F. COMMUNICABLE DISEASES

Importance	Monitoring diseases and preventing their spread by educating and promoting health decreases the impact of infectious diseases in the community.
Definitions	Communicable Diseases (CD): Diseases that are transmitted directly through contact with an infected individual or animal, or indirectly through a vector (such as a mosquito or tick), contaminated food or water, or fomites (contaminated surfaces, such as a tissue, blanket, or needle).
Healthy People 2010 Objectives	▪ Chlamydia: Reduce rate to **300** cases per 100,000 population per year ▪ Gonorrhea: Reduce rate to **19** cases per 100,000 population per year

California law mandates that health care providers and laboratories report any known or suspected case of specified conditions of public health importance, such as certain communicable and non-communicable diseases, outbreaks, and unusual occurrences. Providers report to their local health authority, which is the source of the county's data. Therefore, the accuracy of the data presented is limited by the quality and completeness of the disease reporting process. Additionally, since providers and labs can only report on patients who seek care and receive appropriate testing, data regarding persons who do not see a provider nor complete confirmatory lab testing are not included in the statistics in this section—which inherently skews the data towards the type of people who seek and receive health care.

Table VFi: Active Tuberculosis Cases, Santa Cruz County, 2005-09[1]

	Cases	Percent
GENDER		
Male	23	56%
Female	18	44%
AGE		
0-4	1	2%
5-14	1	2%
15-24	3	7%
25-44	16	39%
45-64	11	27%
65+	9	22%
ETHNICITY/RACE		
White	9	21%
Latino	21	50%
Asian/P.I.	8	19%
Black	2	5%
Am. Indian/ Alaska Native	2	5%
CITY OF RESIDENCE		
Santa Cruz	16	39%
Watsonville	18	44%
Elsewhere in SC County	7	17%
HOMELESS		
Yes	11	27%
No	30	73%
EXCESS ALCOHOL USE IN PAST YEAR		
Yes	9	23%
No	31	78%
5-YEAR TOTAL	**41**	**100%**

i. TUBERCULOSIS

Tuberculosis (TB) is an airborne infection that has afflicted humans for thousands of years. Although one-third of the world's population is believed to be infected with the TB germ, only 5-10% of those persons will go on to develop active (or contagious) TB. Nonetheless, tuberculosis continues to be one of the leading causes of death due to infectious disease in the world.

In 2008, Santa Cruz County had a TB incidence rate of 3.4 cases per 100,000 population, compared to a rate of 7 cases per 100,000 statewide,[6] ranking the county 4th best among the 32 counties in California with 5 or more cases. In Santa Cruz County, rates are disproportionately high among Latinos and Asians. Most cases live in either Santa Cruz or Watsonville. A disproportion are homeless and/or consume excess alcohol (see Table VFi), making their case and contact management more labor intensive.[1] However, studies over the years have shown that resources spent on TB are necessary to keep TB under control.

Fortunately, only one case of poly-drug-resistant TB has been reported in Santa Cruz County, in 2003.[1]

ii. SEXUALLY TRANSMITTED DISEASES

Sexually transmitted diseases (STDs) account for the largest number of reported diseases among Santa Cruz County residents. From 2006 to 2009, annual averages of **646** infections with chlamydia, **68** with gonorrhea, and approximately **6** cases of infectious syphilis (defined as primary, secondary or early latent) were reported for Santa Cruz County residents.[2]

Since 2000, chlamydia rates have been roughly **three** times as high among females as males, a ratio that has also been seen statewide for many years. One reason is that females typically have more occasions than do males to access health care services and be tested. In addition, the majority of chlamydia infections among men are asymptomatic, and there currently is no recommendation for screening males without symptoms. In Santa Cruz County, 2008 rates of chlamydia were highest among persons aged 19-24 for females (partly due to screening recommendations), and ages 25-29 for males. The overall incidence rate in Santa Cruz County was 249.7 cases per 100,000 residents, much better than the rate of 390.8 statewide.[3]

Gonorrhea cases in Santa Cruz County are more equally distributed by gender, although rates are usually higher among men (sometimes up to two-fold). The rates among both females and males are highest in the 15-19 age group. The overall incidence rate in Santa Cruz County was 22.8 cases per 100,000 residents, compared to a rate of 66.7 statewide.[3]

Figure VFii-1: Chlamydia Gender-Specific Incidence Rates, Santa Cruz County, 2000-2009[1]

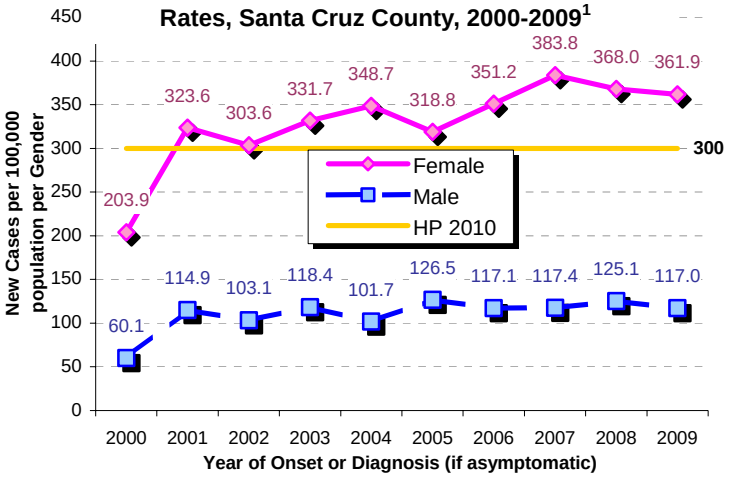
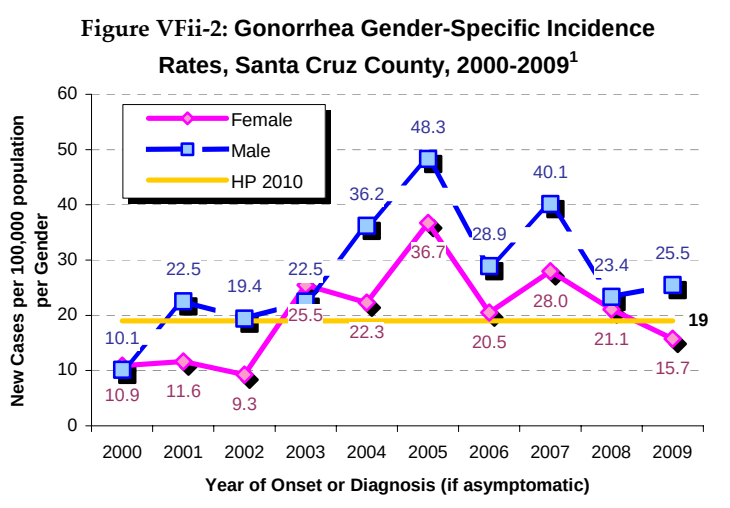


Figure VFii-2: Gonorrhea Gender-Specific Incidence Rates, Santa Cruz County, 2000-2009[1]



HIV & AIDS

HIV, or Human Immunodeficiency Virus, is a virus that can only be transmitted through contact with HIV-infected blood, semen, vaginal secretions, or breastmilk. HIV is the causative agent of AIDS, or Acquired Immunodeficiency Syndrome; only persons infected with HIV can progress to the more severe syndrome known as AIDS.

Since 1982, **843** Santa Cruz County residents have been diagnosed with HIV (212) or AIDS (631). As of the end of 2009, **494** of those persons (59%) were known to be living with either HIV (210) or AIDS (284).[4] Incident cases (newly diagnosed cases) of AIDS have been decreasing since the early 1990s; however, from 2006 to 2009 an average of 12 new cases of HIV and 12 new cases of AIDS were reported each year.

Of the persons living with HIV or AIDS in Santa Cruz County, approximately 85% are male. The majority of cases were diagnosed between the ages of 30 and 49. In Santa Cruz County, a larger percentage of cases have been among Hispanics in recent years than in earlier years.

In the last five years, the primary mode of transmission among males with HIV or AIDS, accounting for 80% of new cases, is bisexual or homosexual contact. Among recent female cases, the primary mode of transmission (accounting for over 75% of new cases in the last five years) is heterosexual contact.

iii. ENTERICS

Enteric illnesses are those that are transmitted by mouth, usually through ingestion of contaminated food and/or water – see Figure VFiii for a list of the reportable enteric diseases and how many cases occurred between 2005 and 2009. The CD Unit begins an investigation of an enteric illness by finding out if the case works in a sensitive occupation or situation (SOS) such as a cook in a restaurant. Persons who are SOS are often restricted from working until they are no longer infectious. The CD Unit also investigates whether the illness has occurred in any of the case's close contacts. If so, those persons are also assessed for whether or not they need to be restricted.

Enforcing these restrictions is one of the most obvious ways to protect the public's health. Between 2005 and 2009, **61** persons were restricted from higher-risk situations (e.g., working in a daycare or restaurant).[1] During the same time period, it was found that enteric illnesses were most likely to occur in children under 10 years old, followed by persons 66 years and older. These two groups generally have lower-functioning immune systems.

Table VFiii: Enteric Illnesses, Santa Cruz County, 2005-2009[1]

Enteric Illness	Count
Amebiasis	5
Campylobacteriosis	251
Cryptosporidium	16
Cysticercosis/Taeniasis	4
E. coli (pathogenic)	19
Giardiasis	82
Hepatitis A	11
Listeria	6
Salmonella	222
Scombroid Fish Poisoning	1
Shigella	71
Typhoid Fever	4
Vibrio infections	8
Yersiniosis	4
TOTAL	**704**

iv. OUTBREAKS

The Santa Cruz County CD Unit investigated 25 outbreaks reported between July 2008 and June 2009.[1] Of these outbreaks, 2 were caused by vaccine-preventable diseases (chicken pox), 9 were either suspected or confirmed to be caused by norovirus (a.k.a. "stomach flu"), and the remaining outbreaks were caused by either scabies, salmonella, rhinovirus, streptococcus, or head lice. Long-Term Care Facilities (LTCFs) are the most common sites for outbreaks to occur, be recognized, and be reported (see Table VFiv).[1]

Table VFiv: Reported Disease Outbreaks, Santa Cruz County, July 2008 - June 2009[1]

Date	Location Type	Etiology	~ # ill
Jul-08	Long-Term Care Facility (LTCF)	Scabies	5
"	LTC Facility	Scabies	16
"	Restaurant(s)	Salmonella	17
Oct-08	LTC Facility	Rhinovirus	31
"	LTC Facility	Norovirus - confirmed	14
Nov-08	School	Chicken Pox	8
"	School	Chicken Pox	9
Dec-08	School	Head Lice	61
"	LTC Facility	Scabies	2
Jan-09	LTC Facility	Norovirus - confirmed	30
"	LTC Facility	Norovirus - confirmed	46
"	School	Norovirus - confirmed	58
"	Preschool	Head Lice	7
"	LTC Facility	Norovirus - suspected	23
"	Corrections	Norovirus - suspected	9
Feb-09	School	Streptococcus	15
"	LTC Facility	Norovirus - suspected	35
Apr-09	Private Party	Foodborne (unknown)	15
"	School	Norovirus - confirmed	18
"	LTC Facility	Norovirus - suspected	34
May-09	Preschool	Streptococcus	3
Jun-09	Residential Care	Influenza (H1N1) 2009	5
"	School	Influenza (H1N1) 2009	25
"	Children's Center	Head Lice	6
"	Camp	Influenza (H1N1) 2009	32
TOTAL		**25**	**524**

Helpful Websites	▪ World Health Organization (WHO): http://www.who.int/topics/infectious_diseases/en/index.html ▪ Centers for Disease Control and Prevention (CDC): http://www.cdc.gov/ncezid/ ▪ California Department of Public Health (CDPH): http://www.cdph.ca.gov/programs/cid/Pages/default.aspx ▪ County of Santa Cruz: http://www.santacruzhealth.org/phealth/cd/3communicable.htm
Primary Prevention Activities	▪ Interviewing cases to learn about potential sources and/or spread. ▪ Providing education. ▪ Facilitating vaccination and/or other treatment to mitigate illness. ▪ Imposing restriction to help prevent further morbidity.

Sources	1. County of Santa Cruz, Public Health Department, Communicable Disease Unit (Unpublished Data); May 2010. 2. *California Local Health Jurisdiction STD Data Summaries, 2008 Provisional Data* (July 2009). http://www.cdph.ca.gov/data/statistics/Documents/STD-Data-LHJ-SantaCruz.pdf. 3. County of Santa Cruz, Public Health Department, HIV/AIDS Unit; (Unpublished Data); Feb 2010. 4. County of Santa Cruz, Provisional Counts of Selected Reportable Conditions by Quarter and Year of "Best Onset Date," Santa Cruz County Residents, 2006-2010. http://www.santacruzhealth.org/pdf/CDStats2006-2010.pdf. 5. California Department of Public Health. Report on Tuberculosis in California, 2008. August 2009. http://www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx