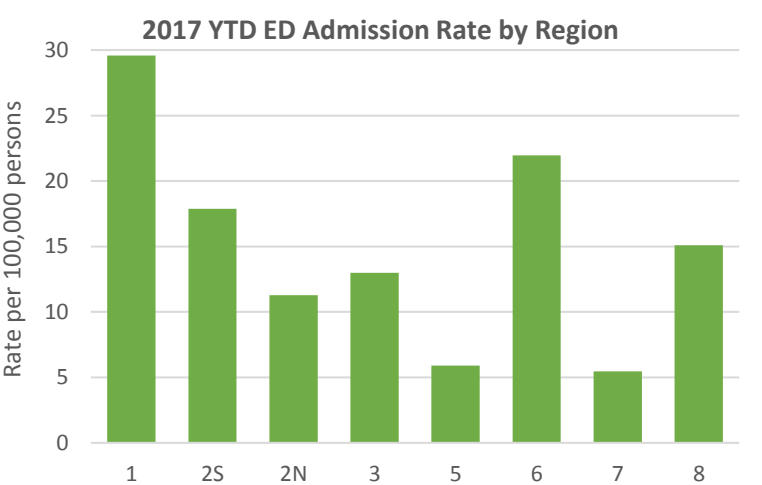
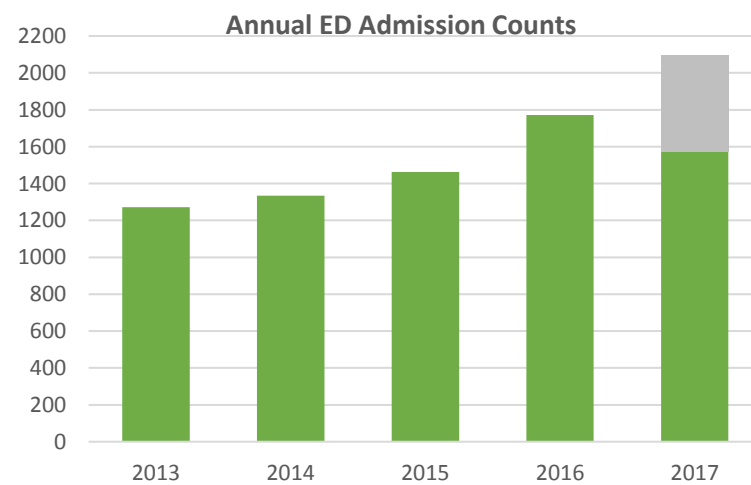
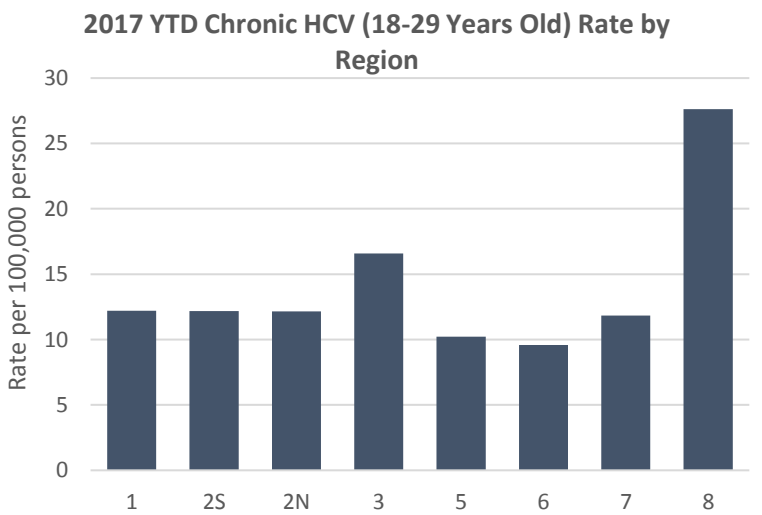
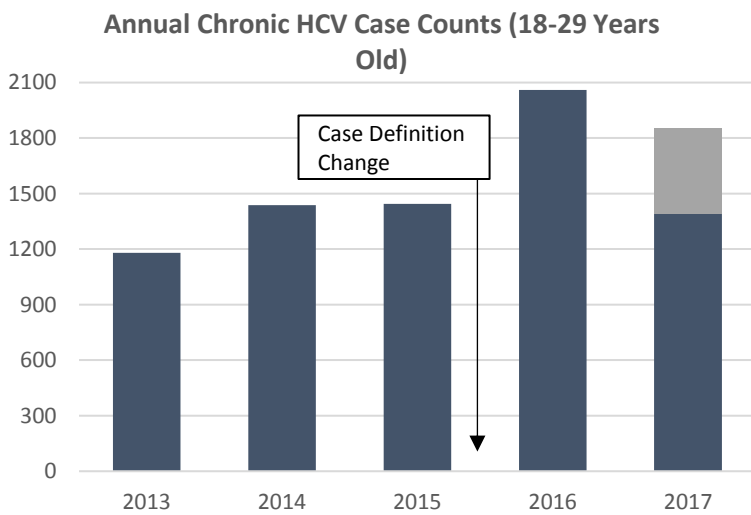
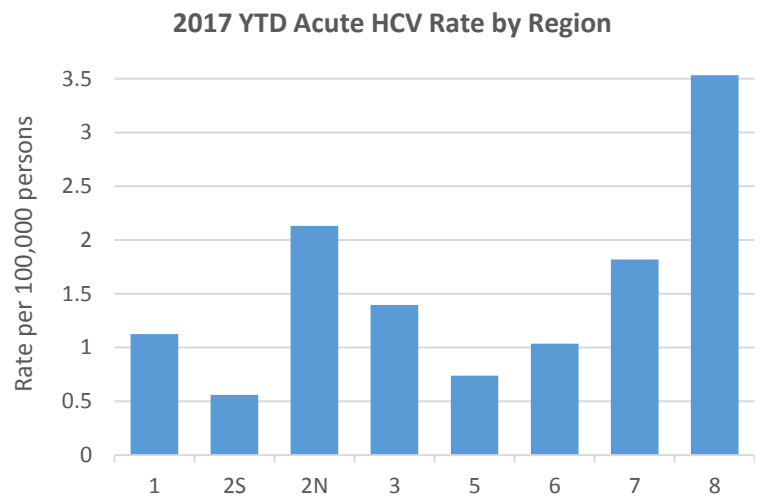
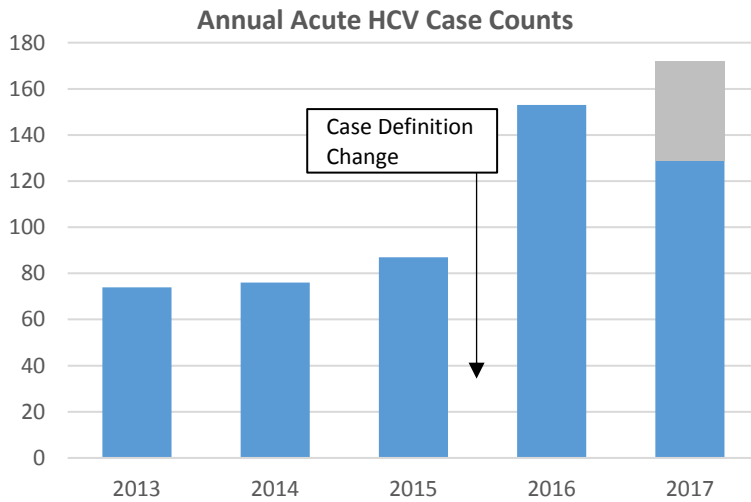


# Hepatitis C Virus Quarterly Surveillance Report (Quarter 3, 2017)

(Data referred 7/1/2017 through 9/30/2017—extracted 11/7/2017—Report released 11/8/2017)

This monthly report is designed to inform local health departments of Hepatitis C Virus (HCV) cases reported to the Michigan Disease Surveillance System (MDSS) that may be related to injection drug use. These cases include all acute HCV cases and chronic HCV cases among persons aged 18 to 29. Also included are the number of ED visits related to injection drug use that were reported to the Michigan Syndromic Surveillance System (MSSS). The purpose of the report is to highlight areas where transmission of HCV may be occurring among people who inject drugs. The goal is that, when warranted, this information will lead to more timely and effective public health intervention. Below are State-wide data trends. LHD-specific numbers can be found in the table that follows.

Please see our separate document on **Technical Notes** for how these data are obtained and defined and limitations to the data.



| County         | LHJ                             | Region | Acute HCV Cases<br>(Current Quarter) | Acute HCV Cases<br>(This Quarter 2016) | Acute HCV Cases<br>(YTD) | Acute HCV Cases<br>(2016 YTD) |
|----------------|---------------------------------|--------|--------------------------------------|--|--------------------------|-------------------------------|
| Alcona         | District Health Department #2   | 3      | 0                                    | 0                                      | 0                        | 0                             |
| Alger          | Luce-Mackinac-Alger-Schoolcraft | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Allegan        | Allegan                         | 5      | 0                                    | 0                                      | 0                        | 0                             |
| Alpena         | District Health Department #4   | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Antrim         | Northwest Michigan              | 7      | 0                                    | 1                                      | 2                        | 1                             |
| Arenac         | Central Michigan                | 3      | 0                                    | 0                                      | 0                        | 0                             |
| Baraga         | Western Upper Penninsula        | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Barry          | Barry-Eaton                     | 5      | 0                                    | 1                                      | 0                        | 1                             |
| Bay            | Bay                             | 3      | 2                                    | 1                                      | 2                        | 1                             |
| Benzie         | Benzie-Leelanau                 | 7      | 0                                    | 1                                      | 0                        | 1                             |
| Berrien        | Berrien                         | 5      | 2                                    | 1                                      | 4                        | 5                             |
| Branch         | Branch-Hillsdale-St. Joseph     | 5      | 0                                    | 0                                      | 0                        | 0                             |
| Calhoun        | Calhoun                         | 5      | 0                                    | 3                                      | 1                        | 4                             |
| Cass           | Van Buren-Cass                  | 5      | 0                                    | 0                                      | 1                        | 0                             |
| Charlevoix     | Northwest Michigan              | 7      | 0                                    | 0                                      | 1                        | 0                             |
| Cheboygan      | District Health Department #4   | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Chippewa       | Chippewa                        | 8      | 0                                    | 0                                      | 1                        | 1                             |
| Clare          | Central Michigan                | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Clinton        | Mid-Michigan                    | 1      | 1                                    | 0                                      | 1                        | 0                             |
| Crawford       | District Health Department #10  | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Delta          | Delta-Menominee                 | 8      | 0                                    | 0                                      | 2                        | 1                             |
| Detroit City   | Detroit City                    | 25     | 1                                    | 0                                      | 6                        | 5                             |
| Dickinson      | Dickinson-Iron                  | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Eaton          | Barry-Eaton                     | 1      | 0                                    | 0                                      | 0                        | 1                             |
| Emmet          | Northwest Michigan              | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Genesee        | Genesee                         | 3      | 3                                    | 0                                      | 9                        | 2                             |
| Gladwin        | Central Michigan                | 3      | 0                                    | 0                                      | 0                        | 0                             |
| Gogebic        | Western Upper Penninsula        | 8      | 0                                    | 2                                      | 1                        | 2                             |
| Grand Traverse | Grand Traverse                  | 7      | 2                                    | 0                                      | 4                        | 5                             |
| Gratiot        | Mid-Michigan                    | 1      | 0                                    | 0                                      | 0                        | 0                             |
| Hillsdale      | Branch-Hillsdale-St. Joseph     | 1      | 0                                    | 0                                      | 0                        | 0                             |
| Houghton       | Western Upper Penninsula        | 8      | 0                                    | 0                                      | 1                        | 2                             |
| Huron          | Huron                           | 3      | 0                                    | 0                                      | 0                        | 0                             |
| Ingham         | Ingham                          | 1      | 1                                    | 0                                      | 7                        | 5                             |
| Ionia          | Ionia                           | 6      | 1                                    | 0                                      | 4                        | 0                             |
| Iosco          | District Health Department #2   | 3      | 0                                    | 0                                      | 1                        | 0                             |
| Iron           | Dickinson-Iron                  | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Isabella       | Central Michigan                | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Jackson        | Jackson                         | 1      | 0                                    | 0                                      | 3                        | 0                             |
| Kalamazoo      | Kalamazoo                       | 5      | 1                                    | 0                                      | 1                        | 2                             |
| Kalkaska       | District Health Department #10  | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Kent           | Kent                            | 6      | 0                                    | 0                                      | 1                        | 0                             |

| County           | LHJ                                | Region | Acute HCV Cases<br>(Current Quarter) | Acute HCV Cases<br>(This Quarter 2016) | Acute HCV Cases<br>(YTD) | Acute HCV Cases<br>(2016 YTD) |
|------------------|------------------------------------|--------|--------------------------------------|--|--------------------------|-------------------------------|
| Keweenaw         | Western Upper Peninsula            | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Lake             | District Health Department #10     | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Lapeer           | Lapeer                             | 3      | 1                                    | 2                                      | 1                        | 3                             |
| Leelanau         | Benzie-Leelanau                    | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Lenawee          | Lenawee                            | 1      | 0                                    | 0                                      | 1                        | 0                             |
| Livingston       | Livingston                         | 1      | 0                                    | 1                                      | 0                        | 2                             |
| Luce             | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Mackinac         | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                    | 0                                      | 1                        | 0                             |
| Macomb           | Macomb                             | 2N     | 19                                   | 9                                      | 32                       | 28                            |
| Manistee         | District Health Department #10     | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Marquette        | Marquette                          | 8      | 2                                    | 0                                      | 5                        | 0                             |
| Mason            | District Health Department #10     | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Mecosta          | District Health Department #10     | 6      | 0                                    | 0                                      | 0                        | 1                             |
| Menominee        | Delta-Menominee                    | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Midland          | Midland                            | 3      | 0                                    | 2                                      | 0                        | 4                             |
| Missaukee        | District Health Department #10     | 7      | 0                                    | 0                                      | 0                        | 1                             |
| Monroe           | Monroe                             | 2S     | 0                                    | 0                                      | 0                        | 0                             |
| Montcalm         | Mid-Michigan                       | 6      | 0                                    | 2                                      | 0                        | 2                             |
| Montmorency      | District Health Department #4      | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Muskegon         | Muskegon                           | 6      | 3                                    | 1                                      | 8                        | 3                             |
| Newaygo          | District Health Department #10     | 6      | 0                                    | 0                                      | 1                        | 0                             |
| Oakland          | Oakland                            | 2N     | 3                                    | 3                                      | 6                        | 7                             |
| Oceana           | District Health Department #10     | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Ogemaw           | District Health Department #2      | 3      | 0                                    | 0                                      | 1                        | 0                             |
| Ontonagon        | Western Upper Peninsula            | 8      | 0                                    | 0                                      | 0                        | 0                             |
| Osceola          | Central Michigan                   | 6      | 0                                    | 0                                      | 0                        | 0                             |
| Oscoda           | District Health Department #2      | 3      | 0                                    | 1                                      | 0                        | 2                             |
| Otsego           | Northwest Michigan                 | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Ottawa           | Ottawa                             | 6      | 1                                    | 0                                      | 1                        | 2                             |
| Presque Isle     | District Health Department #4      | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Roscommon        | Central Michigan                   | 7      | 0                                    | 0                                      | 0                        | 0                             |
| Saginaw          | Saginaw                            | 3      | 0                                    | 0                                      | 0                        | 1                             |
| St Clair         | St Clair                           | 2N     | 5                                    | 0                                      | 9                        | 8                             |
| St Joseph        | Branch-Hillsdale-St. Joseph        | 5      | 0                                    | 0                                      | 0                        | 0                             |
| Sanilac          | Sanilac                            | 3      | 0                                    | 0                                      | 1                        | 0                             |
| Schoolcraft      | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                    | 1                                      | 0                        | 2                             |
| Shiawassee       | Shiawassee                         | 1      | 0                                    | 0                                      | 0                        | 0                             |
| Tuscola          | Tuscola                            | 3      | 1                                    | 0                                      | 1                        | 0                             |
| Van Buren        | Van Buren-Cass                     | 5      | 0                                    | 0                                      | 0                        | 1                             |
| Washtenaw        | Washtenaw                          | 2S     | 0                                    | 2                                      | 3                        | 3                             |
| Wayne            | Wayne                              | 2S     | 1                                    | 1                                      | 4                        | 3                             |
| Wexford          | District Health Department #10     | 7      | 1                                    | 0                                      | 1                        | 0                             |
| MDOC             | Michigan Department of Corrections | MDOC   | 0                                    | 1                                      | 0                        | 2                             |
| <b>STATEWIDE</b> |                                    |        | <b>51</b>                            | <b>36</b>                              | <b>129</b>               | <b>114</b>                    |

| County         | LHJ                             | Region | Chronic HCV Cases, 18-29 years old (Current Quarter) | Chronic HCV, 18-29 years old (This Quarter 2016) | Chronic HCV Cases, 18-29 years old (YTD) | Chronic HCV Cases, 18-29 years old (YTD 2016) |
|----------------|---------------------------------|--------|--|--|--|---|
| Alcona         | District Health Department #2   | 3      | 0  | 0  | 0  | 1   |
| Alger          | Luce-Mackinac-Alger-Schoolcraft | 8      | 0  | 0  | 0  | 1   |
| Allegan        | Allegan                         | 5      | 5  | 2  | 13                                       | 6   |
| Alpena         | District Health Department #4   | 7      | 0  | 1  | 2  | 8   |
| Antrim         | Northwest Michigan              | 7      | 0  | 4  | 3  | 9   |
| Arenac         | Central Michigan                | 3      | 1  | 2  | 3  | 4   |
| Baraga         | Western Upper Penninsula        | 8      | 3  | 2  | 8  | 7   |
| Barry          | Barry-Eaton                     | 5      | 0  | 0  | 3  | 2   |
| Bay            | Bay                             | 3      | 9  | 12   | 24                                       | 33  |
| Benzie         | Benzie-Leelanau                 | 7      | 1  | 1  | 1  | 2   |
| Berrien        | Berrien                         | 5      | 6  | 4  | 16                                       | 14  |
| Branch         | Branch-Hillsdale-St. Joseph     | 5      | 1  | 4  | 6  | 7   |
| Calhoun        | Calhoun                         | 5      | 4  | 8  | 6  | 24  |
| Cass           | Van Buren-Cass                  | 5      | 2  | 1  | 5  | 3   |
| Charlevoix     | Northwest Michigan              | 7      | 1  | 1  | 3  | 3   |
| Cheboygan      | District Health Department #4   | 7      | 1  | 1  | 6  | 3   |
| Chippewa       | Chippewa                        | 8      | 4  | 3  | 7  | 15  |
| Clare          | Central Michigan                | 6      | 2  | 4  | 4  | 8   |
| Clinton        | Mid-Michigan                    | 1      | 1  | 2  | 3  | 8   |
| Crawford       | District Health Department #10  | 7      | 2  | 1  | 2  | 1   |
| Delta          | Delta-Menominee                 | 8      | 8  | 4  | 19                                       | 15  |
| Detroit City   | Detroit City                    | 25     | 29   | 40   | 99                                       | 102   |
| Dickinson      | Dickinson-Iron                  | 8      | 0  | 3  | 1  | 6   |
| Eaton          | Barry-Eaton                     | 1      | 0  | 6  | 9  | 16  |
| Emmet          | Northwest Michigan              | 7      | 0  | 1  | 2  | 12  |
| Genesee        | Genesee                         | 3      | 26   | 24   | 86                                       | 88  |
| Gladwin        | Central Michigan                | 3      | 1  | 1  | 5  | 5   |
| Gogebic        | Western Upper Penninsula        | 8      | 3  | 1  | 7  | 3   |
| Grand Traverse | Grand Traverse                  | 7      | 5  | 3  | 10                                       | 14  |
| Gratiot        | Mid-Michigan                    | 1      | 0  | 0  | 2  | 0   |
| Hillsdale      | Branch-Hillsdale-St. Joseph     | 1      | 7  | 1  | 10                                       | 11  |
| Houghton       | Western Upper Penninsula        | 8      | 1  | 4  | 10                                       | 7   |
| Huron          | Huron                           | 3      | 0  | 2  | 5  | 2   |
| Ingham         | Ingham                          | 1      | 17   | 10   | 42                                       | 33  |
| Ionia          | Ionia                           | 6      | 3  | 2  | 5  | 4   |
| Iosco          | District Health Department #2   | 3      | 1  | 2  | 6  | 6   |
| Iron           | Dickinson-Iron                  | 8      | 1  | 2  | 2  | 8   |
| Isabella       | Central Michigan                | 6      | 0  | 2  | 10                                       | 6   |
| Jackson        | Jackson                         | 1      | 17   | 8  | 37                                       | 33  |
| Kalamazoo      | Kalamazoo                       | 5      | 11   | 9  | 35                                       | 46  |
| Kalkaska       | District Health Department #10  | 7      | 1  | 0  | 2  | 0   |
| Kent           | Kent                            | 6      | 15   | 10   | 42                                       | 40  |
| Keweenaw       | Western Upper Penninsula        | 8      | 0  | 0  | 0  | 0   |

| County           | LHJ                                | Region | Chronic HCV Cases, 18-29 years old (Current Quarter) | Chronic HCV, 18-29 years old (This Quarter 2016) | Chronic HCV Cases, 18-29 years old (YTD) | Chronic HCV Cases, 18-29 years old (YTD 2016) |
|------------------|------------------------------------|--------|--|--|--|---|
| Lake             | District Health Department #10     | 6      | 0  | 0  | 0  | 0   |
| Lapeer           | Lapeer                             | 3      | 5  | 1  | 10                                       | 8   |
| Leelanau         | Benzie-Leelanau                    | 7      | 0  | 0  | 1  | 0   |
| Lenawee          | Lenawee                            | 1      | 1  | 3  | 8  | 13  |
| Livingston       | Livingston                         | 1      | 2  | 3  | 13                                       | 15  |
| Luce             | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0  | 3  | 4  | 5   |
| Mackinac         | Luce-Mackinac-Alger-Schoolcraft    | 8      | 2  | 0  | 2  | 1   |
| Macomb           | Macomb                             | 2N     | 39   | 43   | 121                                      | 140   |
| Manistee         | District Health Department #10     | 7      | 2  | 0  | 7  | 9   |
| Marquette        | Marquette                          | 8      | 6  | 6  | 21                                       | 15  |
| Mason            | District Health Department #10     | 6      | 1  | 0  | 5  | 0   |
| Mecosta          | District Health Department #10     | 6      | 0  | 0  | 1  | 0   |
| Menominee        | Delta-Menominee                    | 8      | 3  | 2  | 5  | 7   |
| Midland          | Midland                            | 3      | 2  | 5  | 8  | 9   |
| Missaukee        | District Health Department #10     | 7      | 1  | 1  | 1  | 5   |
| Monroe           | Monroe                             | 2S     | 1  | 17   | 14                                       | 51  |
| Montcalm         | Mid-Michigan                       | 6      | 1  | 0  | 1  | 3   |
| Montmorency      | District Health Department #4      | 7      | 0  | 0  | 1  | 1   |
| Muskegon         | Muskegon                           | 6      | 13   | 6  | 37                                       | 23  |
| Newaygo          | District Health Department #10     | 6      | 3  | 0  | 7  | 6   |
| Oakland          | Oakland                            | 2N     | 31   | 36   | 93                                       | 116   |
| Oceana           | District Health Department #10     | 6      | 3  | 0  | 7  | 0   |
| Ogemaw           | District Health Department #2      | 3      | 0  | 1  | 3  | 4   |
| Ontonagon        | Western Upper Peninsula            | 8      | 0  | 2  | 0  | 2   |
| Osceola          | Central Michigan                   | 6      | 1  | 0  | 4  | 4   |
| Oscoda           | District Health Department #2      | 3      | 2  | 0  | 4  | 3   |
| Otsego           | Northwest Michigan                 | 7      | 1  | 1  | 3  | 5   |
| Ottawa           | Ottawa                             | 6      | 6  | 1  | 16                                       | 13  |
| Presque Isle     | District Health Department #4      | 7      | 1  | 1  | 1  | 1   |
| Roscommon        | Central Michigan                   | 7      | 0  | 1  | 4  | 4   |
| Saginaw          | Saginaw                            | 3      | 7  | 8  | 20                                       | 32  |
| St Clair         | St Clair                           | 2N     | 17   | 17   | 54                                       | 41  |
| St Joseph        | Branch-Hillsdale-St. Joseph        | 5      | 4  | 1  | 5  | 1   |
| Sanilac          | Sanilac                            | 3      | 2  | 0  | 7  | 4   |
| Schoolcraft      | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0  | 0  | 0  | 3   |
| Shiawassee       | Shiawassee                         | 1      | 2  | 1  | 6  | 3   |
| Tuscola          | Tuscola                            | 3      | 3  | 1  | 9  | 2   |
| Van Buren        | Van Buren-Cass                     | 5      | 1  | 2  | 8  | 6   |
| Washtenaw        | Washtenaw                          | 2S     | 8  | 6  | 25                                       | 21  |
| Wayne            | Wayne                              | 2S     | 42   | 69   | 144                                      | 219   |
| Wexford          | District Health Department #10     | 7      | 0  | 6  | 3  | 11  |
| MDOC             | Michigan Department of Corrections | MDOC   | 44   | 57   | 148                                      | 163   |
| <b>STATEWIDE</b> |                                    |        | <b>446</b>   | <b>489</b>                                       | <b>1392</b>                              | <b>1585</b>                                   |

| County         | LHJ                             | Region | ED Admissions<br>(Current Quarter) | ED Admissions<br>(This Quarter 2016) | ED Admissions<br>(YTD) | ED Admissions<br>(YTD 2016) |
|----------------|---------------------------------|--------|------------------------------------|--------------------------------------|------------------------|-----------------------------|
| Alcona         | District Health Department #2   | 3      | 1                                  | 0                                    | 1                      | 1                           |
| Alger          | Luce-Mackinac-Alger-Schoolcraft | 8      | 0                                  | 0                                    | 0                      | 0                           |
| Allegan        | Allegan                         | 5      | 7                                  | 5                                    | 17                     | 16                          |
| Alpena         | District Health Department #4   | 7      | 3                                  | 4                                    | 3                      | 6                           |
| Antrim         | Northwest Michigan              | 7      | 0                                  | 0                                    | 1                      | 1                           |
| Arenac         | Central Michigan                | 3      | 0                                  | 0                                    | 2                      | 2                           |
| Baraga         | Western Upper Penninsula        | 8      | 0                                  | 0                                    | 0                      | 0                           |
| Barry          | Barry-Eaton                     | 5      | 1                                  | 1                                    | 2                      | 1                           |
| Bay            | Bay                             | 3      | 0                                  | 0                                    | 3                      | 2                           |
| Benzie         | Benzie-Leelanau                 | 7      | 0                                  | 0                                    | 1                      | 2                           |
| Berrien        | Berrien                         | 5      | 2                                  | 3                                    | 6                      | 6                           |
| Branch         | Branch-Hillsdale-St. Joseph     | 5      | 0                                  | 0                                    | 2                      | 2                           |
| Calhoun        | Calhoun                         | 5      | 3                                  | 3                                    | 7                      | 14                          |
| Cass           | Van Buren-Cass                  | 5      | 0                                  | 0                                    | 1                      | 2                           |
| Charlevoix     | Northwest Michigan              | 7      | 0                                  | 0                                    | 0                      | 0                           |
| Cheboygan      | District Health Department #4   | 7      | 0                                  | 0                                    | 1                      | 0                           |
| Chippewa       | Chippewa                        | 8      | 5                                  | 6                                    | 12                     | 13                          |
| Clare          | Central Michigan                | 6      | 0                                  | 1                                    | 0                      | 1                           |
| Clinton        | Mid-Michigan                    | 1      | 6                                  | 1                                    | 15                     | 1                           |
| Crawford       | District Health Department #10  | 7      | 0                                  | 0                                    | 1                      | 0                           |
| Delta          | Delta-Menominee                 | 8      | 8                                  | 2                                    | 13                     | 7                           |
| Detroit City   | Detroit City                    | 25     | 0                                  | 0                                    | 0                      | 0                           |
| Dickinson      | Dickinson-Iron                  | 8      | 3                                  | 3                                    | 13                     | 6                           |
| Eaton          | Barry-Eaton                     | 1      | 18                                 | 5                                    | 33                     | 12                          |
| Emmet          | Northwest Michigan              | 7      | 1                                  | 0                                    | 1                      | 1                           |
| Genesee        | Genesee                         | 3      | 39                                 | 46                                   | 111                    | 92                          |
| Gladwin        | Central Michigan                | 3      | 0                                  | 0                                    | 2                      | 0                           |
| Gogebic        | Western Upper Penninsula        | 8      | 0                                  | 0                                    | 0                      | 1                           |
| Grand Traverse | Grand Traverse                  | 7      | 1                                  | 1                                    | 4                      | 7                           |
| Gratiot        | Mid-Michigan                    | 1      | 1                                  | 1                                    | 7                      | 2                           |
| Hillsdale      | Branch-Hillsdale-St. Joseph     | 1      | 1                                  | 0                                    | 6                      | 1                           |
| Houghton       | Western Upper Penninsula        | 8      | 0                                  | 0                                    | 1                      | 0                           |
| Huron          | Huron                           | 3      | 1                                  | 0                                    | 3                      | 0                           |
| Ingham         | Ingham                          | 1      | 57                                 | 31                                   | 123                    | 77                          |
| Ionia          | Ionia                           | 6      | 6                                  | 2                                    | 26                     | 7                           |
| Iosco          | District Health Department #2   | 3      | 3                                  | 5                                    | 5                      | 6                           |
| Iron           | Dickinson-Iron                  | 8      | 0                                  | 0                                    | 0                      | 1                           |
| Isabella       | Central Michigan                | 6      | 0                                  | 1                                    | 1                      | 1                           |
| Jackson        | Jackson                         | 1      | 25                                 | 22                                   | 100                    | 73                          |
| Kalamazoo      | Kalamazoo                       | 5      | 9                                  | 5                                    | 15                     | 15                          |
| Kalkaska       | District Health Department #10  | 7      | 0                                  | 0                                    | 3                      | 2                           |
| Kent           | Kent                            | 6      | 57                                 | 52                                   | 196                    | 169                         |
| Keweenaw       | Western Upper Penninsula        | 8      | 0                                  | 0                                    | 0                      | 0                           |
| Lake           | District Health Department #10  | 6      | 1                                  | 0                                    | 1                      | 1                           |

| County           | LHJ                                | Region | ED Admissions<br>(Current Quarter) | ED Admissions<br>(This Quarter 2016) | ED Admissions<br>(YTD) | ED Admissions<br>(YTD 2016) |
|------------------|------------------------------------|--------|------------------------------------|--------------------------------------|------------------------|-----------------------------|
| Lapeer           | Lapeer                             | 3      | 3                                  | 2                                    | 5                      | 11                          |
| Leelanau         | Benzie-Leelanau                    | 7      | 0                                  | 0                                    | 1                      | 0                           |
| Lenawee          | Lenawee                            | 1      | 3                                  | 4                                    | 7                      | 6                           |
| Livingston       | Livingston                         | 1      | 3                                  | 4                                    | 11                     | 9                           |
| Luce             | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                  | 0                                    | 0                      | 1                           |
| Mackinac         | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                  | 0                                    | 0                      | 0                           |
| Macomb           | Macomb                             | 2N     | 50                                 | 46                                   | 176                    | 102                         |
| Manistee         | District Health Department #10     | 7      | 1                                  | 0                                    | 1                      | 0                           |
| Marquette        | Marquette                          | 8      | 1                                  | 1                                    | 3                      | 4                           |
| Mason            | District Health Department #10     | 6      | 3                                  | 4                                    | 8                      | 9                           |
| Mecosta          | District Health Department #10     | 6      | 0                                  | 0                                    | 0                      | 0                           |
| Menominee        | Delta-Menominee                    | 8      | 1                                  | 2                                    | 5                      | 3                           |
| Midland          | Midland                            | 3      | 0                                  | 6                                    | 1                      | 7                           |
| Missaukee        | District Health Department #10     | 7      | 0                                  | 3                                    | 1                      | 3                           |
| Monroe           | Monroe                             | 2S     | 5                                  | 10                                   | 16                     | 19                          |
| Montcalm         | Mid-Michigan                       | 6      | 7                                  | 3                                    | 23                     | 8                           |
| Montmorency      | District Health Department #4      | 7      | 1                                  | 0                                    | 3                      | 0                           |
| Muskegon         | Muskegon                           | 6      | 5                                  | 5                                    | 17                     | 25                          |
| Newaygo          | District Health Department #10     | 6      | 3                                  | 0                                    | 8                      | 2                           |
| Oakland          | Oakland                            | 2N     | 20                                 | 26                                   | 66                     | 53                          |
| Oceana           | District Health Department #10     | 6      | 1                                  | 4                                    | 1                      | 5                           |
| Ogemaw           | District Health Department #2      | 3      | 2                                  | 2                                    | 4                      | 2                           |
| Ontonagon        | Western Upper Peninsula            | 8      | 0                                  | 0                                    | 0                      | 0                           |
| Osceola          | Central Michigan                   | 6      | 0                                  | 0                                    | 2                      | 0                           |
| Oscoda           | District Health Department #2      | 3      | 0                                  | 0                                    | 0                      | 2                           |
| Otsego           | Northwest Michigan                 | 7      | 0                                  | 0                                    | 0                      | 0                           |
| Ottawa           | Ottawa                             | 6      | 15                                 | 6                                    | 35                     | 20                          |
| Presque Isle     | District Health Department #4      | 7      | 0                                  | 0                                    | 0                      | 0                           |
| Roscommon        | Central Michigan                   | 7      | 0                                  | 0                                    | 1                      | 1                           |
| Saginaw          | Saginaw                            | 3      | 4                                  | 3                                    | 6                      | 9                           |
| St Clair         | St Clair                           | 2N     | 4                                  | 4                                    | 7                      | 10                          |
| St Joseph        | Branch-Hillsdale-St. Joseph        | 5      | 2                                  | 5                                    | 3                      | 15                          |
| Sanilac          | Sanilac                            | 3      | 2                                  | 0                                    | 2                      | 0                           |
| Schoolcraft      | Luce-Mackinac-Alger-Schoolcraft    | 8      | 0                                  | 1                                    | 0                      | 1                           |
| Shiawassee       | Shiawassee                         | 1      | 2                                  | 4                                    | 13                     | 9                           |
| Tuscola          | Tuscola                            | 3      | 3                                  | 0                                    | 4                      | 1                           |
| Van Buren        | Van Buren-Cass                     | 5      | 1                                  | 0                                    | 3                      | 3                           |
| Washtenaw        | Washtenaw                          | 2S     | 9                                  | 3                                    | 17                     | 20                          |
| Wayne            | Wayne                              | 2S     | 108                                | 142                                  | 381                    | 341                         |
| Wexford          | District Health Department #10     | 7      | 0                                  | 3                                    | 2                      | 3                           |
| MDOC             | Michigan Department of Corrections | MDOC   | N/A                                | N/A                                  | N/A                    | N/A                         |
| <b>STATEWIDE</b> |                                    |        | <b>518</b>                         | <b>493</b>                           | <b>1572</b>            | <b>1255</b>                 |

## Technical Notes

### Hepatitis C Virus Monthly Surveillance Report

Data in this report should be interpreted with caution and with acknowledgement of the limitations. Please direct any questions or comments regarding this report or the methods to the MDHHS Viral Hepatitis Unit ([MDHHS-Hepatitis@michigan.gov](mailto:MDHHS-Hepatitis@michigan.gov))

#### Acute and Chronic HCV Infection

- Acute HCV and Chronic HCV data are obtained from the Michigan Disease Surveillance System ([MDSS](#)).
- Only completed cases meeting CDC/CSTE case definitions ([CSTE hepatitis case definitions](#)) are pulled for inclusion in the report. Included in the analysis are:
  - All Probable and Confirmed Acute HCV cases
  - Probable and Confirmed Chronic HCV cases between the ages of 18 and 29
- Cases are pulled no earlier than 30 days from the end of the reporting month (e.g. January data is extracted no earlier than March 1<sup>st</sup>). These data are not finalized and are subject to change throughout the year.
- It should be noted that CDC/CSTE case definitions for acute and chronic HCV were significantly changed in calendar year 2016 ([acute](#) and [chronic](#)). Therefore, increases in acute and chronic HCV cases in 2016 may be reflective of the change in case counting methods and not necessarily an increase in new cases.

For acute and chronic HCV acquisition, complete risk factor information is needed in order for MDHHS to identify trends in transmission related to injection drug use, health care transmission, and emerging risk factors. The temporality of chronic HCV infections is often unknown due to the lack of symptoms and awareness of the time of infection. Timely and comprehensive follow-up is needed in order to maximize the effectiveness of this report.

#### Regional Rates and Projections

- Year to date case rates are stratified by Michigan Public Health Preparedness Regions (MPHPR). A map of the MPHPRs can be accessed here ([Regional Map](#)).
- Cases from the Michigan Department of Corrections (MDOC) are removed from regional case rates.
- Rates are calculated using 2010 Census data for the population ([2010 US Census](#)).
- The projected number of cases in 2016 is calculated by multiplying the year to date cases by the proportion of months remaining in the year.

#### Syndromic Surveillance ED Admission Rates and Counts

- Emergency Department visit data possibly related to injection drug use are obtained through the Michigan Syndromic Surveillance System ([MSSS](#)).
- MSSS reporting is voluntary and not all hospitals participate in submitting ED data.
- The MSSS has been estimated to cover 83% of Michigan's population.

Though we believe our query to be relatively reliable it is certainly possible that ED-related injection drug use complaints may be missed by the query and/or that we may be counting some ED complaints that are unrelated to injection drug use. With these limitations in mind, MSSS data can be an effective tool for monitoring ED-trends in a population over time.

The following search terms are used to identify ED visits related to injection drug use:

**OR:** heroin heroine ivda ivdu idu "injection drug" opioid opiod opiate opioid suboxon fentan nolozone nalaxone naloxone narcan bupren speedball "speed ball" morphin "venous drug" methadone

**NOT:** epidural idual idue idus