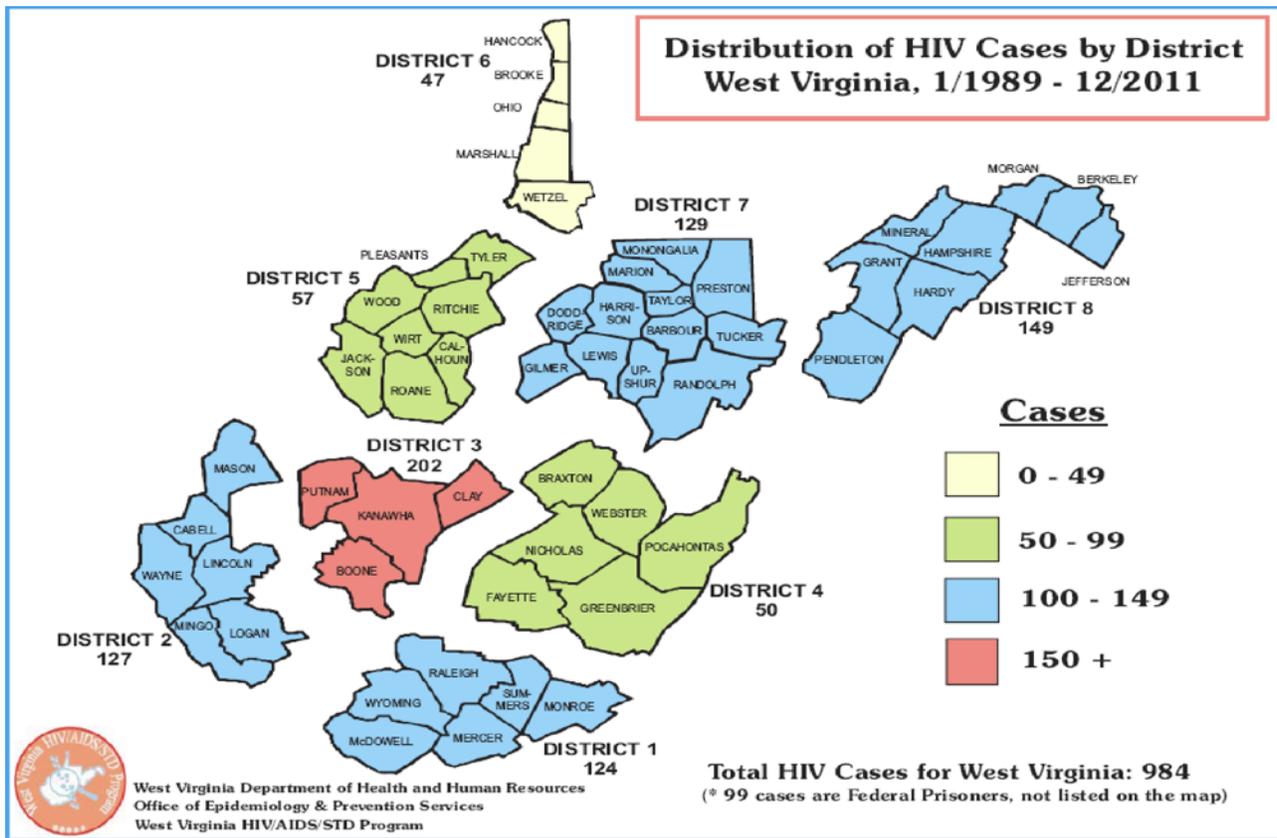
For more information about the new WVEDSS, please visit <http://www.dhhr.wv.gov/oeps/disease/WVEDSS/Pages/default.aspx> 

2011 Year-End HIV/AIDS Surveillance Data

As of December 31, 2011, 984 cases of HIV and 1,740 cases of AIDS have been diagnosed in West Virginia. The majority of these cases have been diagnosed among non-Hispanic Whites—61% of HIV cases and 77% of AIDS cases. Non-Hispanic Blacks account for 35% of HIV and 21% of AIDS cases while Hispanics account for only 3% of HIV and 2% of AIDS cases. Most HIV and AIDS cases have been diagnosed among males, accounting for 72% and 83% of cases, respectively. The major risk behavior for both HIV and AIDS is men having sex with men (MSM), accounting for 46% of HIV and 54% of AIDS cases. Among HIV diagnoses, the second most common risk behavior is heterosexual intercourse, accounting for 20% of cases, followed by injection drug use (IDU), which accounts for 18% of cases. For AIDS cases, this order is reversed with IDU accounting for 15% of cases and heterosexual intercourse accounting for 14% of cases. Finally, the age distribution of diagnosed cases varies,

with AIDS tending to be diagnosed at older ages compared to HIV. Among individuals diagnosed with HIV only, 35% were diagnosed at 20-29 years of age, 33% at 30-39 years old, and 18% at age 40 to 49. Among AIDS cases, 40% were diagnosed at age 30 to 39 years, while 30% were diagnosed at age 40 to 49. ☒

West Virginia AIDS and HIV Infection Cases Diagnosed by Age Group, Gender, Race and Exposure Category Cumulative through December 31, 2011						
Characteristic	AIDS		HIV		Total	
	No.	%	No.	%	No.	%
Age at Diagnosis §						
<13	11	1	12	1	23	1
13-19	18	1	55	6	73	3
20-29	276	16	348	35	624	23
30-39	692	40	320	33	1,012	37
40-49	515	30	179	18	694	25
50-59	167	10	55	6	222	8
60 +	61	4	13	1	74	3
Gender						
Males	1,448	83	707	72	2,155	79
Females	292	17	277	28	569	21
Race/Ethnicity						
White	1,333	77	598	61	1,931	71
Black	362	21	345	35	707	26
Other/Unknown*	45	3	41	4	86	3
Exposure Category						
Male-to-male sex (MSM)	940	54	454	46	1,394	51
Injection drug use (IDU)	267	15	173	18	440	16
MSM/IDU	89	5	29	3	118	4
Heterosexual contact	238	14	200	20	438	16
Perinatal	12	1	13	1	25	1
Other/Unknown**	194	11	115	12	309	11
Total	1740	100	984	100	2724	100
Notes. These are actual numbers of cases of HIV/AIDS that were reported to the West Virginia Health Department as of December 31, 2011. No adjustments were made for reporting delays. AIDS data includes reports from April 1984 through December 31, 2011; HIV data includes reports from January 1989 through December 31, 2011. Numbers include persons diagnosed with HIV infection (not AIDS), HIV infection and later AIDS, and concurrent diagnoses of HIV infection and AIDS. Percentages may not add to 100% due to rounding.						
**"Other" race categories include Hispanic, Asian, Native Hawaiian, Pacific Islander, American Indian, Alaskan Native, Multiple Races, and Unknown race.						
***"Other" risk categories include hemophilia, blood transfusion, and risk not reported or not identified.						
§ Excludes two persons with invalid diagnosis dates.						



Increases in chlamydia and gonorrhea seen in West Virginia

In 2011, compared to 2010, the number of people diagnosed with Chlamydia rose in 7 out of the top 12 counties in West Virginia. The county with the largest percentage increase in Chlamydia cases was Fayette County, which saw a 43% rise in Chlamydia cases. Berkeley and Raleigh counties also experienced a large rise in Chlamydia cases, both with a 38% rise from 2010 to 2011. One more county also experienced an increase in Chlamydia that was greater than 20%—Cabell County experienced a 21% increase in the number of Chlamydia cases over the span of one year.

In terms of absolute numbers, Kanawha County had the largest number of diagnosed Chlamydia cases in 2011 with 729 cases. This was followed by Cabell County with 497 cases, Monongalia County with 422 cases, and Berkeley County with 377 cases. In all four of these counties, the number of women diagnosed with Chlamydia is greater than the number of men diagnosed, ranging from 67% of cases in Monongalia and Berkeley Counties to 71% in Kanawha County. The majority of cases are also diagnosed among non-Hispanic White individuals, with 47% of Kanawha County cases to 70% of Monongalia County cases occurring among this population. However, because of the large difference in population size between Whites and Blacks in these counties, the incidence rate among Blacks is much higher than that of Whites. As a result, the Black community is disproportionately affected by Chlamydia. Finally, most cases occur in the age groups of 15- to 19-years old and 20- to 24-years old. The age group of 15- to 19-years old accounted for 39% of cases in Kanawha County, 33% of cases in Berkeley County, 27% of cases in Monongalia County, and 26% of cases in Cabell County. Meanwhile, 20- to 24-year olds accounted for 56% of cases in Monongalia County, 44% of case in Cabell County, 43% of cases in Berkeley County, and 36% of cases in Kanawha County.

When using rates to take into account the size of each county's population, the county with the highest incidence rate of Chlamydia was Cabell County with 516 cases per 100,000 population. This occurs because Cabell has a much smaller population than Kanawha County; according to the 2010 United States Census, Kanawha County has a population of 193,063 persons while Cabell County has only 96,319 persons. With respect to incidence rates, Monongalia County had the second highest Chlamydia rate, followed by Kanawha County, Berkeley County, and Mercer County, respectively. Figure 2 provides more detail on incidence rates of Chlamydia in West Virginia in 2011.

Figure 1. Chlamydia Cases - Top 12 Counties, West Virginia, 2011

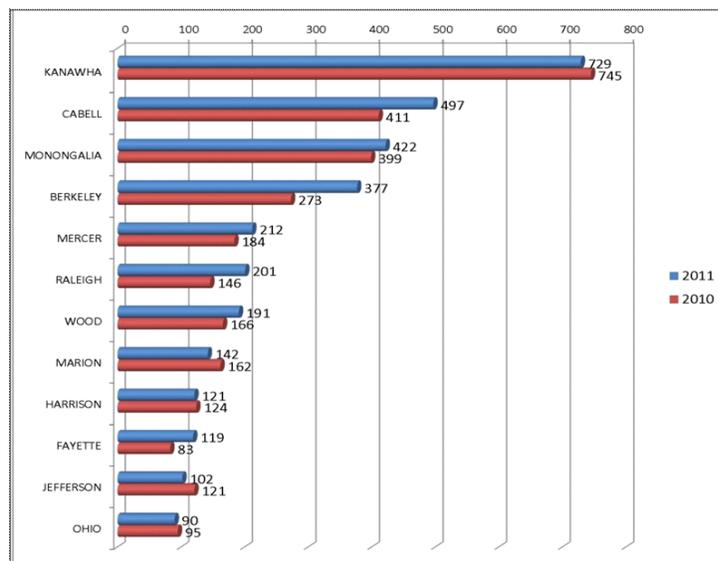
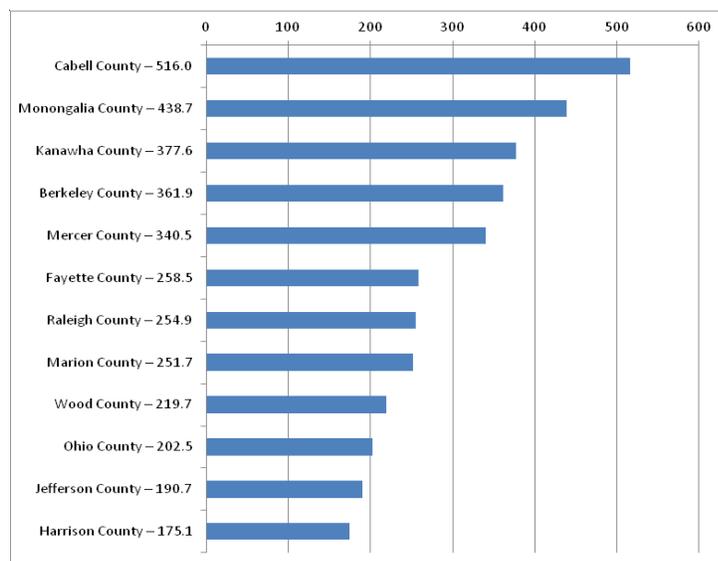
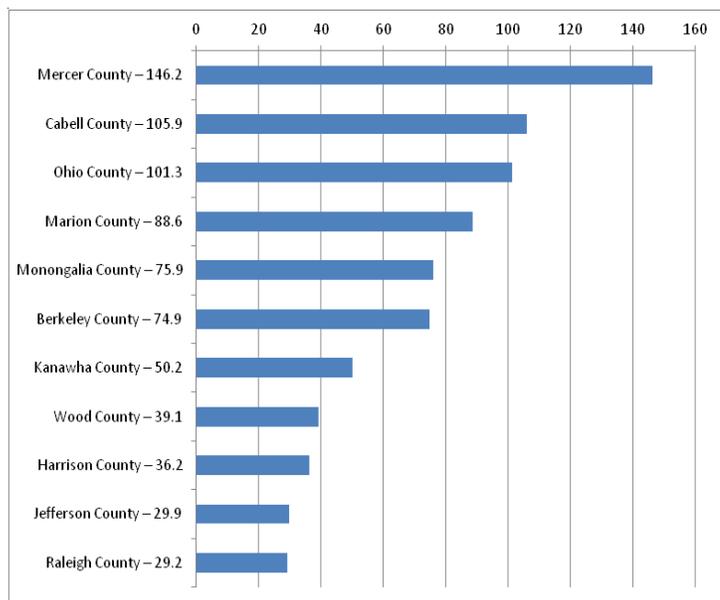


Figure 2. Chlamydia rates per 100,000 population, West Virginia, 2011



(See *STDs*, page 6)

Figure 4. Gonorrhea rates per 100,000 population, West Virginia, 2011



(STDs, continued from page 5)

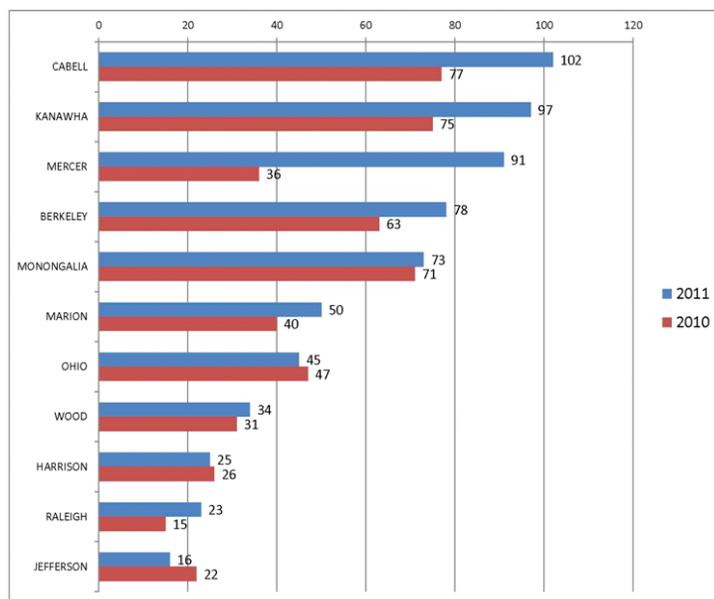
Although Gonorrhea has lower numbers of infection compared to Chlamydia, it is also a sexually transmitted disease of importance to public health surveillance. In 2011, the number of Gonorrhea cases diagnosed increased in 8 of the top 11 counties, in terms of Gonorrhea prevalence, in West Virginia. The greatest increase was seen in Mercer County where an outbreak of Gonorrhea occurred in August 2011. Compared to 2010, Mercer County experienced a 153% increase in the number of diagnosed cases of Gonorrhea in 2011. Other counties that also experienced a large increase in the number of Gonorrhea cases in 2011 compared to 2010 are Raleigh County with a 53% increase, Cabell County with a 33% increase, and Kanawha, Marion, and Berkeley Counties with a 29%, 25%, and 24% increase, respectively.

With respect to absolute numbers, Cabell County had the highest number of diagnosed Gonorrhea cases in

2011 with 102. This was followed by Kanawha County with 97 and Mercer County with 91 cases. As with Chlamydia, the greatest number of Gonorrhea cases occurred among women, compared to men. Women accounted for 62% of cases in Kanawha County, 57% of cases in Mercer County, and 54% of cases in Cabell County. Though Whites made up the largest number of cases in Cabell County, accounting for 47% of Gonorrhea diagnoses, Blacks made up the largest number of cases in both Kanawha and Mercer counties, accounting for 45% and 67% of cases, respectively. Again, because of the large difference in population numbers, Gonorrhea has a disproportionately large effect on the Black population in these counties. Finally, the largest number of cases in the top three counties occurred among individuals aged 20- to 24-years old, with cases among this age group ranging from 44% of cases in Cabell County to 34% in Kanawha County. The second largest age group to be diagnosed with Gonorrhea in these counties differed from county to county; in Cabell County, for example, individuals aged 25- to 29-years of age were the second largest age group, while individuals aged 15- to 19-years old were the second largest age group in both Kanawha and Mercer Counties.

When looking at incidence rates of Gonorrhea in West Virginia in 2011, Mercer County had the highest incidence rate with 146 cases per 100,000 people in the county. This was followed by Cabell County with an incidence rate of 106, Ohio County with an incidence rate of 101, and Marion and Monongalia Counties with incidence rates of 89 and 76, respectively. Kanawha County, which was second in the overall number of Gonorrhea diagnoses in 2011, experienced only the 7th highest incidence rate of Gonorrhea in the state at 50 cases per 100,000 residents.

Figure 3. Gonorrhea Cases - Top 11 Counties, West Virginia, 2011



(See STDs, page 7)

(STDs, continued from page 6)

As previously mentioned, Mercer County experienced a sharp rise in the incidence of Gonorrhea in August of 2011, increasing from five diagnosed cases in July 2011 to 24 diagnosed cases in August. As can be seen in Figure 5 (below left), prior to August, the highest incidence rate occurred in April, with almost 13 cases per 100,000 population. In August, this incidence rate shot up to almost 39 cases per 100,000 population, an increase of over 300%.

Overall, females experienced higher rates of gonorrhea during the outbreak compared to males. The incidence rate among Blacks was over 40 times the incidence rate of gonorrhea among Whites, showing that the outbreak had a highly disproportionate impact by race/ethnicity. Finally, the impact of the outbreak was felt more strongly by those in younger age groups—the incidence rate among those aged 15 to 19 was over 18 times the incidence rate among those aged 30 or older. Individuals in age groups 20-24 and 25-29 also experienced high incidence rates. ☒

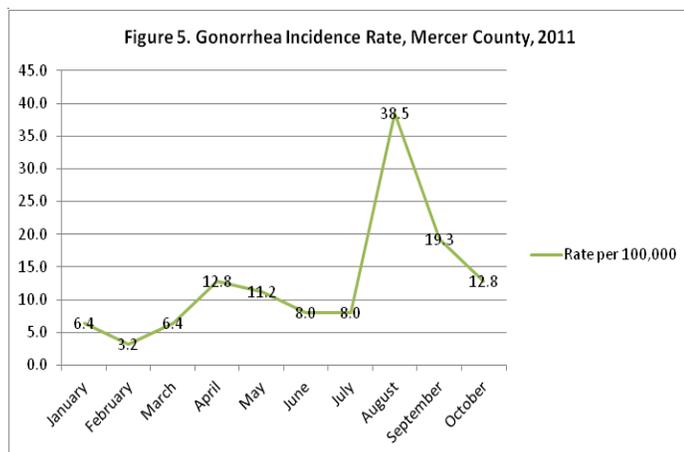


Table 1. Number, percent, and rate of gonorrhea cases by demographic characteristics, August 2011, Mercer County.

Characteristic	Number of Cases	Percent Distribution	Incidence Rate ^a
Total	24	100.0%	38.5
Sex			
Male	9	37.5	30.2
Female	15	62.5	46.1
Race/ethnicity			
White	6	25.0	10.5
Black	18	75.0	474.8
Age			
<15 years	0	0.0	0.0
15-19 years	9	37.5	228.2
20-24 years	6	25.0	152.7
25-29 years	4	16.7	118.2
30+ years	5	20.8	12.4

^a Rate is presented per 100,000 individuals in that population group.

(H3N2, continued from page 1)

The finding of the second case in Mineral County led to the BPH Commissioner and Health Officer Dr. Marian Swinker issuing a Health Advisory #58 “Novel Influenza H3N2 variant virus [(H3N2)v] in Mineral County, WV,” requesting for enhanced surveillance of flu-like illness or upper respiratory symptoms in children less than 5 years of age. CDC reported that limited serologic studies conducted to date indicate that young children have little preexisting immunity to the H3N2v. It is believed that a similar virus circulated in the 1990s meaning that older children and adults may have limited immunity against these viruses.

The seasonal flu vaccine does not provide protection against H3N2v, however health officials are still urging citizens to get the flu shot to protect against other strains of flu expected to be circulating this year. Basic flu prevention methods such as washing hands frequently, discarding used tissues, covering coughs and sneezes are encouraged throughout flu season. If ill with flu-like illness, one may seek treatment and consider staying home from work, school, or daycare until illness improves.

Human infections with influenza viruses currently circulating among swine are rare with only 35 cases being detected since 2005. The frequency with which they have been detected increased in 2011.

MMWR Location: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6051a4.htm?s_cid=mm6051a4_w

Health Advisory: http://www.dide.wv.gov/oeps/disease/Documents/WV_HAN_58.pdf ☒

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