HARDIN COUNTY 2018

COMMUNICABLE DISEASE REPORT

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Annual Communicable Diseases

COMMUNICABLE DISEASES CHANGE
Hardin County saw a 11.2% decrease in communicable disease cases from 2017 to 2018 (287 cases and 255 cases, respectively). Figure 1. to the right shows the number of communicable disease cases occurring annually for the last five years.

COMMUNICABLE DISEASE HIGHLIGHTS
Numerous infectious diseases were reported during 2018; however, the most frequently reported illnesses were chlamydia (89 cases), Hepatitis C (51 cases), influenza-associated hospitalizations (31 cases), gonorrhea (19 cases), and campylobacteriosis (14 cases). Chlamydia, Hepatitis C, influenza-associated hospitalizations and gonorrhea have continued to be in the top five most reported diseases since 2015. However, in 2018, campylobacteriosis was replaced by Hepatitis B as the fifth most reported disease. Table 1. on Page 2 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 information for each of the top five 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, 2018

<table>
<thead>
<tr>
<th>Class B Reportable Diseases</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacteriosis</td>
<td>14</td>
</tr>
<tr>
<td>Chlamydia infection</td>
<td>89</td>
</tr>
<tr>
<td>Coccidioidomycosis</td>
<td>1</td>
</tr>
<tr>
<td>Carbapenemase Producing Carbapenem-Resistant Enterobacteriaceae</td>
<td>1</td>
</tr>
<tr>
<td>Creutzfeldt-Jakob Disease</td>
<td>1</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>1</td>
</tr>
<tr>
<td>E. coli</td>
<td>5</td>
</tr>
<tr>
<td>Ehrlichiosis</td>
<td>1</td>
</tr>
<tr>
<td>Giardiasis</td>
<td>3</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>19</td>
</tr>
<tr>
<td>Haemophilus influenzae</td>
<td>2</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>13</td>
</tr>
<tr>
<td>Hepatitis C- Perinatal Infection</td>
<td>51</td>
</tr>
<tr>
<td>Influenza- associated hospitalization</td>
<td>31</td>
</tr>
<tr>
<td>Legionnaires’ Disease</td>
<td>3</td>
</tr>
<tr>
<td>Pertussis</td>
<td>3</td>
</tr>
<tr>
<td>Salmonellosis</td>
<td>6</td>
</tr>
<tr>
<td>Streptococcal disease</td>
<td>1</td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>2</td>
</tr>
<tr>
<td>Varicella</td>
<td>1</td>
</tr>
<tr>
<td>West Nile Virus Disease</td>
<td>1</td>
</tr>
<tr>
<td>Yersiniosis</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>255</strong></td>
</tr>
</tbody>
</table>
Communicable Disease Graph

Types of Communicable Diseases Reported in Hardin County, 2018

- Sexually transmitted infections include chlamydia, and gonorrhea
- Enteric illnesses include campylobacteriosis, cryptosporidiosis, *E. coli*, giardia, salmonella, and yersiniosis
- Vaccine preventable illnesses include *Haemophilus influenzae*, Hepatitis A, Hepatitis B, influenza-associated hospitalizations, pertussis, *Streptococcus pneumoniae*, and varicella
- Bloodborne pathogens include Hepatitis C and Hepatitis C Perinatal Infections
- Vectorborne illnesses include Ehrlichiosis and West Nile virus disease
- Other illnesses include Coccidioidomycosis, CP-CRE, Creutzfeldt-Jakob disease, Legionnaires’ Disease and Streptococcal disease
Chlamydia

**DEMOGRAPHICS**
- Number of Cases: 89
- Average Age: 24.3 years
- Median Age: 22 years
- Age Range: 14-58 years
- Female: 69.7%
- Male: 30.3%
- Percent Change from 2017: 7.2%

**EPIDEMIOLOGY**
- Infectious Agent: *Chlamydia trachomatis* bacteria
- Case Definition: Isolation of *C. trachomatis* by culture or demonstration of *C. trachomatis* in a clinical specimen
- Symptoms: Woman may notice abnormal vaginal discharge and/or a burning sensation when urinating while symptoms in men can include a discharge from their penis, a burning sensation while urinating, and/or pain and swelling in one or both testicles.
- Source: Humans
- Mode of Transmission: Sexually transmitted
- Incubation Period: 7-21 days
- Prevention: Abstinence, appropriate condom use, and identification and treatment of sexual contacts of those proven to be or suspected of being infected with *Chlamydia trachomatis*.

**CHLAMYDIA FIVE YEAR TREND**

[Graph showing Chlamydia Cases by Month in Hardin County, 2018]

[Graph showing Chlamydia Cases in Hardin County, 2014-2018]
Hepatitis C

DEMOGRAPHICS
Number of Cases: 51
Average Age: 39.4 years
Median Age: 34.0 years
Age Range: 23-76 years
Female: 49.0%
Male: 49.0%
Unknown: 2.0%
Percent Change from 2017: -13.6%

EPIDEMIOLOGY
Infectious Agent: Hepatitis C virus
Case Definition: A positive test for Hepatitis C virus antibodies or detection of the Hepatitis C virus
Symptoms: Most individuals infected with the Hepatitis C virus do not experience any symptoms; however, some may experience nausea, vomiting, abdominal pain, loss of appetite, dark urine, and/or jaundice. If a person has been infected for many years, their liver may be damaged.
Source: Humans
Mode of Transmission: Sharing needles, syringes, or other equipment to inject drugs, needlestick injuries in health care settings, being born to a mother who has Hepatitis C, sharing personal care items that have come in contact with another person’s blood, and having sexual contact with another infected person.
Incubation Period: 2 weeks – 6 months
Prevention: No vaccine currently available

HEPATITIS C FIVE YEAR TREND
Influenza-Associated Hospitalizations

DEMOGRAPHICS
Number of Cases: 31
Average Age: 68.4 years
Median Age: 73.0 years
Age Range: 4 months – 90 years
Female: 51.6%
Male: 45.2%
Unknown: 3.2%
Percent Change from 2016: -24.4%

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

INFLUENZA-ASSOCIATED HOSPITALIZATION FIVE YEAR TREND

Influenza-Associated Hospitalizations in Hardin County, 2014-2018

Influenza-Associated Hospitalizations by Month in Hardin County, 2018
Gonorrhea

DEMOGRAPHICS
Number of Cases: 19
Average Age: 28.3 years
Median Age: 26.0 years
Age Range: 15-46 years
Female: 68.4%
Male: 31.6%
Percent Change from 2017: -48.7%

EPIDEMIOLOGY
Infectious Agent: Neisseria gonorrhoeae bacteria
Case Definition: Isolation of Neisseria gonorrhoeae from a clinical specimen
Symptoms: Many people are asymptomatic; however, symptoms for men may include discharge from the penis as well as testicular or scrotal pain while women typically experience mild symptoms that include increased vaginal discharge, or vaginal bleeding between periods.
Source: Humans
Mode of Transmission: Sexually transmitted
Incubation Period: 3-8 days
Prevention: Abstinence, appropriate condom use, and identification and treatment of sexual contacts of those proven to be or suspected of being infected with Neisseria gonorrhoeae.

GONORRHEA FIVE YEAR TREND
Campylobacteriosis

DEMOGRAPHICS
Number of Cases: 14
Average Age: 42.0 years
Median Age: 34.0 years
Age Range: 10-75 years
Female: 35.7%
Male: 64.3%
Percent Change from 2016: 16.7%

EPIDEMIOLOGY
Infectious Agent: *Campylobacter* organisms, most commonly *Campylobacter jejuni*
Case Definition: Isolation of Campylobacter spp. from a clinical specimen
Symptoms: Infection is characterized by diarrhea (frequently bloody), abdominal pain, fever, and occasionally nausea and vomiting.
Source: Poultry, cattle, puppies, kittens, swine, sheep, rodents, birds and other wild/domestic animals
Mode of Transmission: Fecal-oral route of contaminated products. Most commonly from eating raw or undercooked poultry or food that was contaminated by raw or undercooked poultry. Direct contact with infected pets, livestock or infants.
Incubation Period: 2-4 days
Prevention: Hand washing, safe food preparation, safe food storage, do not drink unpasteurized milk or untreated water.

CAMPYLOBACTERIOSIS FIVE YEAR TREND
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 on 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 illnesses should be reported to the health department by the end of the next business day.

Table 2 illustrates the lag time for select Class B reportable diseases reported in Hardin County during 2018.

<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>End of next business day</td>
<td>14</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>End of next business day</td>
<td>1</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td><em>E. coli</em></td>
<td>End of next business day</td>
<td>5</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Giardia</td>
<td>End of next business day</td>
<td>3</td>
<td>2.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Influenza-Associated Hospitalization</td>
<td>End of next business day</td>
<td>31</td>
<td>3.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Legionnaires’ Disease</td>
<td>End of next business day</td>
<td>3</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Pertussis</td>
<td>End of next business day</td>
<td>3</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Salmonella</td>
<td>End of next business day</td>
<td>6</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>Shigella</td>
<td>End of next business day</td>
<td>0</td>
<td>N/A</td>
<td>N/A</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.
Epidemiologist Contact Information

Information compiled and prepared by the following Epidemiologists:

<table>
<thead>
<tr>
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<th>MARY MERRIMAN, MPH EPIDEMIOLOGIST</th>
</tr>
</thead>
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</tr>
</tbody>
</table>

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