

Pregnancy Estimator Doc Examples with Formulas for Calculations

Example for places with rates only: A Fictional State—“Atlantic”

In 2010, there were 607,707 women of reproductive age (WRA) in “Atlantic.” The 2010 state birth rate (B) for “Atlantic” was 65.8/1,000 WRA, and the abortion rate (A) from state vital statistics was 3.8/1,000 WRA. The 2005 national fetal loss rate (D) was 17.1/1,000 WRA.

The calculation for pregnant women where all values are known is:

$$\text{WRA}/1000 * \{ (B*Pb) + (A*Pa) + (D*Pd) \}$$

Thus, $607,707/1000 * \{(65.8*0.75) + (3.8*0.167) + (17.1*0.25)\} = 32,974$ pregnant women

Approximately 33,000 women in “Atlantic” were pregnant at any given point in time in 2010.

Example for places with numbers (not rates): A Fictional County—“Pacific”

In 2010, the “Pacific” 2010 county number of births (NB) was 581, the number of abortions (NA) was 54, and the number of fetal deaths (ND) was 1.

Since the vital statistics document gives numbers instead of rates, the calculation is simpler. Multiply the numbers for births, abortions and fetal deaths by their respective proportion of the year a woman is pregnant for each pregnancy outcome by month, and then sum them.

The calculation for pregnant women where all values are known is:

$$(NB*Pb) + (NA*Pa) + (ND*Pd)$$

Thus, $(581*0.75) + (54*0.167) + (1*0.25) = 445$ women in “Pacific” County were pregnant at any given point in time in 2010.

Because fetal deaths only account for a small proportion of all fetal loss, this is a slight underestimation.

Note: The purpose is to estimate rather than precisely count the number of pregnant women. You might choose to test different models in which you use different data sources available for your state abortion and fetal loss rates to create a potential range or to create an estimate in which you have the most confidence.