

COMMUNICABLE DISEASES

Importance	Monitoring diseases and preventing their spread by educating the public 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 2020	Reduce: <ul style="list-style-type: none"> - Tuberculosis to 1.0 new case per 100,000 population (IID-29) - Gonorrhea Rates Among Females (Age 15-44) to 257 per 100,000 population (STD-6.1) - Gonorrhea Rates Among Males (Age 15-44) to 198 per 100,000 population (STD-6.2)

California law mandates that health care providers and laboratories report all known or suspected cases of specified conditions to their local health authority, which is the source of Santa Cruz County's data.¹

TUBERCULOSIS

Tuberculosis (TB) is an airborne bacterial infection that has afflicted humans for thousands of years. From 2008 to 2010, there was an average of 8 active TB cases each year among Santa Cruz County residents, for an incidence rate of 3.0 per 100,000 population, compared to statewide and nationwide rates of 6.5 and 3.8 per 100,000, respectively (see Figure 1).² The majority of Santa Cruz County cases are born outside of the United States, but about 25% are born in the United States. Over the past couple of years, about 15% of cases have been homeless, adding significant costs during periods of isolation. The number of active cases does not fully reflect the workload that tuberculosis imposes on public health agencies. There are at least 10 to 20 times as many persons who need some level of follow-up to rule out active tuberculosis, and case and contact management are very labor intensive. Yet, studies have consistently shown that the resources spent on TB are necessary to keep TB under control.

SEXUALLY TRANSMITTED DISEASES

Sexually transmitted diseases (STDs) account for the largest number of reported diseases among Santa Cruz County residents. The combined case counts of chlamydia, gonorrhea, and infectious syphilis increased 17% from 2008-09 to 2010-11 (see Figure 2).

Figure 1: Crude Rate of New Active Tuberculosis Cases per 100,000 Population, Santa Cruz County, California, and U.S., 2008-2010²

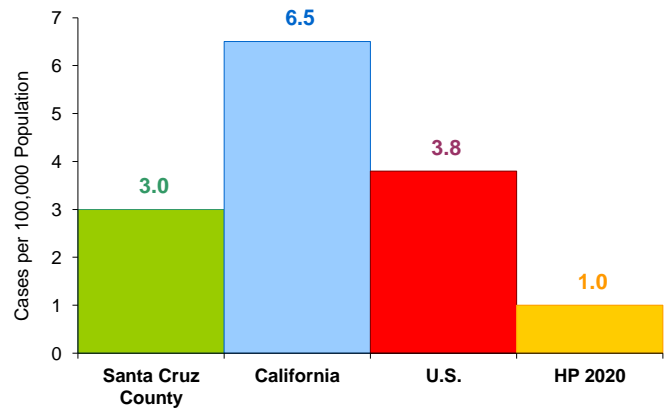
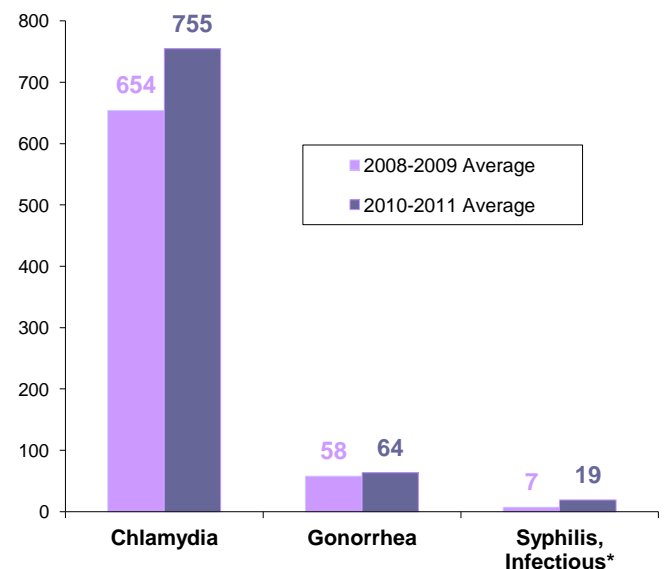


Figure 2: Average Annual Number of Selected Reportable STDs, Santa Cruz County Residents, 2008-2009 and 2010-2011¹



* Infectious syphilis includes primary, secondary, and early latent stages.

COMMUNICABLE DISEASES

Cases of infectious syphilis (primary, secondary, or early latent) continue to rise, with 28 cases in 2012 (see Figure 3). Among the cases in 2012, 96% are male, when known, 96% of the males have had sex with men, 32% of cases have had a prior syphilis infection, and 56% are co-infected with HIV. Efforts are underway to increase community knowledge about the rise in morbidity and recommended responses.

HIV & AIDS

HIV is costly to treat, preventable, and a very complex health issue. The majority of infections are among men who have sex with men (MSM). Homophobia and stigma contribute to poor mental health and unhealthy behaviors, such as substance abuse, risky sexual behaviors, and suicide attempts. As of the end of 2012, 431 Santa Cruz County residents were known to be living with HIV; 256 (59%) of them have AIDS.³ Between 2007 and 2011, there was an average of 18 new HIV cases each year (6.9 new cases per 100,000 population); see Figure 4. Of the new HIV cases diagnosed between 2007 and 2011, 36% were diagnosed with AIDS within one year of HIV diagnosis. Locally, late HIV diagnosis cases tend to have limited HIV education and poor access to HIV testing, and are often MSM who don't identify as gay or bisexual.

ENTERICS

Enteric (intestinal) illnesses enter the body through the mouth and intestinal tract and are usually spread through contaminated food and water or by contact with vomit or feces. Locally, the top six infectious agents causing enteric illnesses in 2010 and 2011 caused nearly 120 reportable cases per year (see Figure 5 for the top six conditions and their relative contributions to the case counts).¹

Cases with enteric illnesses are investigated by the Communicable Disease (CD) Unit to identify potential sources of illness and prevent further spread in the community. Prevention includes identifying cases who work in sensitive occupations, such as a restaurant; such persons are often restricted from working until they are no longer contagious.

Figure 3: Number of Infectious Syphilis Cases (Primary, Secondary and Early Latent) by Year, Santa Cruz County, 2007-2012¹

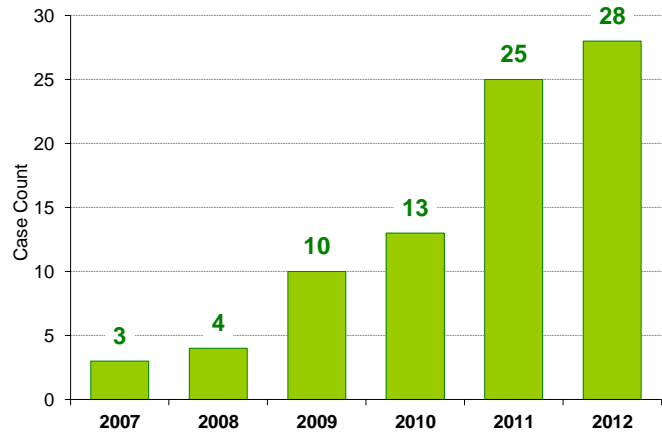


Figure 4: Number of New HIV Cases, With or Without AIDS, by Year of HIV Diagnosis, Santa Cruz County Residents, 2007-2011²

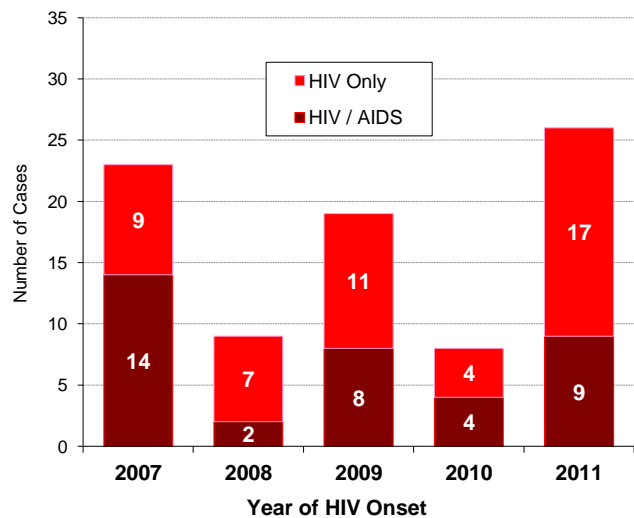
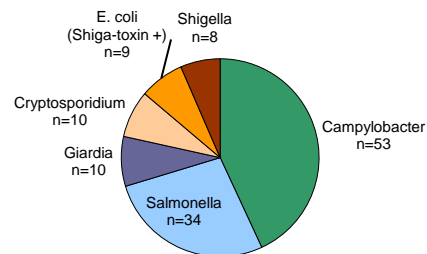


Figure 5: Average Annual Number of Cases of Enteric Illnesses for the Six Most Common Etiologic Agents, Santa Cruz County Residents, 2010-2011¹



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VACCINE PREVENTABLE DISEASES

Disease prevention is the key to public health; it is always better to prevent a disease than to try to treat it and its consequences. Vaccines prevent disease in two ways – directly, in the people who receive them, and indirectly, by reducing the number of infected people who could otherwise transmit infection. Vaccines often dramatically reduce disease incidence (see the Measles example in Figure 6).

From January to October of 2010, California experienced an epidemic of pertussis, with the highest number of reported cases (9,394) since 1947, and the highest rate of cases (23.4/100,000 population) since 1958.⁴ In Santa Cruz County, the rate was even higher than the state, at 32.5 cases per 100,000 population – possibly because Santa Cruz County has relatively low vaccination rates. Fortunately, pertussis rates have subsided significantly since October, 2010.

OUTBREAKS

In 2011, the Santa Cruz County CD Unit investigated fifteen disease outbreaks.¹ Eight of the fifteen were classified as acute gastroenteritis, or sudden onset of diarrhea and/or vomiting; see Table 1 for the numbers of outbreaks and combined numbers ill by type of disease. Acute gastroenteritis and respiratory infections are often very contagious, as can be seen by the number ill.

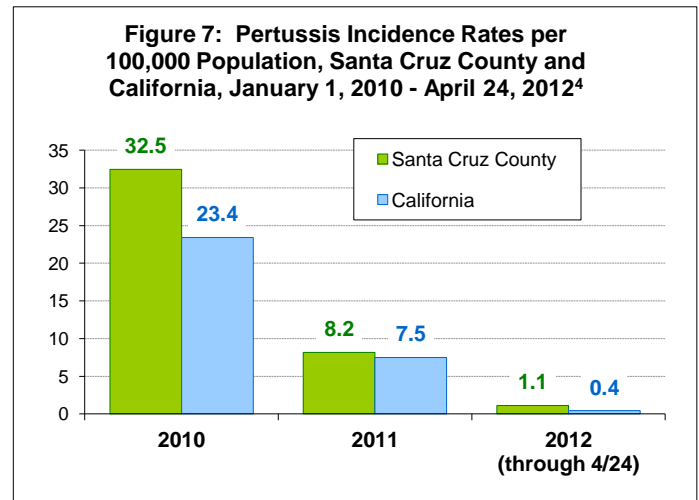
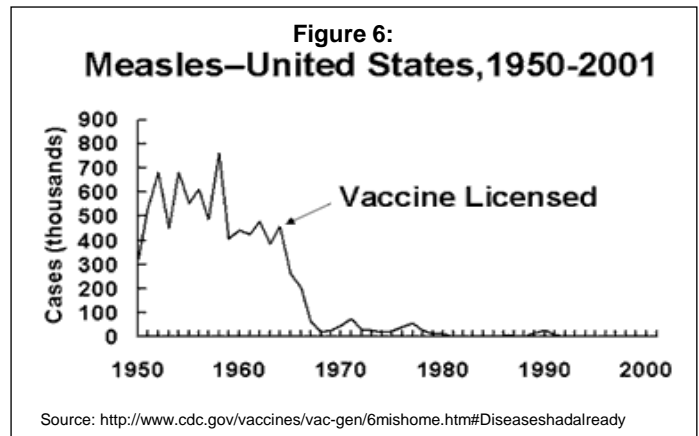


Table 1: Outbreaks by Type and Number Ill, Santa Cruz County, 2011¹

Type	# of locations	Combined # ill
Acute Gastroenteritis	8	260
Respiratory	5	211
Other (Rash, Waterborne)	2	11
Total	15	482

Primary Prevention Activities	CD Unit Investigations: Interviewing cases to identify potential sources, providing education to reduce spread, facilitating vaccinations or other treatments to mitigate illness, and imposing work or other restrictions to help prevent further morbidity.	
Helpful Websites	County of Santa Cruz, Communicable Disease Unit:	http://www.santacruzhealth.org/phealth/cd/3communicable.htm
	CDPH, Center for Infectious Diseases:	http://www.cdph.ca.gov/programs/cid/Pages/default.aspx
	Centers for Disease Control and Prevention:	http://www.cdc.gov
Sources	<p>(1) County of Santa Cruz, Public Health Department, Communicable Disease Unit (unpublished data). Accessed through CalREDIE on October 12, 2012.</p> <p>(2) California Department of Public Health and Conference of Local Health Officers. County Health Status Profiles 2012. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx. April 2012.</p> <p>(3) California Department of Public Health, Office of AIDS. eHARS Data File for Santa Cruz County, 4th Quarter, 2012 (unpublished).</p> <p>(4) California Department of Public Health. Pertussis Report: April 24, 2012. http://www.cdph.ca.gov/programs/immunize/Documents/PertussisReport2012-04-24.pdf.</p>	