INTRODUCTION
We want you to feel confident using these report findings.

This report uses totals, rates and percents.

To get the most out of this report, it is important to understand the differences between totals, rates and percents... and why each is vital to community health planning.

CHAPE staff is available to discuss the analysis, tables and data sources found in this report. Contact Chuck McKetney at (925) 313- 6171 or cmcketne@hsd. cccounty.us for assistance.

Totals
Totals provide us with numbers and counts. They tell us whether a problem is big or small in scope. The total number of new cancer cases will help us to evaluate our treatment and prevention resources. The total number of homicides helps us see grieving families and the larger social costs to communities.

Rates
Rates let you compare things between populations and groups that are different—like places, races and genders.

It is difficult to understand what a number means, if you don't have anything to compare it to. We expect bigger numbers from bigger populations. California has many more deaths than Contra Costa... and Whites die in larger numbers than ethnic minorities.

Why do we use rates?
- Rates allow us to see if a group of people has proportionally more than its "fair share" of deaths.
- A higher rate means a group has an increased risk of dying from a particular disease. A lower rate means a lower risk.

Key Findings

Rates provide us with a meaningful way to compare deaths between population groups of different sizes.

A death rate is calculated by dividing the number of deaths by the total population, and then by multiplying the result by a standard population size such as 100,000.

The formula is:

$$\text{Rate} = \frac{\text{Number of Deaths} \times 100{,}000}{\text{Total Population}}$$

A local example:
If we want to compare cancer deaths between Contra Costa and California, it is important to use rates. California's population is much larger than that of Contra Costa – we would expect California to have many more cancer deaths. Rates allow us to see if Contra Costa has proportionally more (or less) than its "fair share" of these deaths.

Cancer Deaths

Table1. California & Contra Costa County, 2002–2004

	Cancer Deaths (3 years)	Population (2002–2004)	Rate
Contra Costa	5,058	3,005,441	*170.5
California	161,941	107,888,688	163.3

These are age-adjusted rates per 100,000 residents.

* Significantly higher rate compared to California

To calculate death rates, we divide the number of deaths in each group by its total population, and then multiply the results by 100,000. (Note: Multiplying our rate by 100,000 does not really change its size. This is simply a statistical tradition which allows our local rates to be compared to other rates around the world.)

These calculations give us a rate of 170.5 cancer deaths per 100,000 people in Contra Costa and 163.3 cancer deaths per 100,000 in California.

This means that the cancer death rate is higher in Contra Costa – residents of Contra Costa County have a higher risk of dying from cancer than people living in California.

Many rates are "age-adjusted."

An age adjusted-rate is the best statistic for comparing the impact of diseases like heart disease, cancer, stroke and diabetes – diseases that affect people as they get older.

Age-adjusted rates allow you to compare death rates between population groups, even though the size of the groups or the age of the group members might be very different. For instance, many Latinos living in Contra Costa are recent immigrants and therefore tend to be younger than other county residents. The rates of age-related diseases, like heart disease, are lower for Latinos living in Contra Costa compared other racial groups.

What is statistical significance?

In statistics, "significant" does not mean important. It means "probably true." Just because two rates appear different, it doesn't mean that the difference is worth talking about. In this report, when

we say that a difference between two rates is significant, we mean that we are at least 95% certain this difference is not due to chance alone. For information on testing statistical significance, please see the methods help online at http://www.cchealth.org/health_data/hospital_council/pdf/statistical_significance.pdf

Percentages

A percent is as a simple statistic that shows parts of a whole. It is a familiar way to compare totals and judge proportions.

Percents are limited in their uses. Percentages help you judge the burden of disease within a population (like a county), but you can't use percents to make comparisons and judgments outside that population.

Rates are the best statistic to measure a population's risk. When percents are provided in this report without rates, it is usually because dependable population totals (denominators) were unavailable.

For More Help

Please see the glossary and back of this report for more information on our statistical methods. Please also feel free to contact Chuck McKetney, CHAPE Director, at (925) 313- 6171 or cmcketne@hsd.cccounty.us for further assistance.