



# Communicable Diseases (CD) Quarterly Report

San Mateo County Health System  
CD Control Program

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**Table 1. Selected CD cases reported in San Mateo County Residents**

Disease	2010		2009	
	3rd Qtr	YTD	3rd Qtr	YTD
Coccidioidomycosis	2	4	5	8
Dengue	3	4	0	1
Listeriosis	2	3	1	2
<b>Hantavirus</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
Hepatitis C (chronic)	98	444	99	427
Meningitis - Bacterial <sup>1</sup>	0	6	1	5
Meningitis - Viral	1	6	1	10
Meningococcal Disease	0	4	*	*
Typhoid/Paratyphoid Fever	3	6	1	2

<sup>1</sup> Excluding Meningococcal meningitis; \* Data not available at this time due to reporting changes

**Table 2. Selected Gastrointestinal illnesses reported in San Mateo County Residents**

Disease	2010		2009	
	3rd Qtr	YTD	3rd Qtr	YTD
Amebiasis	1	6	3	5
Campylobacteriosis	83	185	62	159
Cryptosporidium	12	27	33	59
E. Coli 0157: H7	4	5	3	6
Giardia	14	42	15	38
<b>SALMONELLA (non-typhoid)</b>	<b>42</b>	<b>87</b>	<b>42</b>	<b>89</b>
S. Enteritidis	22	32	5	12
S. Typhimurium	7	10	1	7
Other	13	45	36	70
Scombroid Fish Poisoning	1	2	0	0
Shigella	8	16	5	17
Shiga Toxin producing E. Coli	2	3	0	0
Vibrio (non-cholera)	4	6	2	3

**Table 3. Selected Vaccine Preventable Diseases reported in San Mateo County Residents**

Disease	2010		2009	
	3rd Qtr	YTD	3rd Qtr	YTD
Hepatitis A	1	2	5	6
Hepatitis B (acute)	0	2	1	4
Hepatitis B (chronic)	74	244	99	277
<b>Pertussis*</b>	<b>69</b>	<b>101</b>	<b>2</b>	<b>10</b>

\*Includes confirmed, probable and suspect cases

### What's new with the flu

Starting this season, everyone aged 6 months and older should be vaccinated against influenza. It is especially important that people at increased risk of complications be vaccinated. This year American Indians, Alaska Natives and morbidly obese people (BMI of 40 or more) were added to the list of high risk groups. There is a new vaccine for people 65 and older: Fluzone High-Dose, manufactured by Sanofi Pasteur Inc. It contains 4 times the amount of antigen contained in regular flu shots and is intended to create a stronger immune response. For more information regarding influenza including an algorithm to help you decide whether children should receive one or 2 doses of vaccine, go to <http://smhealth.org/flu>.

**Table 4. Outbreaks in San Mateo County**

Disease	2010		2009	
	3rd Qtr	YTD	3rd Qtr	YTD
Gastrointestinal Illness	2	28	3	23
<b>Pertussis</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>

### Focus on Hantavirus

Hantaviruses infect rodents worldwide. Several species are known to infect humans, with varying severity. In 1993, a previously unrecognized hantavirus (Sin Nombre virus) caused an outbreak in the southwestern United States. The principal target organ was the lung (**Hantavirus Cardio-Pulmonary Syndrome** or **HCPS**), as opposed to the kidney which is usually the target organ in human hantaviral infections (**Hemorrhagic Fever with Renal Syndrome**). The deer mouse is the major reservoir of the Sin Nombre Virus. **Rodent contact** is an important factor in the transmission of hantaviruses to humans. Many hantaviruses are shed in the urine, feces, or saliva of acutely infected reservoir rodents. It is suspected that **transmission to humans occurs via the aerosol route**. Very few patients with hantavirus infections give a history of rodent bites. However, two to four weeks before they develop symptoms, many report encountering living or dead rodents, or being in rooms with visible evidence of rodent infestation.

The interval between exposure and the onset of symptoms for hantavirus infections ranges from one to six weeks, with a median of 14 to 17 days. In all countries affected by hantavirus disease, there are regions that exhibit a high incidence of infection and others that are only rarely affected. In the United States, there are many more cases in the western states such as New Mexico, California, Washington, and Texas than in the Midwestern or Eastern states.

The earliest **clinical manifestations** of HCPS consist of fevers, chills, myalgias, and gastro-intestinal complaints. Headaches are sometimes prominent and abdominal pain can be severe enough to mislead the clinician into considering a diagnosis of acute abdomen. A dry cough often heralds the abrupt transition to the cardiopulmonary phase, with the sudden onset of respiratory distress and hypotension. The disease then usually progresses rapidly to severe respiratory failure and shock. Most cases show an elevated hematocrit and thrombocytopenia. The simultaneous appearance of thrombocytopenia, a left-shifted granulocytic series, and an immunoblast count that exceeds 10 percent of the total lymphoid series is referred to as the **diagnostic triad**. This triad is sufficiently diagnostic that it is used at centers with substantial experience with HCPS to triage patients for **extra-corporeal membrane oxygenation (ECMO) care**.

Diagnosis is through demonstration of **specific IgM antibodies** using ELISA, Western Blot or strip immunoblot techniques. HCPS should be suspected in settings in which a patient from a rural area or with potential exposure to wild rodents presents with fever, chills, and myalgias, especially in the presence of nausea and vomiting. The likelihood of surviving HCPS increases with early recognition, hospitalization, and adequate pulmonary and hemodynamic support. This includes intensive care unit monitoring, and the initiation of mechanical ventilation as needed to treat respiratory failure. Although it is used relatively often, **ribavirin** is as yet of no proven benefit.

Given the **limited treatment options and high case-fatality rate** of HCPS, which can be as high as 35-50%, prevention of disease is of utmost importance. Recommendations from the CDC focus on measures to limit contact with potentially infectious rodents in affected areas, particularly in indoor, poorly ventilated spaces.