

Williams County Prenatal Smoking Trends, 2012-2016



Williams County Health District

Data Summary:

There were a total of 1,518 births from 2012-2016 in Williams County.

Of the women who gave birth between 2012 and 2016, 96% were white, 95% were Non-Hispanic and the top three most prevalent age groups for the mother were ages 20-24 years old (33%), 25-29 years old (31%), and 30-34 years old (18%).

The remainder of this report will look at smoking trends in pregnant women during 2012-2016 broken down by their ethnicity, race and age.

The terms “heavy-smoker” and “non-heavy smoker” will be used when discussing the trends among women who smoked during pregnancy.

Heavy-smoker— a mother reporting smoking an average of 20 or more cigarettes per day

Non-heavy smoker— a mother that reports smoking an average of less than 20 cigarettes per day

Methodology:

The data for this report was pulled from Williams County birth certificates from 2012 through 2016. The data was organized and analyzed using Microsoft® Office Excel®2010 and its tools, such as Pivot Table and Pivot Chart.

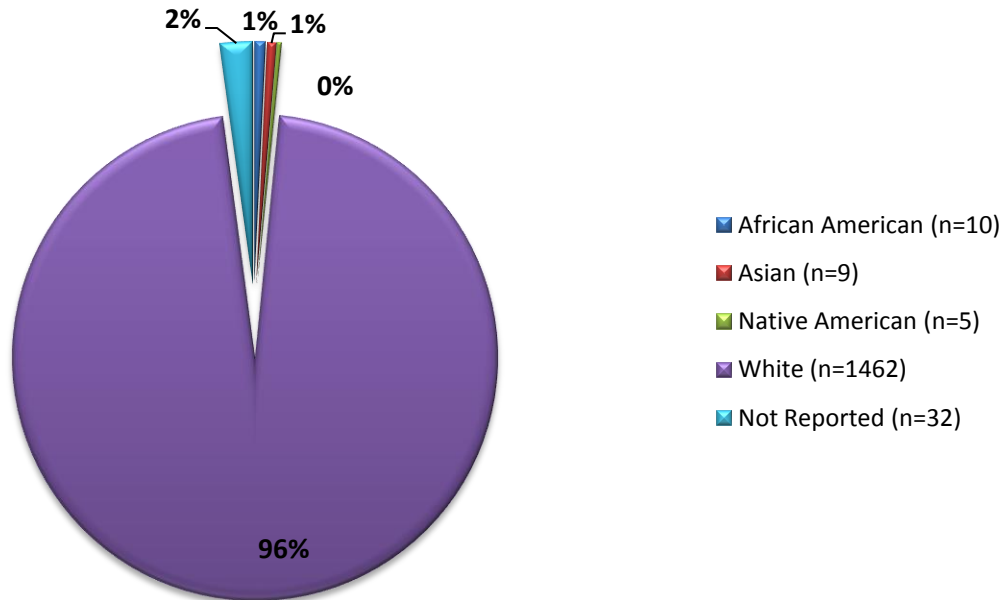
Limitations:

One limitation is that these results only include births that occurred in Williams County. It does not record the number of Williams County residents that gave birth in another county; therefore some data about Williams County residents may be missing and individuals who reside outside of Williams County may have been included. Another limitation is the small number of cases for certain races, ethnicities and age groups. These small numbers mean that the results cannot be generalized to that subpopulation and trends for these groups cannot be determined with certainty.

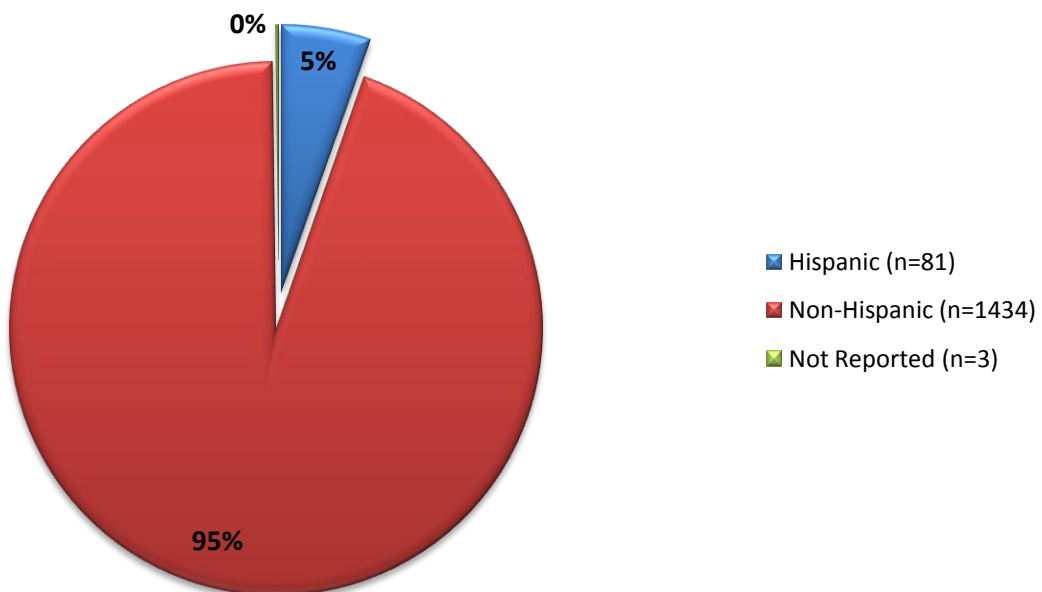
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Demographics:

Breakdown of Mothers who Gave Birth, by Race, 2012-2016

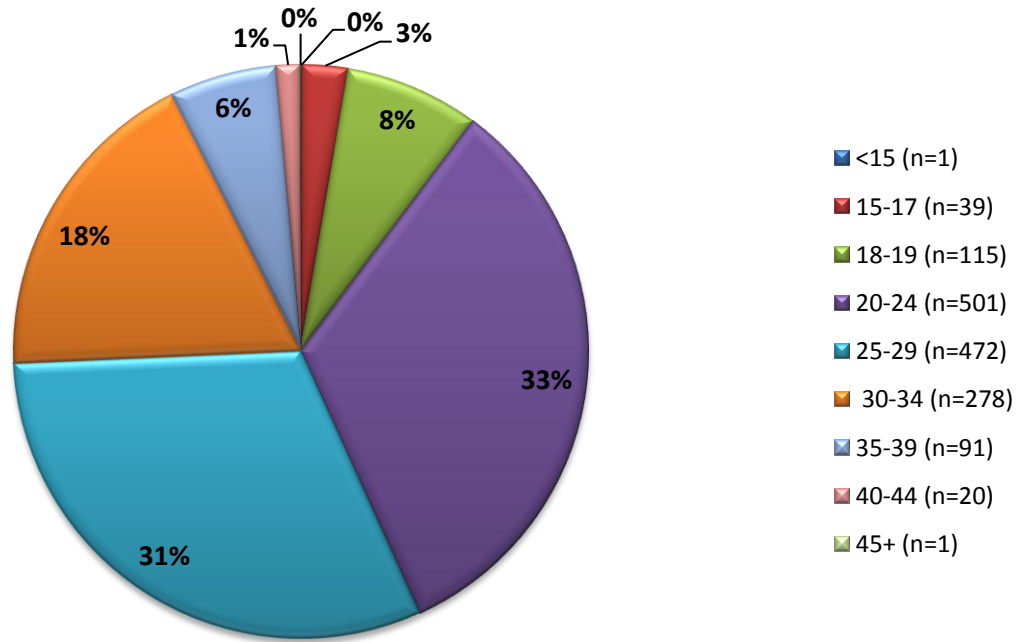


Breakdown of Mothers who Gave Birth, by Ethnicity, 2012-2016



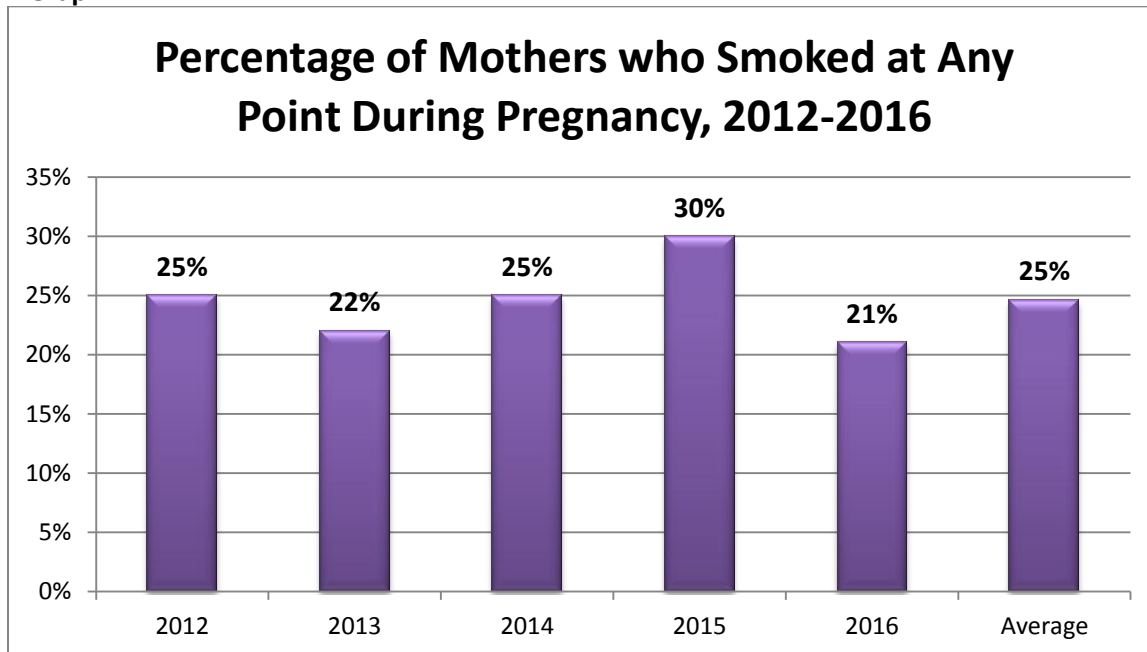
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Breakdown of Mothers who Gave Birth, by Age Group, 2012-2016



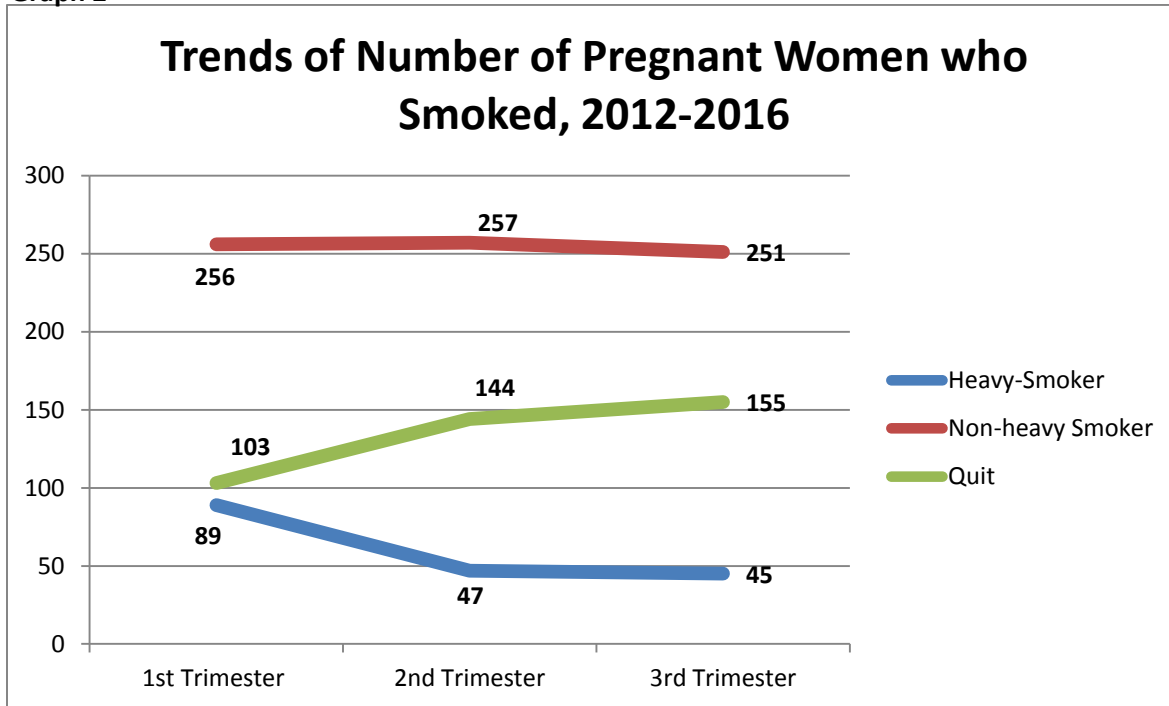
Overall Statistics:

Graph 1



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Graph 2

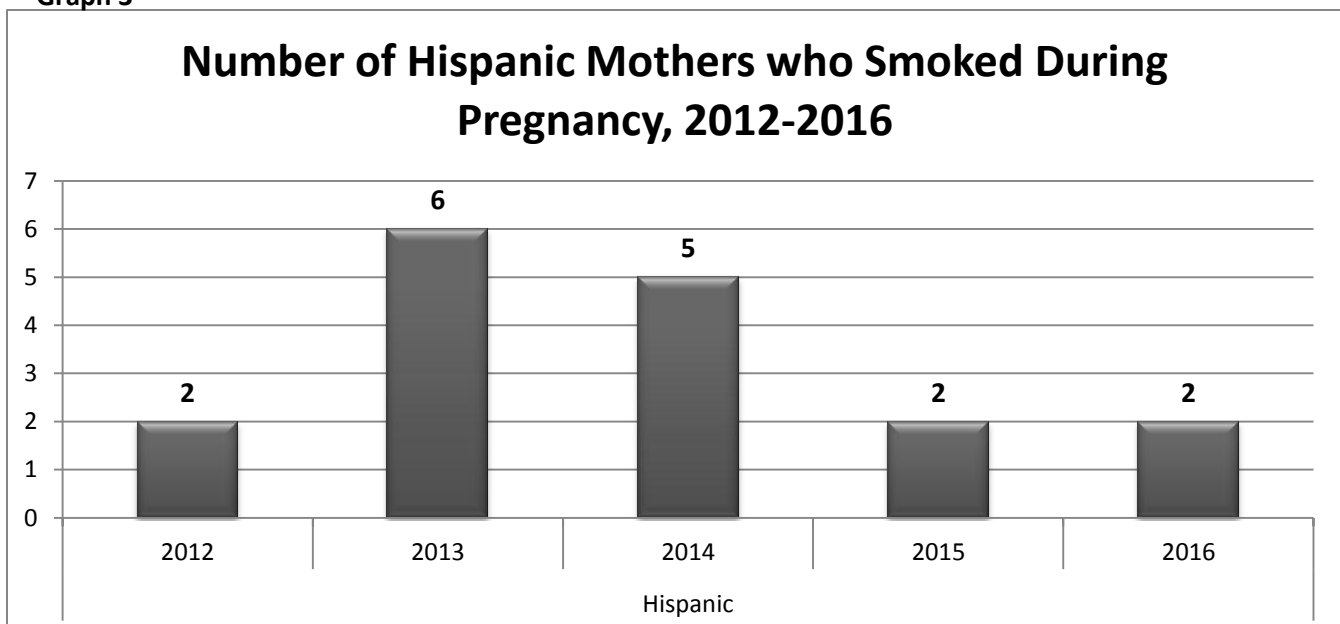


Between 2012 and 2016, an average of 1 in 4 women in Williams County smoked at some point during their pregnancy. Of the women who smoked, 84% had smoked during their third trimester, with **71%** being non-heavy smokers and **13%** being heavy smokers. Despite these numbers, throughout the pregnancy, the number of heavy-smokers decreased by half and the number of women who quit smoking drastically increased.

Ethnicity:

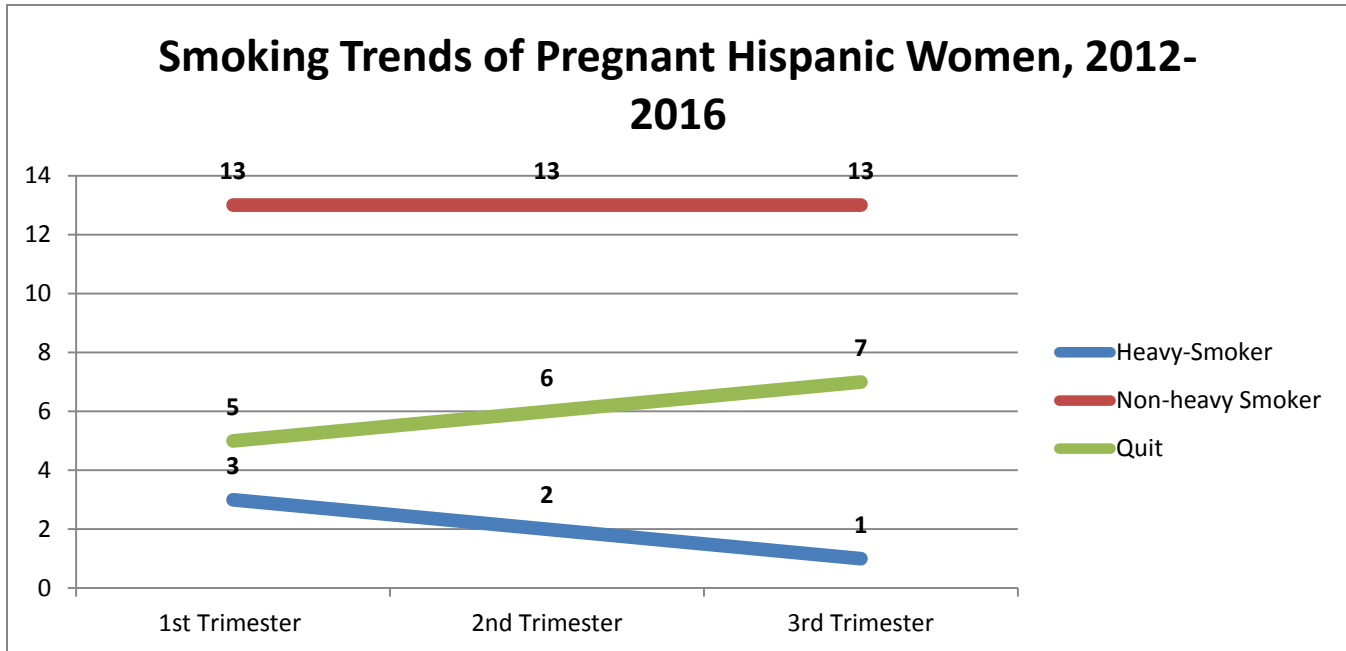
These graphs look at the number of women by ethnicity who smoked at any point during pregnancy and these women's smoking trends throughout pregnancy.

Graph 3



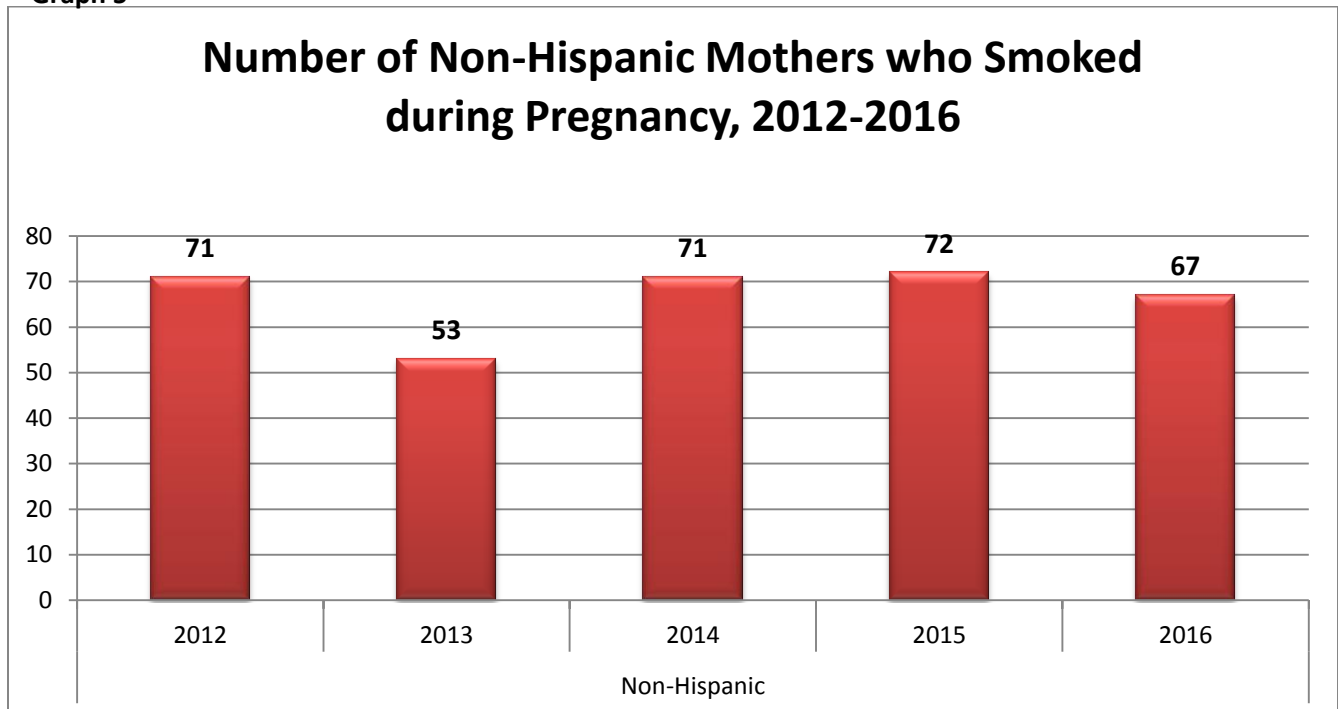
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Graph 4



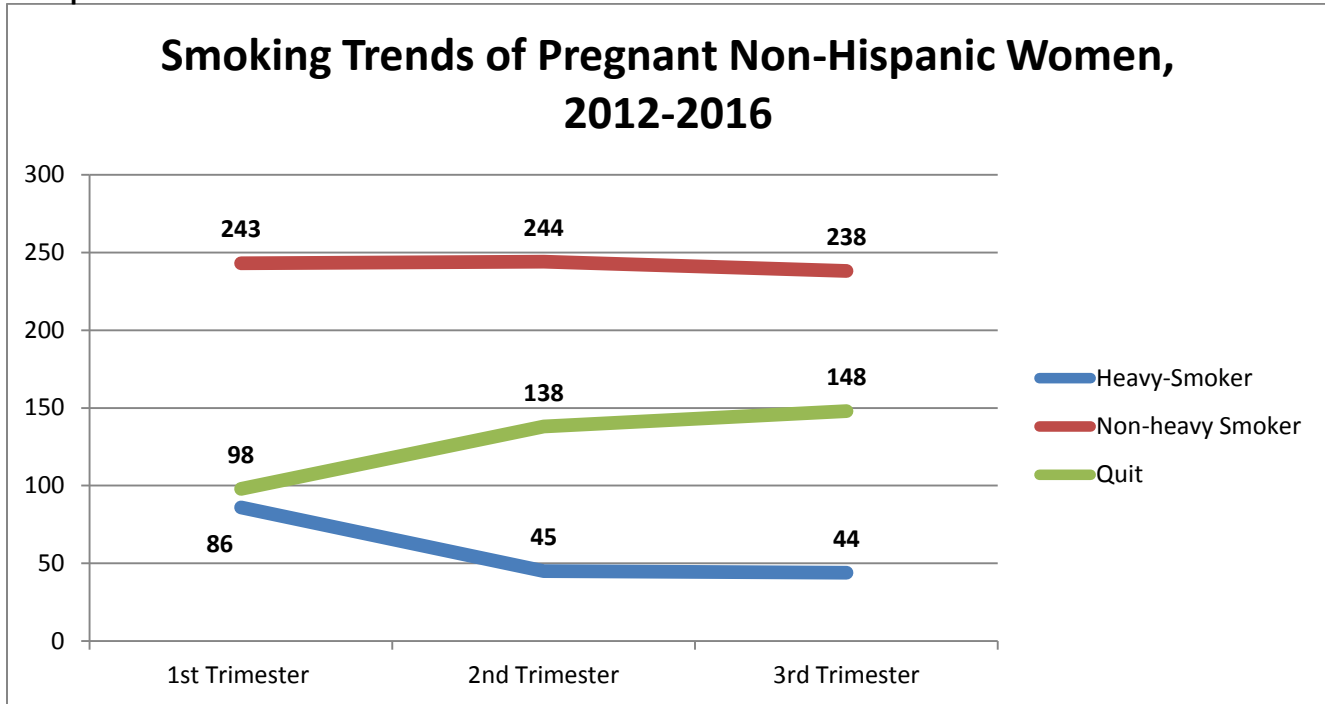
Graph 3 shows that the number of Hispanic women who smoked during pregnancy spikes slightly in 2013-2014 but drops again in 2015-2016. Graph 4 depicts that while the number of heavy-smokers decreased the number of women who quit increased. Though the number of individuals who quit increased, in the third trimester 82% of Hispanic women were smoking with 93% being non-heavy smokers and 7% being heavy-smokers.

Graph 5



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Graph 6



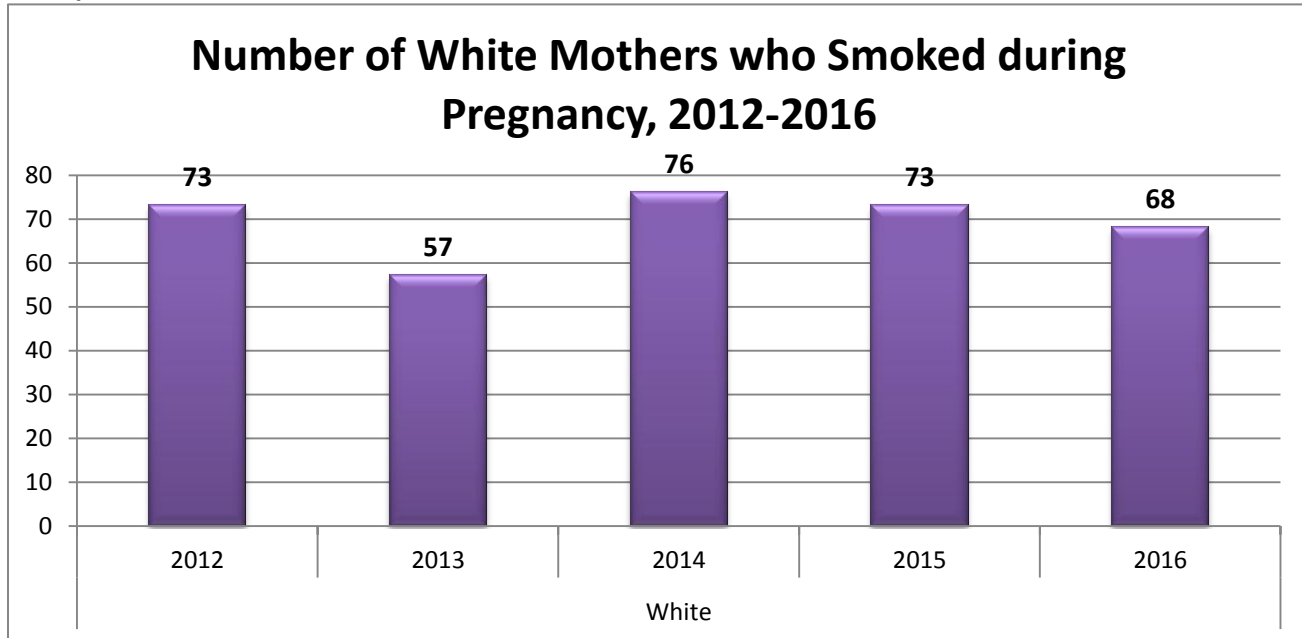
Graph 5 shows the number of Non-Hispanic mothers who smoked during pregnancy, with the numbers dropping slightly in 2013 before rising again for 2014-2016. Similar to Hispanic mothers, the trend seen in Graph 6, also displays a decreasing number of heavy-smokers and an increasing number of women who quit during their pregnancy. While numbers did improve to an extent, there were still 84% of smoking Non-Hispanic mothers smoking in their third trimester; with 71% being non-heavy smokers and 13% being heavy smokers.

Race:

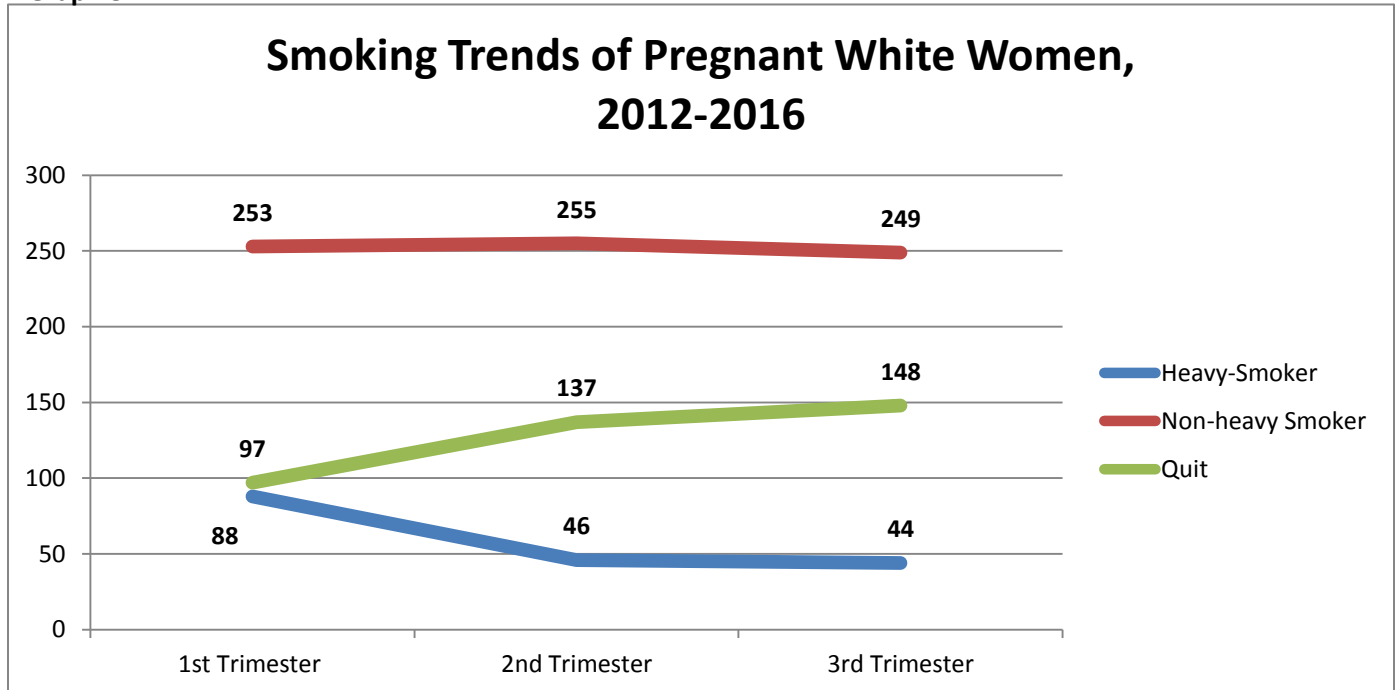
These graphs look at the number of women by race who smoked at any point during pregnancy and these women's smoking trends throughout pregnancy. Several of the categories were combined due to the small number of women who smoked in the racial group and even with this combination certain years are not shown due to no women in that racial group smoking.

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Graph 7



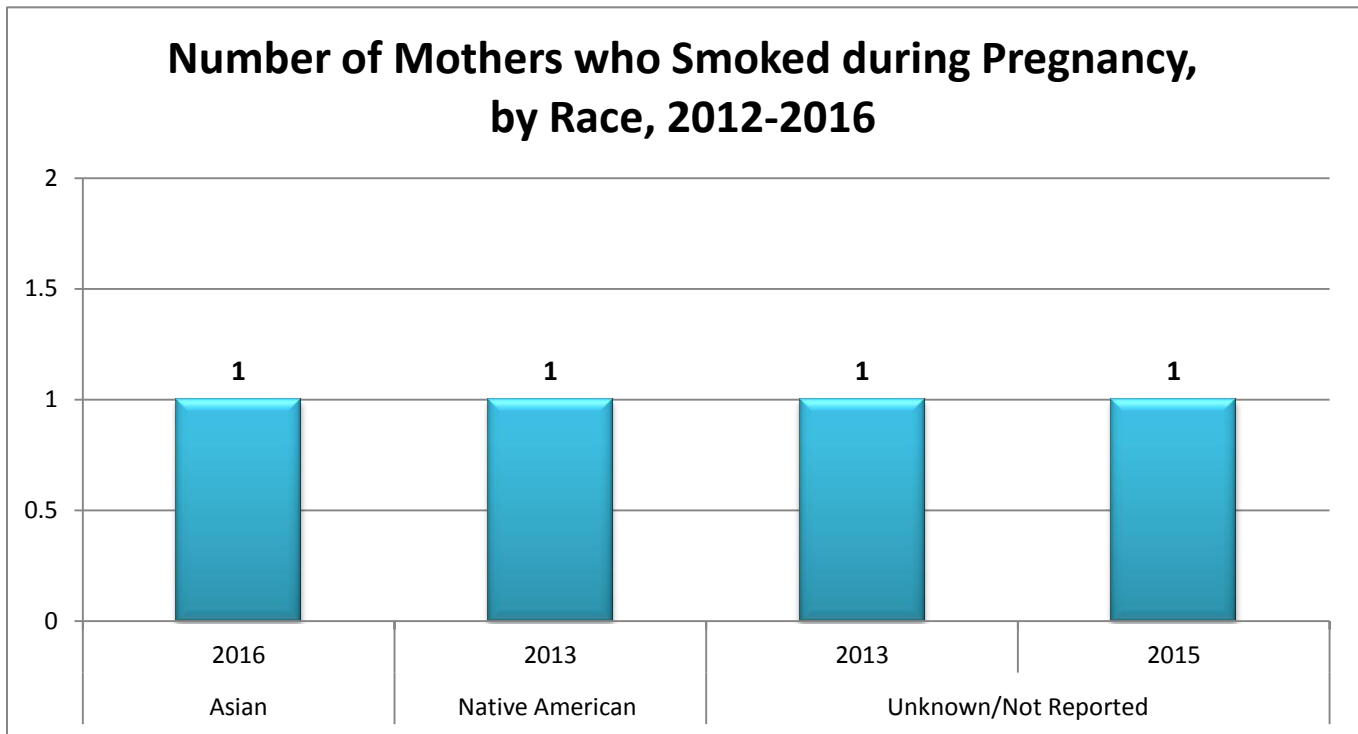
Graph 8



The trend seen in Graph 7 is similar to that one in Graph 5. The number of white women who smoked during pregnancy decreased slightly in 2013 and rose again to previous numbers in 2014-2016. Graph 8 reveals that the number of women who are heavy smokers decreases and the number of women who quit increases as the pregnancy progresses; similar to other trends examined by ethnicity. By third trimester, 84% of smoking White mothers were smoking, with 72% being non-heavy smokers and 12% being heavy smokers.

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Graph 9



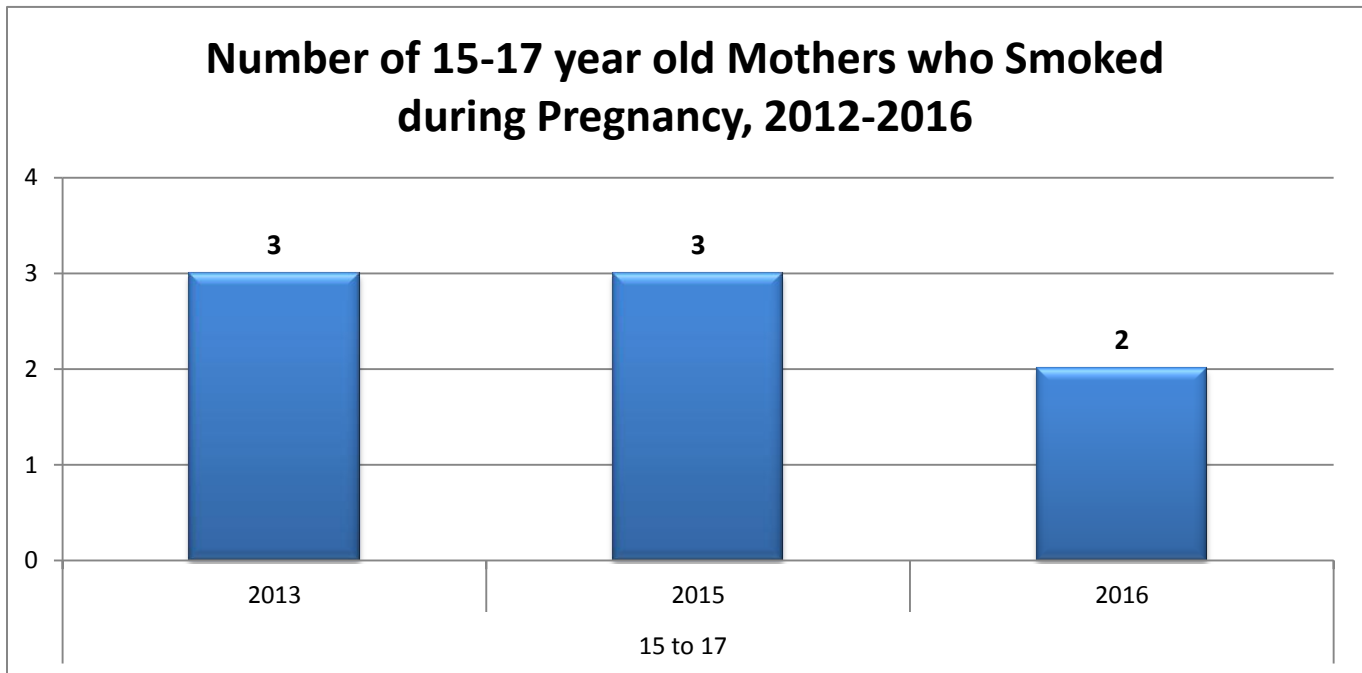
Graph 9 displays only the years in which there were mothers of certain races who smoked during their pregnancy. Of the Asian and Native American mothers who smoked, 100% smoked in the third trimester, while 50% of Unreported races smoked. African American mothers are not depicted as there were no African American women in 2012-2016 who smoked during their pregnancy. Some of the years between 2012-2016 are not shown as there were no mothers of Asian, Native American or Unreported races who smoked that year. Due to the small number of Asian, Native American and Unreported race mothers who smoked during pregnancy trends could not be identified for these racial groups either in the number of women who smoked or their smoking habits while pregnant.

Age:

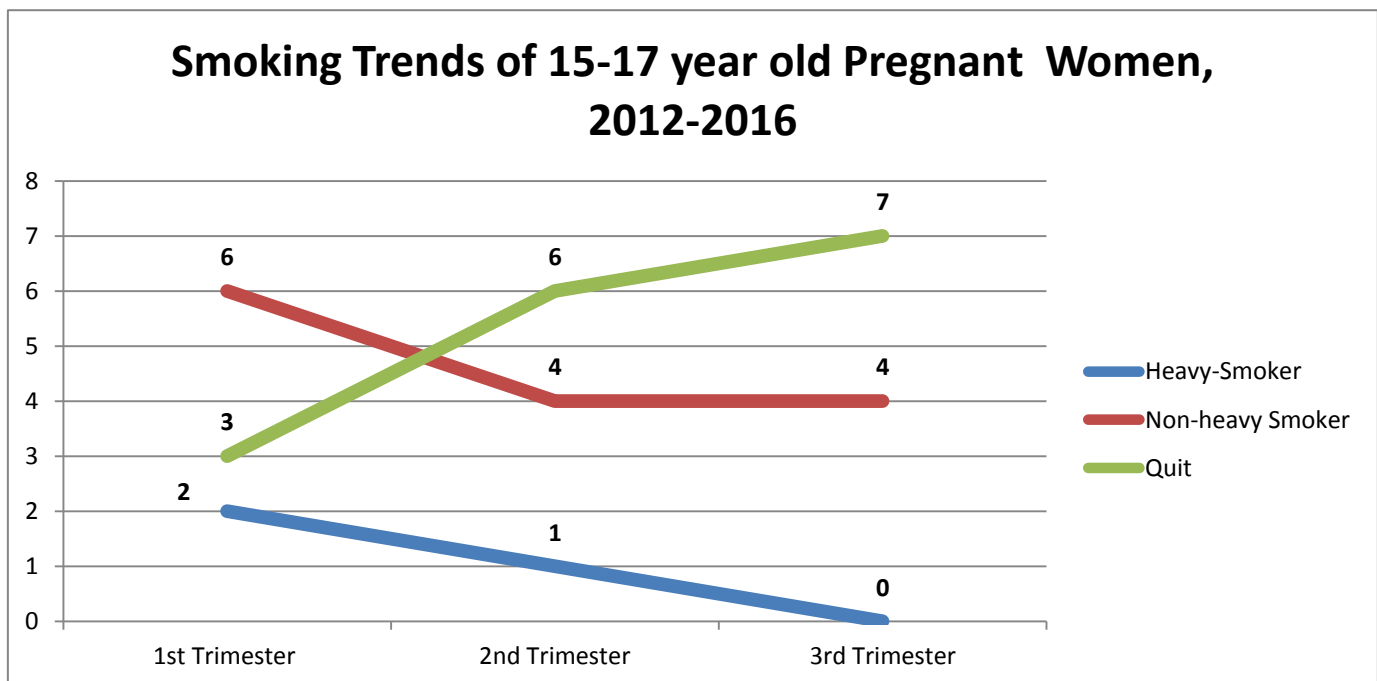
These graphs look at the number of women in each age group that smoked at any point during pregnancy and smoking trends throughout pregnancy. The age groups of <15 years and 45+ are not shown in individual graphs as there was only one birth in each of these age groups during 2012-2016 and neither of the women in those groups smoked during their pregnancy. Certain years are not depicted in the below graphs as there were no mothers in that age group that smoked during pregnancy that year.

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Graph 10



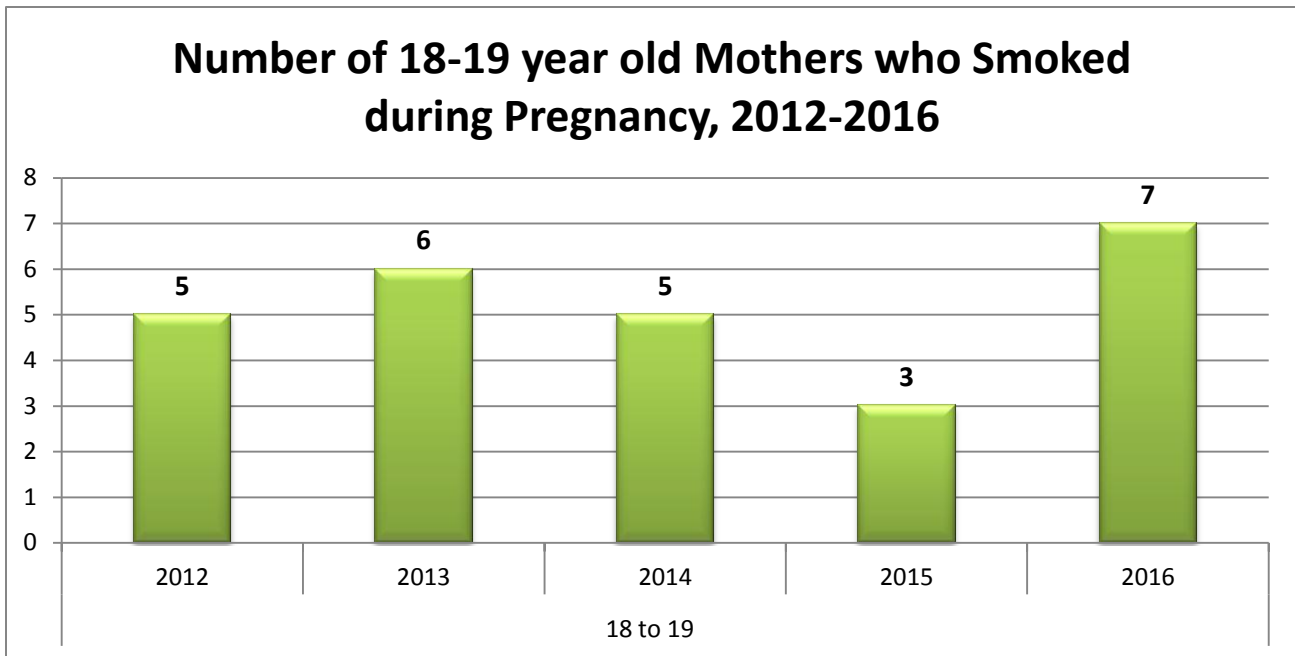
Graph 11



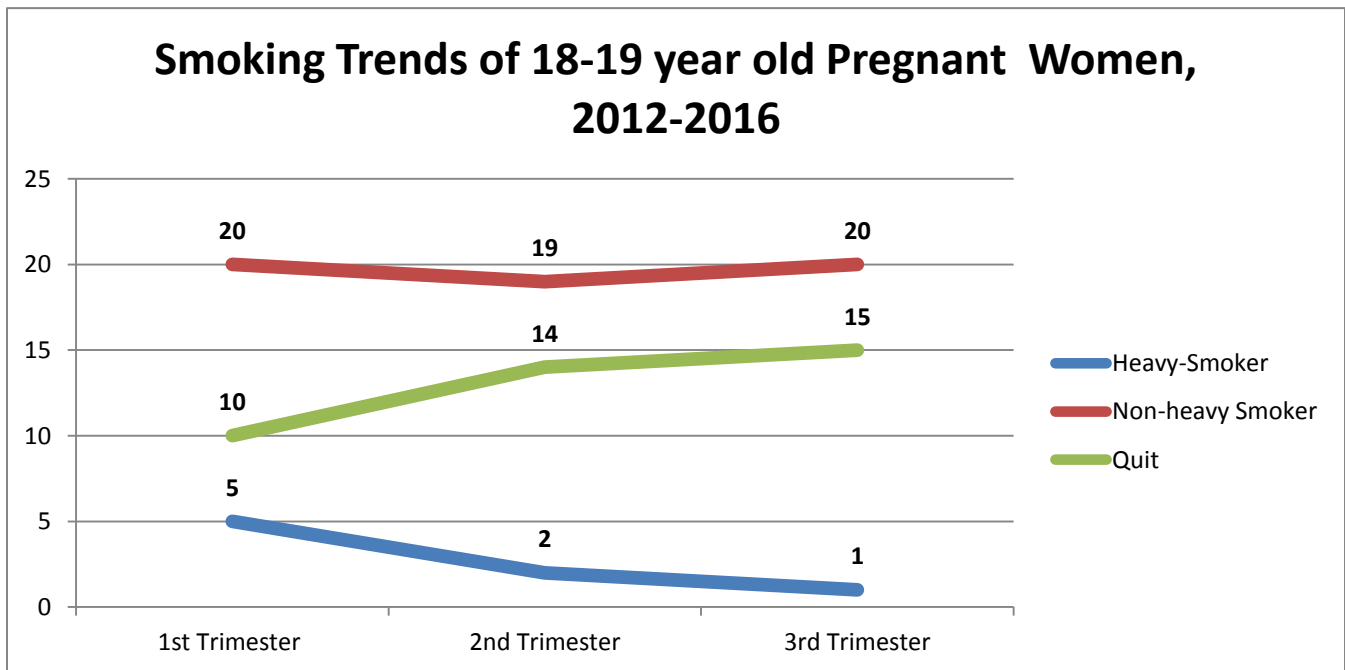
The number of 15-17 year old mothers who smoked remained low during 2012-2016. Graph 11 reveals that three women quit during their first trimester, and throughout the other trimesters the number of heavy-smokers decreased to 0, non-heavy smokers decreased by 2 and the number of women who quit smoking during pregnancy more than doubled. Despite these trends, 50% of mothers in this age group smoked during their third trimester, all of them being non-heavy smokers.

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Graph 12



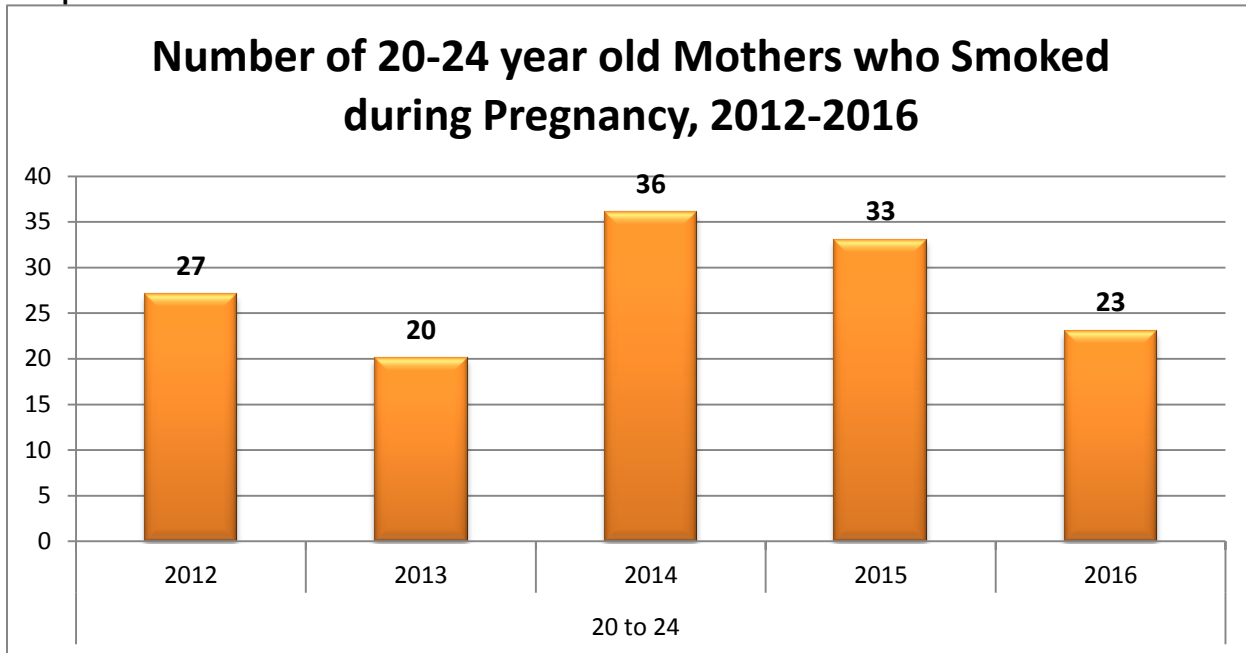
Graph 13



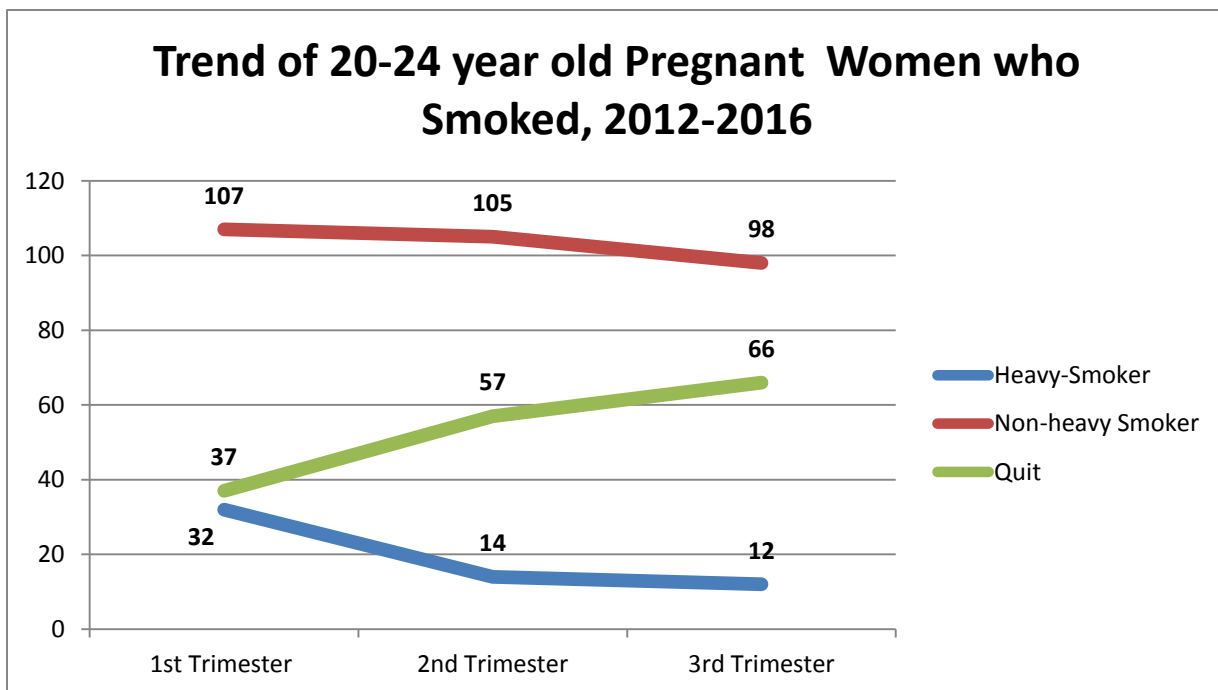
The number of 18-19 year old mothers who smoked during pregnancy remains consistent from 2012-2014 before dropping slightly in 2015. The 2015 number more than doubles in 2016 to result in the highest number of 18-19 year old mothers who smoke in the past 5 years. Graph 13 repeats the trend seen in the above groups, a decrease in heavy-smokers as the pregnancy progresses and an increase in the number of pregnant mothers who quit. By third trimester, 81% of smoking mothers were still smoking, with **77%** being non-heavy smokers and **4%** being heavy smokers.

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Graph 14



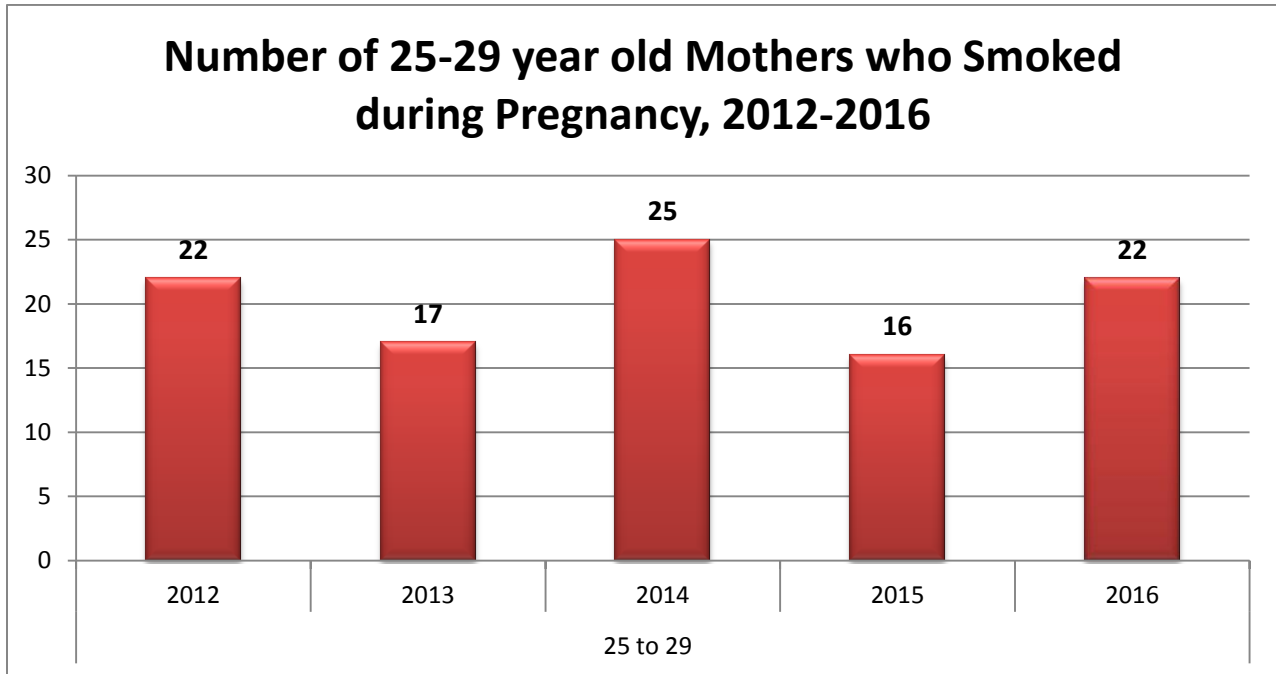
Graph 15



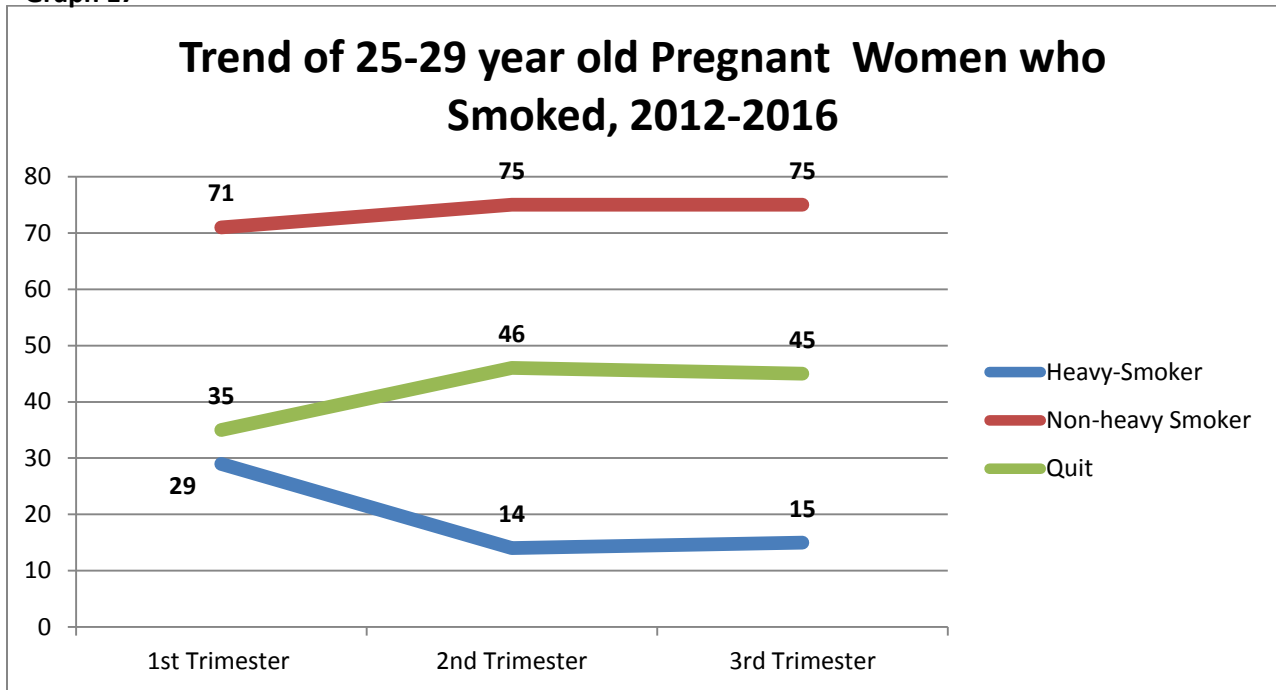
Graph 14 displays the increase in 20-24 year old mothers who smoked during pregnancy in 2014, however, after this peak there is a steady decline for the next two years in women who smoked during pregnancy. Graph 15 also shows the inverse relationship between heavy-smokers and women who quit smoking as the pregnancy progresses. Of mothers who smoked in this age group, 79% smoked in their third trimester with 71% being non-heavy smokers and 8% being heavy smokers.

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Graph 16



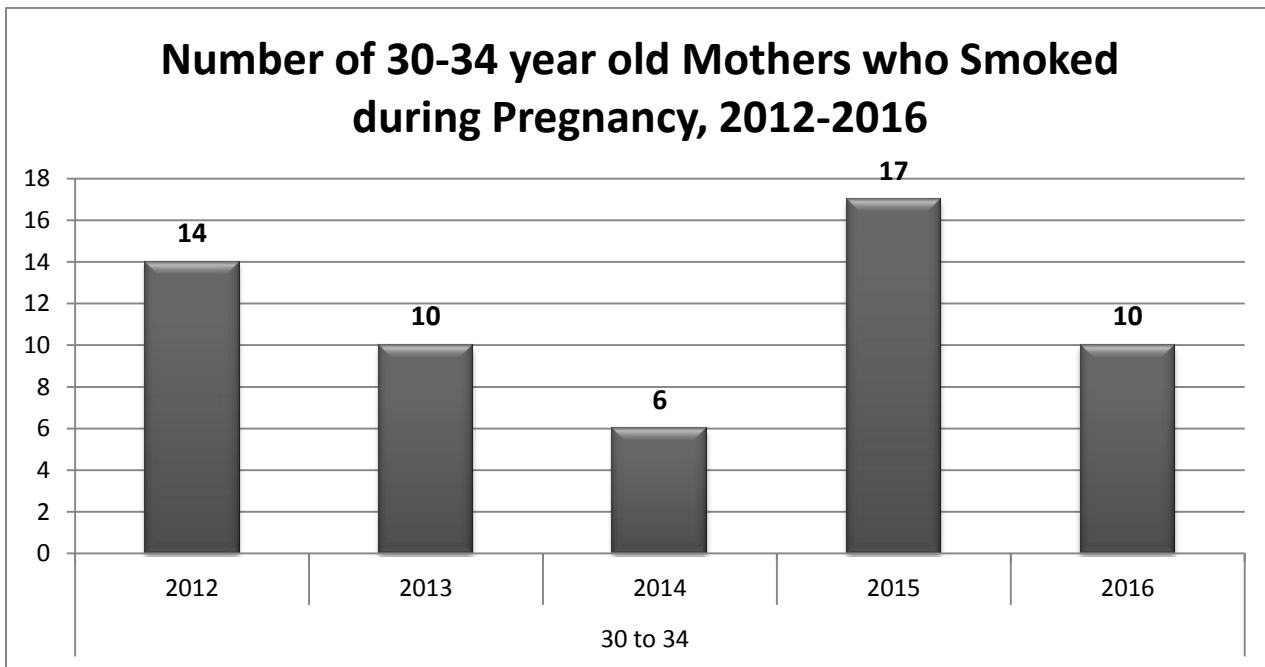
Graph 17



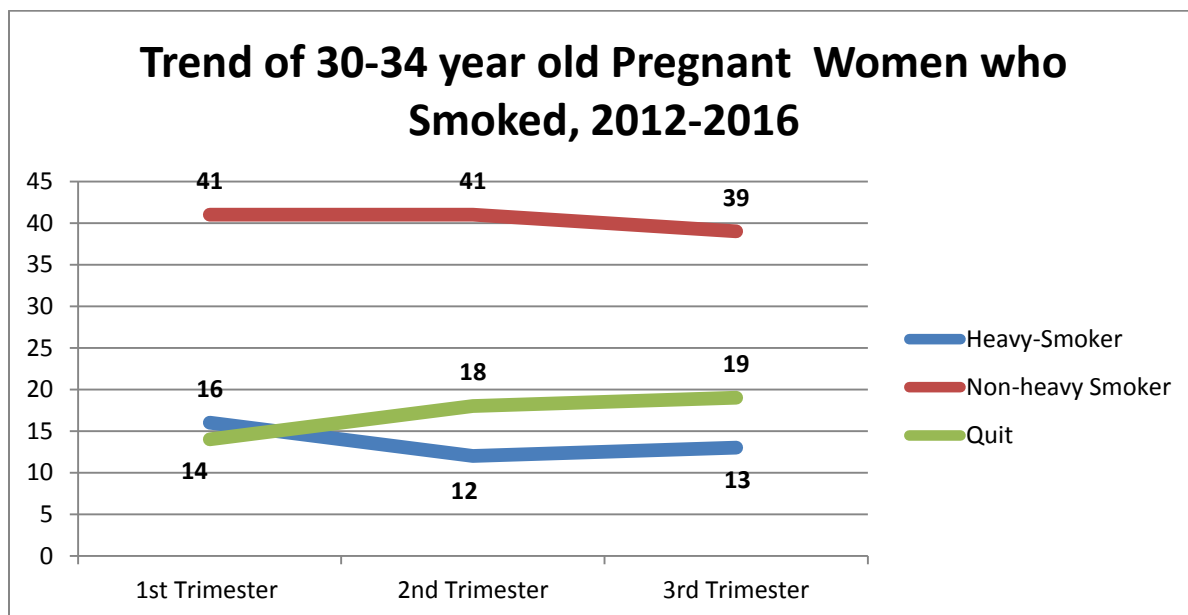
Graph 16 looks at the number of 25-29 year olds who smoked during pregnancy, where not much of a pattern can be determined. Despite this, Graph 17 shows that the number of heavy-smokers decreased by almost half and the number of women who quit increased. While the number of non-heavy smokers did increase this is likely due to heavy-smokers cutting down to become non-heavy smokers. By the third trimester, 88% of women who smoked during pregnancy were still smoking.

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Graph 18



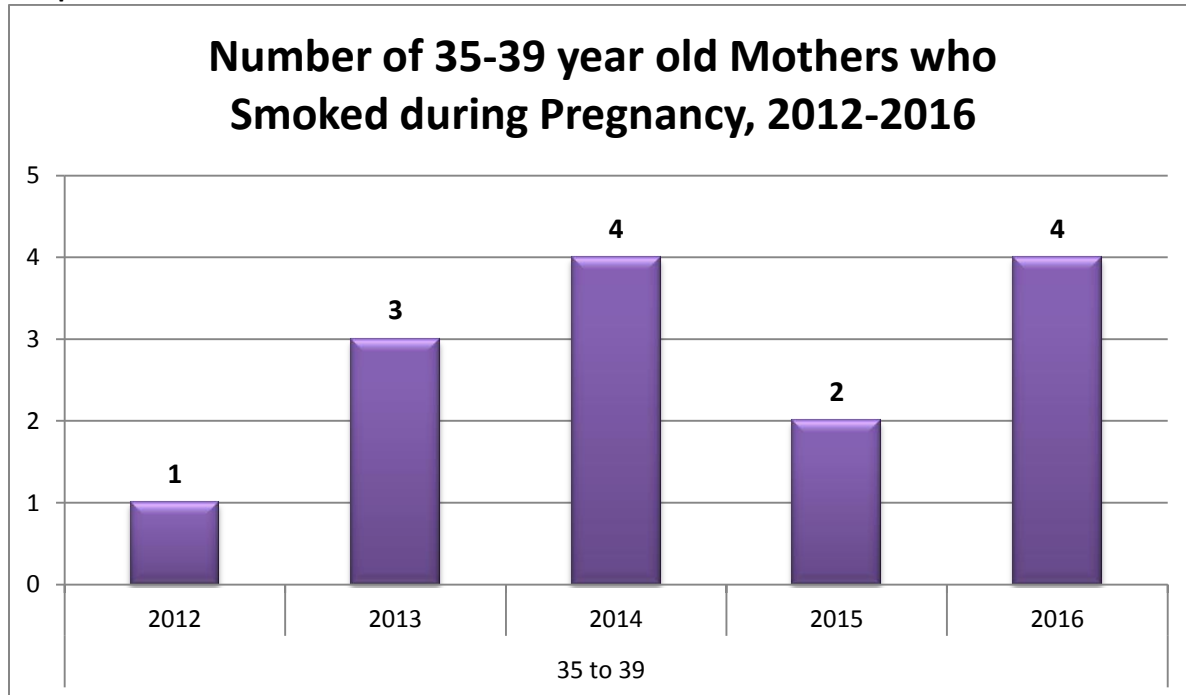
Graph 19



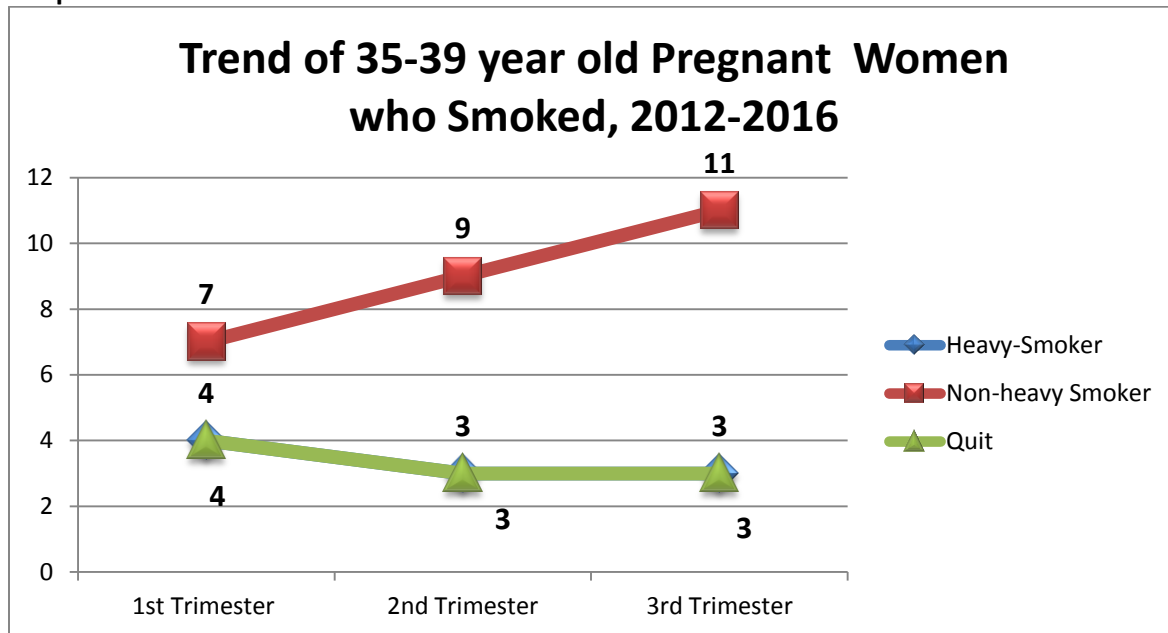
Graph 18 shows a steady decrease in the number of 30-34 year old pregnant women who smoked from 2012-2014, however, there is a sharp increase in 2015 with almost triple the number of pregnant women smoking. This number then drops again in 2016 to close to where it had been in 2014. Graph 19 displays the same trend seen above, where the number of heavy-smokers decreases and the number of women who quit increases. Unlike the other examined groups, however, the changes in heavy-smokers and women who quit smoking are not as large. Of the total number of women who smoked during their pregnancy, 91% smoked in their third trimester.

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Graph 20



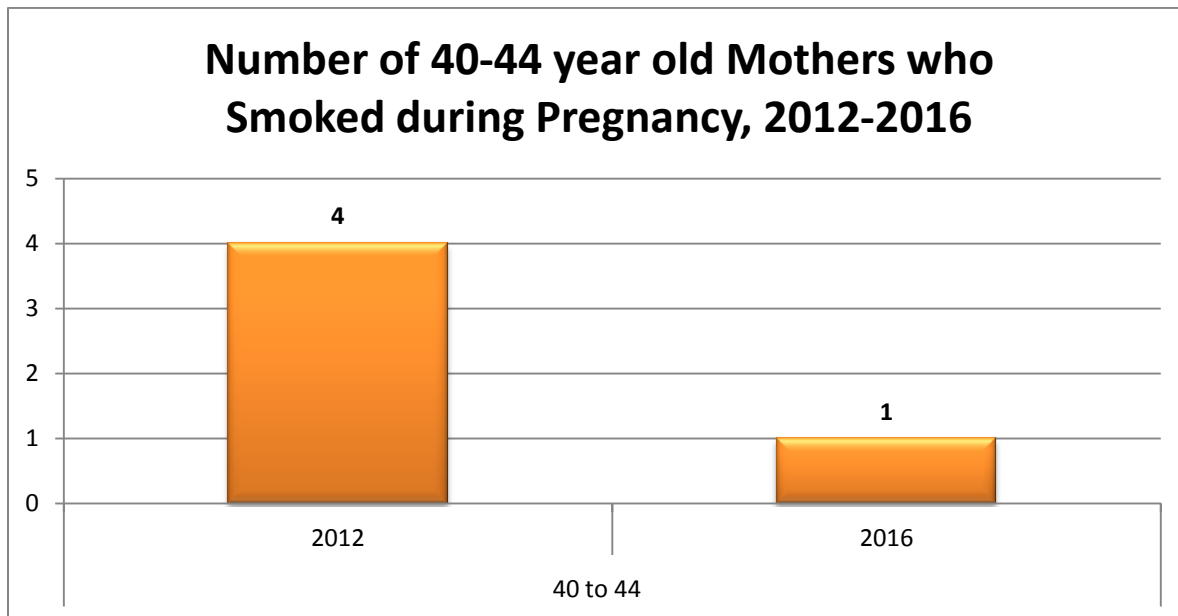
Graph 21



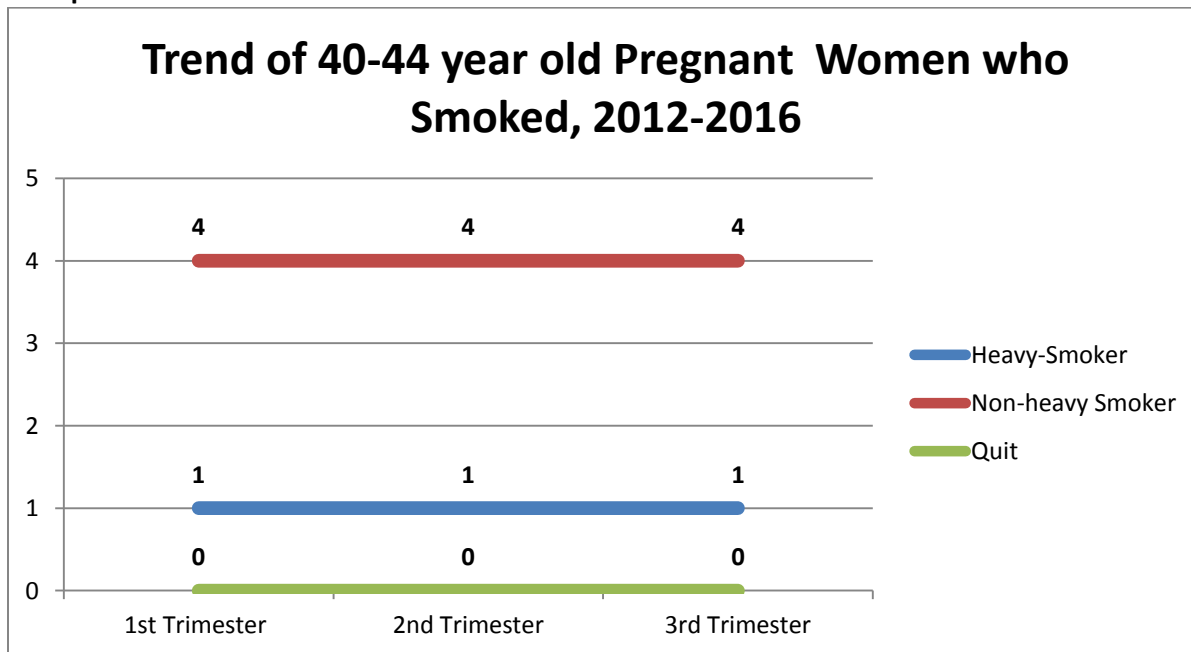
The number of 35-39 year old pregnant women steadily increases between 2012 and 2014 before decreasing in 2015 and then increasing once more in 2016. The trend seen in Graph 21 is different than those seen in the other areas examined. Here, while the number of heavy-smokers does decrease so does the number of women who quit, this occurs while the number of non-heavy smokers increases as the pregnancy progresses. Of the women who smoked during their pregnancy 100% of them were smoking in their third trimester.

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Graph 22



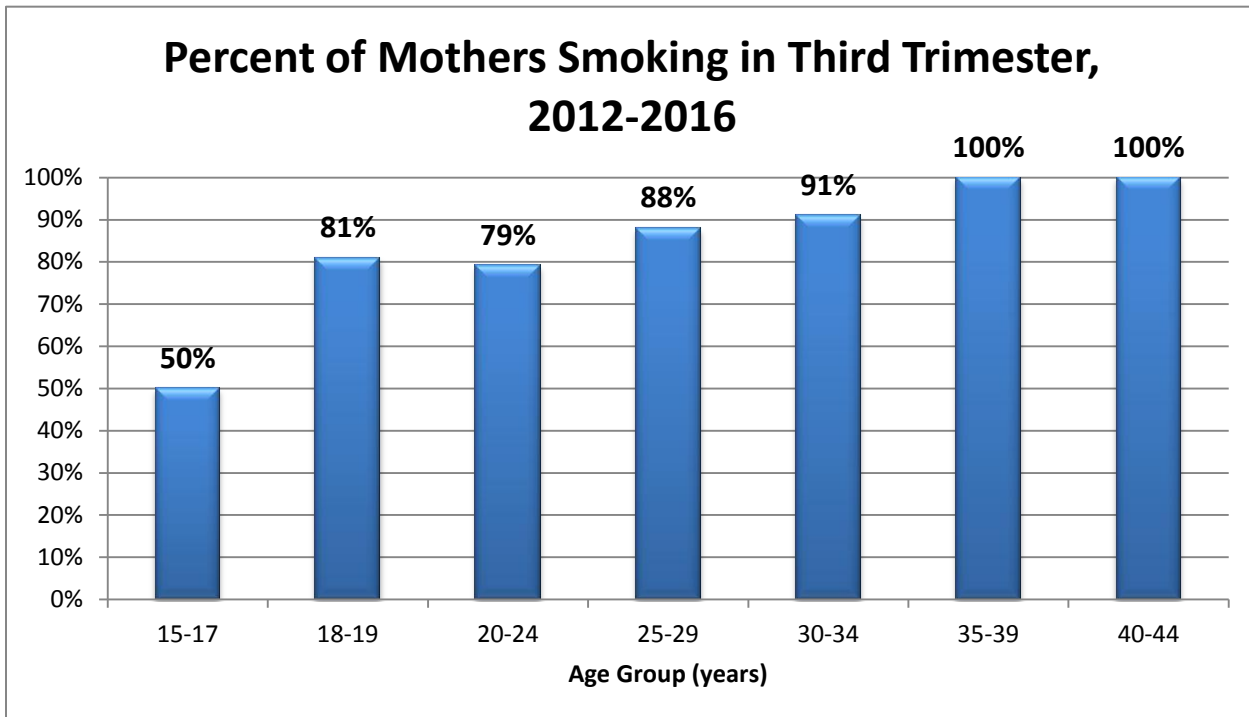
Graph 23



Though there is a clear decline in the number of 40-44 year old women who smoked from 2012 to 2016, the small number of cases for this age group needs to be kept in mind when examining this trend. Graph 23 differs from the other trends in that there were no mothers who quit or decreased their smoking habits during the progression of their pregnancy; once again, though, the small number of cases for this age group needs to be considered.

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Graph 24



Graph 24 examines the percentage of mothers from each age group who were smoking in their third trimester. These percentages were calculated by taking the number of mothers smoking in their third trimester and dividing it by the total number of mothers who smoked during their pregnancy in that age group. The trend that can be seen in the graph is that the number of women smoking in their third trimester increases as age increases. This correlation could be contributed to the number of years that woman has been smoking; as it is more difficult for women who have been smoking longer to quit.

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Data Summary and Recommendations

Data Summary

Between 2012 and 2016, an average of 25% of pregnant women in Williams County smoked at some point during their pregnancy. Throughout the pregnancy, however, the number of heavy-smokers decreased by half and of those who smoked 44% quit during their pregnancy. Despite these encouraging numbers, of the women who smoked during their pregnancy 84% smoked during their third trimester.

Immediate Health effects:

According to the Centers for Disease Control and Prevention, these are some of the effects of prenatal smoking on health and well-being:

- Smoking during pregnancy can cause:
 - Birth defects
 - Preterm birth
 - Infant death
- Prenatal smoking is associated with birth defects like cleft lips and cleft palates
- Preterm births can put the baby at higher risk for serious disabilities or even death. Infants who are born prematurely can experience:
 - Low birth weight
 - Feeding difficulties
 - Breathing problems
 - Vision problems
 - Hearing impairment
 - Cerebral palsy
 - Developmental delay
- Smoking during and after pregnancy is a risk factor of Sudden Infant Death Syndrome (SIDS). SIDS is an infant death for which a cause of the death cannot be found.

When you stop smoking:

- Your baby gets more oxygen, even after just 1 day.
- Your baby will grow better.
- Your baby is less likely to be born too early.
- You'll have more energy and breathe more easily.

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- You will be less likely to develop heart disease, stroke, lung cancer, lung disease, and other smoking-related diseases.

Long-term health effects:

According to the study completed by Cornelius, Goldschmidt and Day (2012), the effects of smoking while pregnant extend far past infancy, specifically in terms of behavioral problems and smoking habits.

The study found that young adults whose mothers smoked during their pregnancy have significantly higher scores on the Adult Self-Report (ASR) behavioral survey. These individuals received higher scores in categories such as:

- Social withdrawal
- Anxiety/depression
- Rule-breaking behavior
- Aggressive behavior
- Intrusive behavior
- Thought problems
- Attention problems

Young adults whose mothers smoked during pregnancy were also more likely to have an arrest history and a higher rate of smoking and nicotine dependence (Cornelius, Goldschmidt, & Day, 2012).

Recommendations

The CDC states that quitting smoking before getting pregnant is ideal; however, this may not always be possible. For women who are already pregnant, quitting as soon as possible can protect the infant from the negative health effects. Talk to a doctor about the best ways to quit while pregnant or when trying to get pregnant. It is never too late to quit smoking.

Support can help pregnant women through the unique challenges of quitting while pregnant. Guidance is available for you and for the people around you who are also smoking. These resources include:

- [Feelings, Partners, and Friends](#)
- [Quitting With Help From Friends](#)
- [12 Ways to Help Her Quit Smoking](#)
- [Pregnancy, Motherhood, and Smoking](#)

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References

Centers for Disease Control and Prevention (CDC). (2016). Tobacco Use and Pregnancy.

Retrieved from

<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/tobaccousepregnancyindex.htm>

Cornelius, M., Goldschmidt, L., & Day, N. (2012). Prenatal cigarette smoking: Long-term effects on young adult behavior problems and smoking behavior. *Neurotoxicology and Teratology*, 34, pp. 554-559. Retrieved from

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