Definitions

Many data sources used on www.sumn.org provide official **count** data. These include, but are not limited to, death, arrest and corrections data. These data provide actual raw **numbers** reported to and collected by various state agencies. Whenever possible, raw numbers are provided along with percentages or rates.

Rates are ratios, calculated by dividing the numerator by the denominator. In a fraction, the numerator is the number on top—the number which is divided. The denominator is the number on the bottom—the number you are dividing by. In epidemiology, a rate is the frequency with which a health event occurs in a defined population. The components of the rate are the raw number (numerator) and the population (denominator).

On the SUMN website, rates are presented per 1,000 or 10,000 or 100,000 of the population and are noted accordingly. Be sure to reference each data sheet for the denominator. If for example there are nine deaths in a given year in a county with a population of 5,286, you would divide 9 by 5,286 to get 0.0017. In this case, to get the rate per 10,000 population, you would simply multiply 0.0017 by 10,000 to get a rate of 17 per 10,000 population.

Incidence rates differ from prevalence rates. **Incidence** refers to the frequency of development of a new illness in a population in a certain period of time, normally one year (e.g., the number of people who were diagnosed with lung cancer in 2008). **Prevalence** refers to the current number of people suffering from an illness in a given year; this number includes all those who may have been diagnosed in prior years, as well as in the current year (e.g., the number of people who have lung cancer in 2008).

A **percent** is the ratio of a number to 100; percent means "per hundred." For example, say 14 students out of 97 students reported ever having smoked marijuana. Dividing 14 by 97 gives you 0.144; multiply this answer by 100 to obtain the percent of students reporting that they have ever smoked marijuana: 14.4%.

It's important to pay attention to the denominator (the population) when looking at a percentage. On the SUMN website, percents are displayed for *Minnesota Student Survey* and for *Minnesota Survey of Adult Substance Use* indicators. Depending on the sub-population you select on the website, the denominator will change. If you choose to display data for 12th graders, then percents will be calculated using only the 12th grade population. For example, the percent of male 12th graders in the seven-county metro area who reported drinking any alcohol in the past 30 days is based on the total number of male 12th graders in the seven-county metro area who responded to the survey question about 30 day alcohol use (not based on the total number of students in Minnesota who responded to this question.)

Rate ratios can be used to compare a Minnesota rate to a US rate (calculated by simply dividing the Minnesota rate by the US rate). A rate ratio of 1.00 indicates that the Minnesota rate equals the US rate. Over 1.00 indicates higher use, while less than 1.00 indicates lower use. Similarly, rate ratios can be used to compare one county to another, one county to the region it's in, or one county to the state.