HARDIN COUNTY 2017

COMMUNICABLE DISEASE REPORT

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COMMUNICABLE DISEASE SUMMARY

Hardin County saw a 28.7% increase in communicable disease cases from 2016 to 2017 (223 cases and 287 cases, respectively).

Numerous infectious diseases were reported during 2017; however, the most frequently reported illnesses were chlamydia (83 cases), Hepatitis C (59 cases), influenza-associated hospitalizations (41 cases), gonorrhea (37 cases), and Hepatitis B (19 cases). Chlamydia, Hepatitis C, influenza-associated hospitalizations, and Hepatitis B were also in the top five diseases reported during 2016.

Table 1. on Page 4 illustrates all of the diseases reported in the community and the number of cases for each of these illnesses. The remainder of this document provides epidemiological data on each of these illnesses as well as brief demographic information on the cases and disease trends over the past five years.
### Table 1. Communicable Diseases Reported in Hardin County, 2017

<table>
<thead>
<tr>
<th>Disease</th>
<th>Class B Reportable Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacteriosis</td>
<td>12</td>
</tr>
<tr>
<td>Chlamydia infection</td>
<td>83</td>
</tr>
<tr>
<td>Coccidioidomycosis</td>
<td>1</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>1</td>
</tr>
<tr>
<td><em>E. coli</em></td>
<td>4</td>
</tr>
<tr>
<td>Giardiasis</td>
<td>1</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>37</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>19</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>59</td>
</tr>
<tr>
<td>Influenza-associated hospitalization</td>
<td>41</td>
</tr>
<tr>
<td>Legionnaires’ Disease</td>
<td>5</td>
</tr>
<tr>
<td>Listeriosis</td>
<td>1</td>
</tr>
<tr>
<td>Lyme Disease</td>
<td>1</td>
</tr>
<tr>
<td>Meningitis (bacterial)</td>
<td>2</td>
</tr>
<tr>
<td>Mycobacterial disease (not tuberculosis)</td>
<td>1</td>
</tr>
<tr>
<td>Salmonellosis</td>
<td>6</td>
</tr>
<tr>
<td>Shigellosis</td>
<td>1</td>
</tr>
<tr>
<td>Streptococcal disease</td>
<td>1</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em></td>
<td>1</td>
</tr>
<tr>
<td>Syphilis</td>
<td>1</td>
</tr>
<tr>
<td>Varicella</td>
<td>2</td>
</tr>
<tr>
<td>Yersiniosis</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>287</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disease</th>
<th>Class C Reportable Diseases—Outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fifth Disease</td>
<td>1</td>
</tr>
<tr>
<td>Norovirus</td>
<td>1</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>
ANNUAL COMMUNICABLE DISEASES

Types of Communicable Diseases Reported in Hardin County, 2017

- Sexually Transmitted Infections: 121 cases
- Enteric Illnesses: 30 cases
- Vaccine Preventable Illnesses: 66 cases
- Bloodborne Pathogens: 59 cases
- Vectorborne Illnesses: 1 case
- Other Illnesses: 10 cases

Notes:
- Case counts include confirmed, probable, and suspect disease classifications
- Sexually transmitted infections include chlamydia, gonorrhea, and syphilis
- Enteric illnesses include campylobacteriosis, cryptosporidiosis, *E. coli*, giardiasis, Listeriosis, salmonellosis, shigellosis, and yersiniosis
- Bloodborne pathogens includes Hepatitis C
- Vectorborne illness includes Lyme disease
- Other illness include bacterial meningitis, coccidioidomycosis, Legionnaires’ Disease, mycobacterial disease (not tuberculosis), and streptococcal diseases
**DEMOGRAPHICS**

- Number of Cases: 83
- Average Age: 23.7
- Median Age: 22
- Age Range: 14-45 years
- Female: 73.5%
- Male: 26.5%
- Decrease from 2016: 5.7%

**EPIDEMIOLOGY**

- Infectious Agent: *Chlamydia trachomatis* bacteria
- Case Definition: Isolation of *Chlamydia trachomatis* from a clinical specimen
- Symptoms: Men may suffer from painful urination, urinary frequency, and penile discharge; while women may experience vaginal discharge
- Source: Humans
- Mode of Transmission: Sexually transmitted
- Incubation Period: 7-21 days
- Prevention: Abstinence, condom use, and identification and treatment of sexual contacts of those proven to be or suspected of being infected with *Chlamydia trachomatis*

**FIVE YEAR TREND**
HEPATITIS C

DEMOGRAPHICS

Number of Cases: 59
Average Age: 35
Median Age: 31
Age Range: 18-65 years
Female: 54.2%
Male: 44.1%
Decrease from 2016: 14.5%

EPIDEMIOLOGY

Infectious Agent: Hepatitis C virus
Case Definition: A positive test for Hepatitis C virus antibodies or detection of the Hepatitis C virus
Symptoms: Those infected may be asymptomatic; however, some may experience nausea, vomiting, abdominal pain, loss of appetite, dark urine, and/or jaundice
Source: Human blood
Mode of Transmission: Injection drug use through the sharing of needles and other drug paraphernalia contaminated with infected blood; non-professional tattooing or in-home tattooing through shared needles or contaminated equipment; sexual transmission inefficiently spreads the virus (rare)
Incubation Period: 2 weeks—6 months
Prevention: No vaccine is available

FIVE YEAR TREND

Hepatitis C Cases in Hardin County, 2013-2017

Hepatitis C Cases by Month in Hardin County, 2017
INFLUENZA-ASSOCIATED HOSPITALIZATIONS

DEMOGRAPHICS

Number of Cases: 41
Average Age: 59.2
Median Age: 69
Age Range: 1 month—89 years
Female: 51.2%
Male: 48.8%
Increase from 2016: 272.7%

EPIDEMIOLOGY

Infectious Agent: Two main types of Influenza virus: Influenza A and Influenza B; both types include different strains that tend to change from year to year
Case Definition: An illness compatible with influenza virus infection that results in hospitalization
Symptoms: Fever, body aches, headache, malaise, nonproductive cough, sore throat, and runny nose
Source: Humans
Mode of Transmission: Direct person-to-person contact through droplet spread or via articles recently contaminated with nasopharyngeal secretions.
Incubation Period: 1-4 days
Prevention: The best prevention is annual vaccination; washing hands after sneezing, coughing or using a tissue; cough into sleeve and not into hands

FIVE YEAR TREND

Influenza-Associated Hospitalizations in Hardin County, 2013-2017

Influenza-Associated Hospitalizations by Month in Hardin County, 2017

Number of Cases

Influenza-Associated Hospitalizations in Hardin County, 2013-2017

Number of Cases
GONORRHEA

DEMOGRAPHICS

Number of Cases: 37
Average Age: 30.3
Median Age: 30.5
Age Range: 18-63 years
Female: 37.8%
Male: 62.2%
Increase from 2016: 311.1%

EPIDEMIOLOGY

Infectious Agent: Neisseria gonorrhoeae bacteria
Case Definition: Isolation of Neisseria gonorrhoeae from a clinical specimen
Symptoms: Men suffer from painful, frequent urination, and penile discharge; women may experience vaginal discharge, painful urination, and vaginal bleeding between menstrual cycles
Source: Humans
Mode of Transmission: Sexually transmitted
Incubation Period: 3-8 days
Prevention: Abstinence, condom use, and identification and treatment of sexual contacts of those proven to be or suspected of being infected with Neisseria gonorrhoeae

FIVE YEAR TREND

Gonorrhea Cases in Hardin County, 2013-2017

Gonorrhea Cases by Month in Hardin County, 2017
HEPATITIS B

DEMOGRAPHICS

Number of Cases: 19
Average Age: 36.2
Median Age: 33
Age Range: 23—59 years
Female: 42.1%
Male: 57.9%
Increase from 2016: 46.2%

EPIDEMIOLOGY

Infectious Agent: Hepatitis B virus
Case Definition: A positive test for Hepatitis B virus antibodies not associated with vaccination or detection of the Hepatitis B virus
Symptoms: Those infected may be asymptomatic; however, some may experience nausea, vomiting, abdominal pain, loss of appetite, dark urine, and/or jaundice
Source: Blood and other body fluids (e.g., semen, vaginal secretions, and wound exudates)
Mode of Transmission: Injection drug use through the sharing of needles and other drug paraphernalia contaminated with infected blood; non-professional tattooing or in-home tattooing through shared needles or contaminated equipment; sexual contact; exposure through breaks in the skin; contamination of mucosal surfaces with body fluids other than saliva; perinatal transmission
Incubation Period: 6 weeks—6 months
Prevention: The best prevention is vaccination

FIVE YEAR TREND

Hepatitis B's cases in Hardin County, 2013-2017

Hepatitis B Cases by Month in Hardin County, 2017

Hepatitis B Cases in Hardin County, 2013-2017
TIMELINESS OF REPORTING

Timely reporting of infectious diseases is important in identifying potential outbreaks and in reducing disease burden. Public health relies on health care providers and laboratories for identification and prompt reporting of these infectious diseases. Timeliness requirements for each reportable disease is dependent of the infectious nature and severity of the disease.

Reporting lag is defined as the difference between the date the case was reported to the local health department and the date of diagnosis. For Class A diseases, median and mean lag time values should be less than 1 since these illnesses are required to be reported to the health department immediately, and for Class B and C diseases, mean and median lag time values should be less than 2 since these illness should be reported to the health department by the end of the next business day.

Table 2. illustrates the lag time for select reportable diseases reported in Hardin County during 2017.

<table>
<thead>
<tr>
<th>Reportable Disease</th>
<th>Reporting Requirement</th>
<th>Cases (N)</th>
<th>Median (Days)</th>
<th>Mean (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacteriosis</td>
<td>By end of next business day</td>
<td>12</td>
<td>3</td>
<td>4.9</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>By end of next business day</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>E. coli O157:H7</td>
<td>By end of next business day</td>
<td>4</td>
<td>7</td>
<td>6.5</td>
</tr>
<tr>
<td>Giardia</td>
<td>By end of next business day</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Influenza-Associated Hospitalization</td>
<td>By end of next business day</td>
<td>41</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>Legionnaires’ Disease</td>
<td>By end of next business day</td>
<td>5</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Pertussis</td>
<td>By end of next business day</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Salmonella</td>
<td>By end of next business day</td>
<td>6</td>
<td>5</td>
<td>5.2</td>
</tr>
<tr>
<td>Shigella</td>
<td>By end of next business day</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Reporting lag time is the difference between the date the case was reported to the local health department and the case’s date of diagnosis

Date of diagnosis defaulted to lab specimen collection date or illness onset date if blank