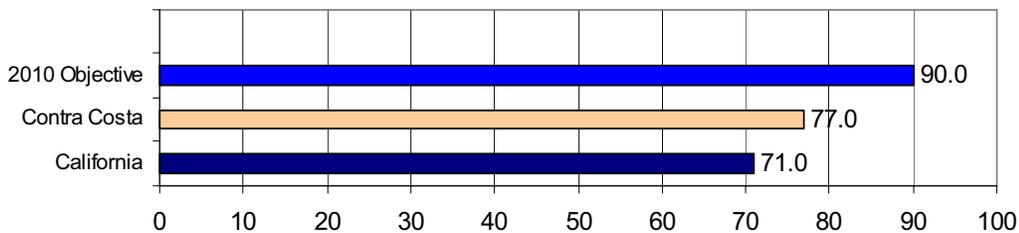


Childhood Immunizations & Vaccine Preventable Diseases



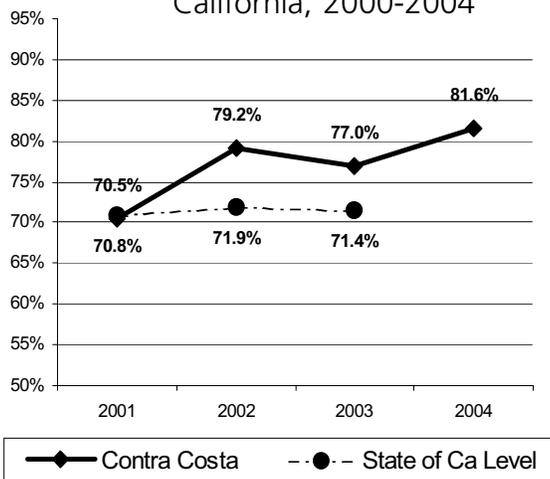
Despite recent improvements, Contra Costa has not met the Healthy People 2010 objective of having at least 90% of all two year olds fully immunized.

Figure 13. Percent of fully immunized two-year olds, Contra Costa and California, 2003



The county rate is much better than the state's but is well below the Healthy People 2010 objective 90%.

Figure 14. Two-Year Olds With All Their Shots, Contra Costa and California, 2000-2004



The estimated rate of immunizations in Contra Costa has improved from 70.5% in 2001 to 81.6% in 2004.

Immunization is among the most effective preventive measures known.

Vaccines protect against diseases such as polio, measles, pertussis and hepatitis. Vaccines not only protect the immunized child, but the community as well.

Hepatitis B (chronic) is the most common vaccine-preventable disease among children in Contra Costa followed by whooping cough (pertussis).

"Chronic" hepatitis is clinically defined by greater than six months of positive test results. Most children with hepatitis are born to mothers with the chronic form of the disease.

California requires that children be up-to-date on their shots before entering kindergarten and seventh grade, and before enrolling in licensed childcare programs.

Nationally, according to the Centers for Disease Control and Prevention, the number of new Hepatitis B infections per year has declined in the U.S. from an average of 260,000 in the 1980s to about 78,000 in 2001.

Although Hepatitis B is common in children, the highest rate of disease occurs in 20-49 year-olds.

The decline in the number of cases among children and adolescents is due to successful Hepatitis B vaccination programs.



Table 52. Childhood Vaccine-Preventable Disease Cases, Contra Costa, 1999-2003

Vaccine-Preventable Disease ¹	5 Year Total
Hepatitis B (Chronic)	60
"Whooping Cough" (Pertussis)	43
Measles	2
Mumps	2

Between 1999 and 2003 there were no reported cases of diphtheria, polio, rubella or tetanus for children less than 19 years old.

Richmond (12), Pittsburg (8) and Concord (6) had the greatest number of cases of "whooping cough" (pertussis) among children.

Table 53. Pertussis, Cases By Community. 1999-2003

Cases of Pertussis	
Richmond	12
Pittsburg	8
Concord	6
San Pablo	5
Walnut Creek	5
Antioch	3
Brentwood	2
Oakley	2
Bay Point	0
Martinez	0
Pinole	0

California has seen an unusually high number of whooping cough cases since the year 2000 (Contra Costa Times, 2004). Not all cases are severe, but many are.

More than one-third occurred in infants less than three months old. Eighty percent of these infants were so sick they needed hospitalizations.

Complications include vomiting, pneumonia, seizures, brain damage and, in a few cases, death. The disease causes violent coughing spasms that can last several minutes and persist for months, making it very difficult for an infant to eat, drink and breathe.

Whooping cough can easily be prevented

“Whooping cough” is vaccine-preventable using what is known as the DtaP vaccine, which is recommended at two months of age, followed by three additional injections by the time a child is eighteen months old. Newborns are particularly vulnerable to whooping cough so it is important not to delay the first shot.

How to calculate the percentage of immunized children

The percentage describes the proportion of kindergartners who are fully immunized. (See *Data Sources below*).

The percentage is calculated by dividing the number of kindergartners who are fully immunized by the total number of kindergartners in the county or state, then multiplying by 100.

$$\frac{\text{Total Immunized}}{\text{Total in County/State}} \times 100$$

How to calculate numbers of cases of vaccine-preventable disease

The above analysis is based on the number of reported cases of vaccine-preventable disease among children less than 19 years old in the five-year period between January 1999 and December 2003.

Because vaccine-preventable disease is rare and actual numbers are small, only reported cases were used for this analysis.

Data sources

Local data about immunization levels is analyzed by the Immunization Branch of the State Department of Health Services (DHS). A random survey of schools is used to assess the immunization levels of students in kindergarten. DHS uses these immunization records to estimate the percentage of children who were up-to-date when they were two years old. For example, the 2004 vaccination records of 5 year olds (kindergartners) are used to estimate immunization coverage for the years 2000-2001.

In the analysis above, local data about vaccine-preventable disease is derived from our Contra Costa County's Automated Vital Statistics System or AVSS.

For more information about communicable disease in Contra Costa please contact Juan Reardon, MD, MPH, jreardon@igc.org, or Martin Lynch by phone at (925) 313-6323. You can also visit the unit's page at <http://www.co.contra-costa.ca.us>.

Any analyses, interpretations or conclusions of the data, unless specified, have been reached by CHAPE and are not from the CA Department of Health Services, Immunization Branch.

For more information call Contra Costa Health Service's Community Health Assessment, Planning & Evaluation (CHAPE) Group at (925) 313-6171.

¹ Hepatitis B information was not available by community.