



**St. Charles County Annual Communicable Disease Report
Department of Community Health and the Environment
2007**



The Communicable Disease Section

The Communicable Disease (CD) section of the St. Charles County Department of Community Health and the Environment (SCCDCHE) completed a total of 2,318 investigations in the year 2007. These reports include those that met Missouri Department of Health and Senior Services (MDHSS) case definition for reportable conditions/diseases and other conditions not necessarily reported to MDHSS. This number is down slightly from the year before (2006 = 3,317 investigations), but the high numbers in 2006 are mainly due to the late start of the influenza season in 2005-2006 and the early start in the 2006-2007 season.

MDHSS Reportable Conditions: St. Charles County Report Summary

The data presented below is a summary of the reportable diseases that meet the confirmed and probable MDHSS case definition (*excluded from this report are Sexually Transmitted Diseases, Tuberculosis, and Influenza*). There were a total of 894 reportable cases in St. Charles County In 2007. Using 2006 population data of 338,719 people this gives an incidence rate of 263.9 per 100,000 people. This is an increase from 2006 incidence of 206.9 per 100,000.

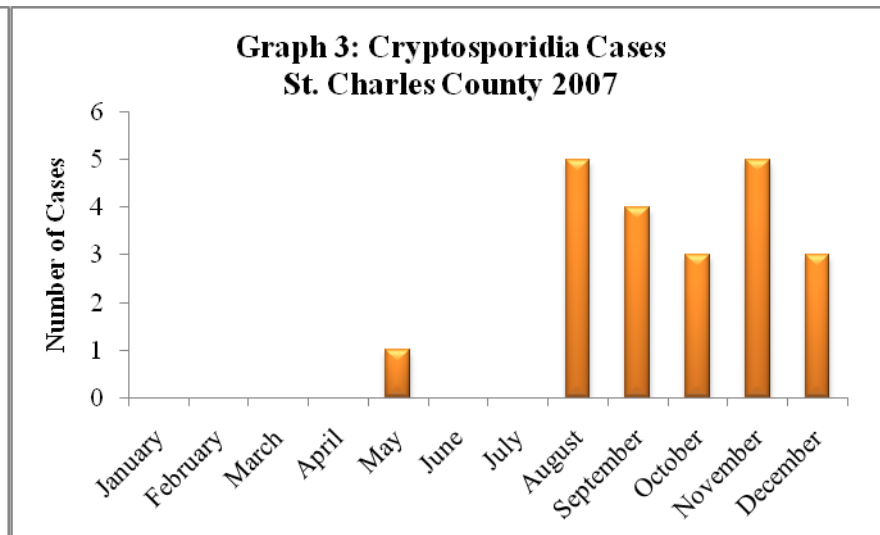
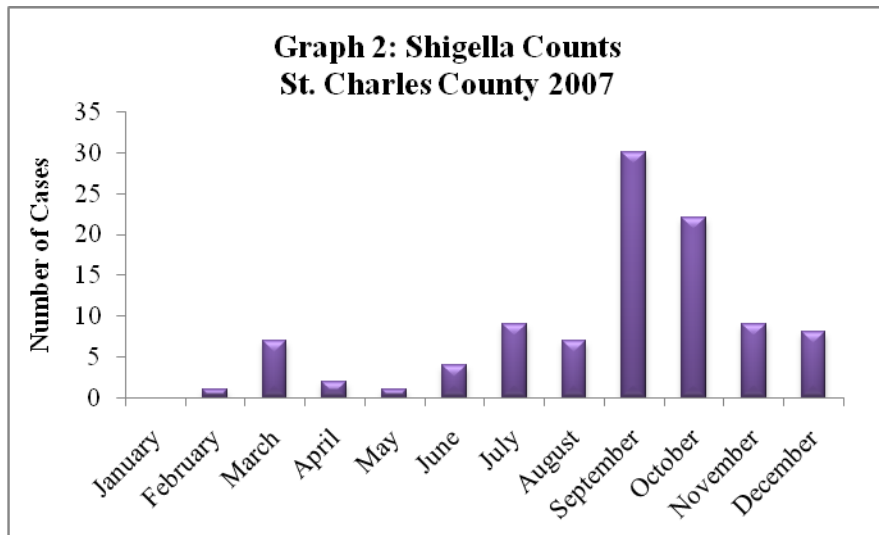
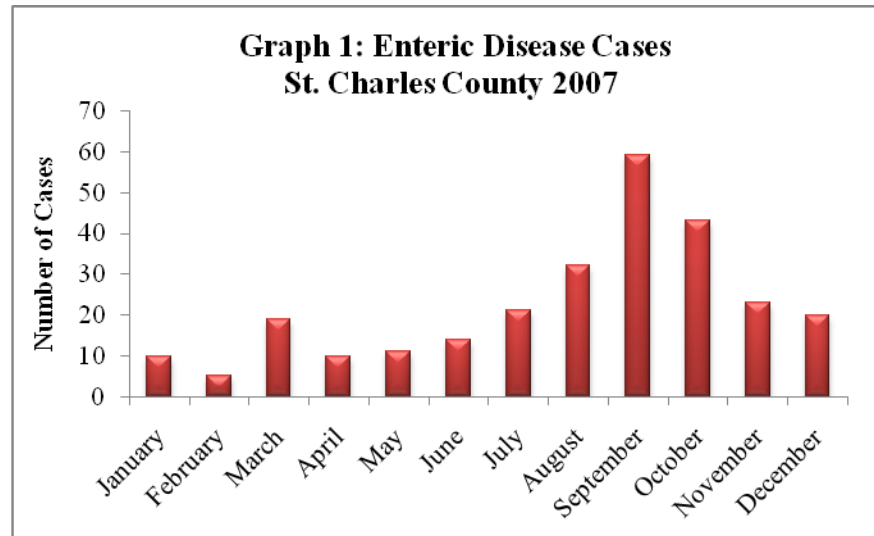
The Shigella and Varicella outbreaks in 2007 are one of the major contributing factors to the increase in reportable conditions in 2007 compared to previous years. Other noteworthy increases include Cryptosporidia cases and rickettsial cases (including Rocky Mountain Spotted Fever and Q Fever). A more in depth look at each of these diseases is below.

In addition to increases, 2007 saw some decreases, particularly in the number of Hepatitis A and Pertussis cases. Both are vaccine preventable diseases. There were only 9 cases of Pertussis in 2007, a decreasing trend since the sudden re-surfacing of cases in 2005. 2005 also saw the introduction of the Tdap vaccine which is available for people ages 11-64 and can be used instead of the Td vaccine for adults.

| CONDITION_NAME | Year | | | | 2007 Rate Per 100,000 | Previous 3 Year Mean | % Change From 3 Year Mean |
|-----------------------------|------|------|------|------|-----------------------|----------------------|---------------------------|
| | 2004 | 2005 | 2006 | 2007 | | | |
| ANIMAL BITES | 178 | 279 | 329 | 324 | 96 | 262 | 19.1% |
| CAMPYLOBACTERIOSIS | 51 | 28 | 55 | 48 | 14 | 45 | 6.9% |
| COCCIDIOIDOMYCOSIS | 1 | 0 | 1 | 1 | 0 | 1 | 33.3% |
| CRYPTOSPORIDIOSIS | 5 | 7 | 10 | 21 | 6 | 7 | 65.1% |
| DENGUE FEVER | 0 | 0 | 0 | 1 | 0 | 0 | 100.0% |
| E COLI SHIGA TOXIN POSITIVE | 0 | 0 | 13 | 7 | 2 | 4 | 38.1% |
| E. COLI O157 H7 | 1 | 9 | 17 | 9 | 3 | 9 | 0.0% |
| EHRlichiosis HGE | 0 | 0 | 0 | 1 | 0 | 0 | 100.0% |
| EHRlichiosis HME | 1 | 1 | 0 | 1 | 0 | 1 | 33.3% |

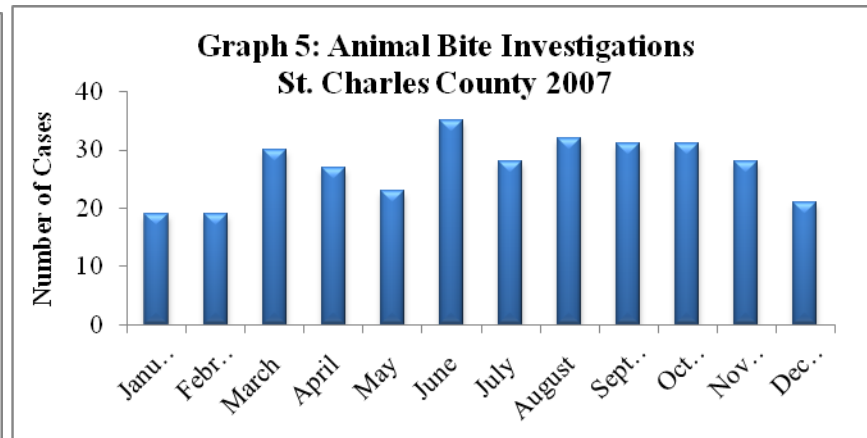
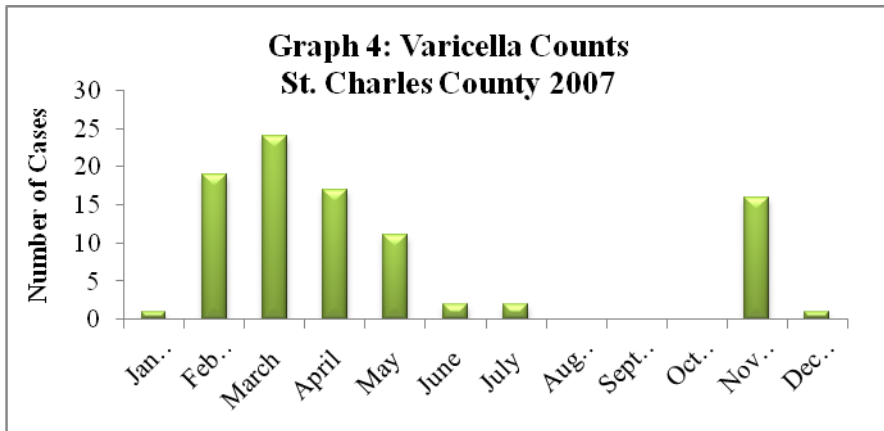
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|--|-----|-----|-----|-----|----|-----|---------|
| EHRlichiosis, other or unspecified | 0 | 0 | 0 | 1 | 0 | 0 | 100.0% |
| GIARDIASIS | 28 | 33 | 40 | 36 | 11 | 34 | 6.5% |
| HEMOLYTIC UREMIC SYNDROME | 1 | 0 | 0 | 1 | 0 | 0 | 66.7% |
| HEPATITIS A ACUTE | 1 | 1 | 6 | 1 | 0 | 3 | -166.7% |
| HEPATITIS B (PREGNANCY) PRENATAL | 4 | 6 | 11 | 5 | 1 | 7 | -40.0% |
| HEPATITIS B ACUTE | 1 | 1 | 0 | 4 | 1 | 1 | 83.3% |
| HEPATITIS B CHRONIC INFECTION | 14 | 11 | 4 | 13 | 4 | 10 | 25.6% |
| HEPATITIS C ACUTE | 0 | 0 | 0 | 1 | 0 | 0 | 100.0% |
| HEPATITIS C, CHRONIC INFECTION | 113 | 133 | 123 | 131 | 39 | 123 | 6.1% |
| LEGIONELLOSIS | 2 | 1 | 0 | 3 | 1 | 1 | 66.7% |
| MUMPS | 0 | 0 | 1 | 1 | 0 | 0 | 66.7% |
| NEUROINVASIVE WEST NILE | 1 | 0 | 1 | 1 | 0 | 1 | 33.3% |
| PERTUSSIS | 9 | 55 | 20 | 9 | 3 | 28 | -211.1% |
| Q FEVER | 0 | 0 | 2 | 4 | 1 | 1 | 83.3% |
| RABIES POST EXPOSURE PROPHYLAXIS | 0 | 0 | 0 | 12 | 4 | 0 | 100.0% |
| ROCKY MOUNTAIN SPOTTED FEVER | 2 | 1 | 3 | 7 | 2 | 2 | 71.4% |
| SALMONELLOSIS | 47 | 43 | 39 | 46 | 14 | 43 | 6.5% |
| SHIGA TOXIN + (NON E. COLI/UNKNOWN ORGANISM) | 0 | 0 | 1 | 1 | 0 | 0 | 66.7% |
| SHIGELLOSIS | 5 | 13 | 4 | 100 | 30 | 7 | 92.7% |
| STREP DISEASE, GROUP A INVASIVE | 2 | 7 | 3 | 5 | 1 | 4 | 20.0% |
| STREP PNEUMONIAE, <5 YEARS, INVASIVE | 0 | 1 | 0 | 3 | 1 | 0 | 88.9% |
| STREP PNEUMONIAE, DRUG-RESISTANT | 1 | 1 | 1 | 1 | 0 | 1 | 0.0% |
| VARICELLA | 0 | 15 | 20 | 95 | 28 | 12 | 87.7% |

The majority of the enteric diseases reported to St. Charles County in 2007 occurred during the last 2 quarters (Graph 1). This is quite abnormal as we usually see a spike in enteric cases during the summer months. The reason for this increase can be attributed to 2 diseases. The first being shigella. Starting in August and continuing to December there were 4 daycare outbreaks of shigella resulting in over 70 cases (Graph 2). St. Louis County and St. Louis City experienced a community wide shigella outbreak starting in November 2006 and lasted over a year. Luckily St. Charles County did not see any increase in cases until the summer of 2007. This increase lasted a relatively short time in comparison, but we are still seeing above average number of shigella cases. In addition to shigella, there was a jump cryptosporidia cases during the same time frame (Graph 3). Unlike shigella, the increase in cryptosporidia cases was not due to an outbreak as a large proportion of these cases were exposed while travelling.



I am sure it is no surprise that Varicella numbers tend to rise and fall with the school season and this was no different in 2007 (Graph 4). At the beginning of 2007 there was an outbreak of Varicella in an elementary school with a total of 63 cases. November saw another jump in cases among school age children, although this one was not connected with an outbreak.

Animal bite investigations continue to be the highest reportable condition (next to influenza). Numbers usually increase during summer months, but in 2007 it remained fairly consistent throughout the year (Graph 5).



Lastly, the number of vector-borne illnesses has increased in St. Charles County the past few years. Q Fever and Rocky Mountain Spotted Fever have seen the biggest increase. Graph 6 displays the total number of rickettsial illnesses (Q Fever, Rocky Mountain Spotted Fever, West Nile and Ehrlichiosis) since 2000. What is interesting is that the number of confirmed cases has remained the same, but the number of probable and suspect cases has really risen since 2005. This is most likely due to either a true rise in the disease or the increase awareness of rickettsial illness and therefore increased testing. But rickettsial illnesses require follow-up testing to determine a fourfold or greater rise in antibody titers taken weeks later in order to classify a case as confirmed and this is usually difficult to obtain.

