Healthy Start

Coalition of Flagler & Volusia Counties, Inc.

Strengthening Our Future

NEEDS ASSESSMENT 2020

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

The Healthy Start Coalition of Flagler and Volusia Counties, Inc. works with stakeholders from our two county service area to improve the health and well-being of pregnant women, infants, young children and their families. To do this effectively, we gather and review related data in a formal and intentional manner and develop strategies based on this review. Every five years, we conduct a comprehensive needs assessment in order to complete a Service Delivery Plan with data-driven strategies to guide our activities, goals and objectives, resource allocation, and fund development.

The attached Needs Assessment for 2020 is comprised of data from multiple sources including

- Population level data by County
- Department of Health/Florida CHARTS data
- Zip Code level data in specific neighborhoods
- Service Level Data
- Fetal and Infant Mortality Review Data
- Consumer feedback
- Provider feedback

We focused on data related to specific indicators to include:

- Infant Mortality and Fetal Death
- Low Birth Weight and Very Low Birth Weight
- Entry into Prenatal Care
- Screening - prenatal and postnatal
- Substance Exposed Pregnant Women and their Babies
- Maternal Health/Social Determinants of Health
- Neighborhood Level Social Determinants of Health and Health Equity

As a major component and driving tool in the decision-making process toward improving the lives of mothers and babies, this Needs Assessment contains data from multiple sources and has been presented in a manner that is designed to be clear and easy to understand.

As we were completing this product in March 2020, we were forced to redirect our efforts and reconsider our strategies as the COVID 19 pandemic forced many shifts in priorities. Because of this, data that we used to set long term goals, but which also has some reporting time lag, has been supplanted by some anecdotal and provisional data as the circumstances demand.
The value of the Healthy Start Coalitions has never been more evident than in 2020. Our ability to remain focused on the important needs of pregnant women and babies while our public health system is forced to pivot focus on a pandemic, speaks to the wisdom of

the Florida Legislature in the creation of local coalitions to drive maternal child health needs assessment and service delivery planning.

The Role of the Needs Assessment in Service Delivery Planning

The Service Delivery Planning process is an ongoing activity that takes place each quarter with reports of outcomes presented by all providers and stakeholders. While we assess needs with our stakeholders each time we meet, during the final year before our five year Service Delivery Plan is due, we conduct a formal needs assessment that aligns with and incorporates the Community Health Needs Assessment (CHNA) for each county in our service area as an integral part. Our timeline, while intentionally designed to allow sufficient time for our stakeholders to reflect on information as part of the decision-making process toward the development of long term goals, also includes information about COVID and its impact on community need. Below is the planning process we used to develop the Needs Assessment

a. **Phase I** - The Comprehensive Needs Assessment began with convening of the Healthy Start provider agencies to review Healthy Start Service Delivery data in relation to core performance measures and outcomes as part of our Plan, Do, Study, Act process to consider the ongoing action planning of the Coalition.

b. **Phase II** - The second phase of the Needs Assessment process included participation in and review of the Flagler and Volusia Counties Community Health Needs Assessment (CHNA) data as it relates to social determinants of health and maternal, infant and early child health and wellbeing. In addition to the CHNA data, we reviewed more precise maternal and infant health indicators as well as place-based data in a more granular fashion to consider factors that contribute to disproportionately high rates of fetal and infant mortality and morbidity (and other indicators) in specific zip codes and census tracts.

c. **Phase III** - The third phase considered areas where we have made progress or lost ground toward major indicator outcomes and begin the formulation action plan strategies.

Based on the preliminary needs assessment data, the following areas were determined to be indicators for ongoing strategy development and action:

- Fetal and Infant Mortality
- Low Birth Weight
- Entry into Prenatal Care
- Screening - prenatal and postnatal
- Substance Exposed Pregnant Women and their Babies
- Social Determinants of Health and Health Equity

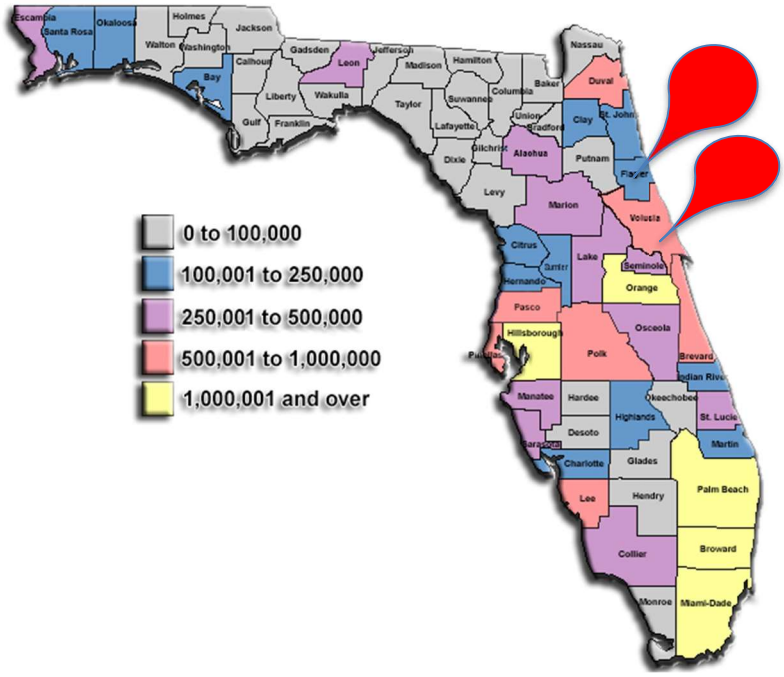
d. **Phase IV** – The Service Delivery Planning group will continue to meet to finalize recommendations about the priorities and strategies related to the Needs Assessment.

The Needs Assessment serves as a driving force in the development of the Coalition's Five Year Service Delivery Plan. It incorporates data and information about available resources and gaps in order to establish a unified Action Plan to improve outcomes.

I. Service Area by County Demographics

Service Area Population

Our Coalition Service Area designation is comprised of Volusia County and Flagler County Florida. Combined, these two counties are home to 668,365 residents (2019). Volusia County has 16 cities, the most populous being Deltona, with 91,951 (2018) and Daytona Beach with 68,866 (2018). This county has a distinct "east" and "west" side, with Deltona located on the southwest quadrant of the county and Daytona Beach is in the east central area located on the coast. Flagler County has 5 municipalities and 115,081 resident. The city of Palm Coast is the most populous with 87,607 residents (2018) and an unincorporated area with over 15,000 residents. This comprises about 90% of the Flagler County population. There are a total of five municipalities in Flagler County.



In total, there are 21 distinct municipalities within these two counties. These two counties represent a diverse range of people and resources

For additional information about the demographics of Volusia and Flagler Counties by age, gender, and income, we reference the Community Health Needs Assessments for both counties. These may be found at:

www.floridahealth.gov/.../volusia-county/_documents/Volusia_CHA.pdf

www.flaglercares.org/Flagler_CHNA.pdf

A. FLAGLER COUNTY

1. Population by Age and Gender

Flagler County is the smaller of the two counties in our Coalitions service area. 27.3% of the Flagler population consists of women of reproductive age (ages 15-44). The majority (58.4%) of residents of Flagler County residents are over age 45.

Figure 1. Population by Age and Gender, Flagler County, Florida 2019

Population by Age and Gender, Flagler County, Florida - 2019										
		County						State		
Age Group	Data Year	Male	Female	Total	% Male by age	% Female by age	% Total by age	% Male by age	% Female by age	% Total by age
< 5	2019	2,168	2,147	4,315	4.1%	3.7%	3.9%	5.6%	5.1%	5.4%
5-14	2019	5,514	5,144	10,658	10.4%	9.0%	9.6%	11.6%	10.6%	11.1%
15-24	2019	5,399	5,024	10,423	10.1%	8.8%	9.4%	12.2%	11.1%	11.6%
25-44	2019	9,990	10,603	20,593	18.8%	18.5%	18.6%	25.9%	24.5%	25.2%
45-64	2019	14,017	16,645	30,662	26.3%	29.0%	27.7%	25.9%	26.7%	26.3%
65-74	2019	9,330	10,358	19,688	17.5%	18.0%	17.8%	10.6%	11.8%	11.2%
> 74	2019	6,818	7,479	14,297	12.8%	13.0%	12.9%	8.2%	10.1%	9.2%

Data Source: The Florida Legislature, Office of Economic and Demographic Research.

2. Population by Race & Ethnicity

As of 2019, 83.9% of Flagler residents were White, 10.7% Black and 5.3% identified as Other Race. In addition, 89.4% identify as Non-Hispanic White, and 10.6% are Hispanic ethnicity.

Figure I.A.2.a. Population by Race, Flagler County 2019

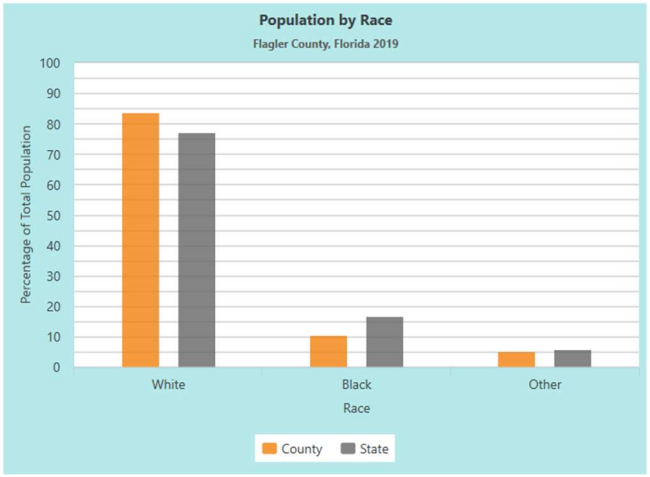


Figure A. 2.b. Population by Hispanic/NonHispanic Flagler County, 2019

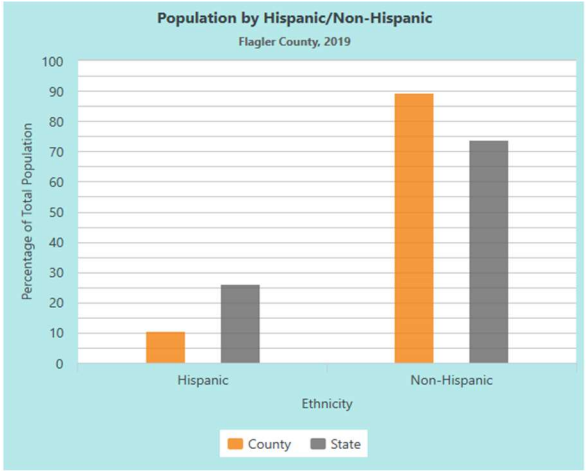
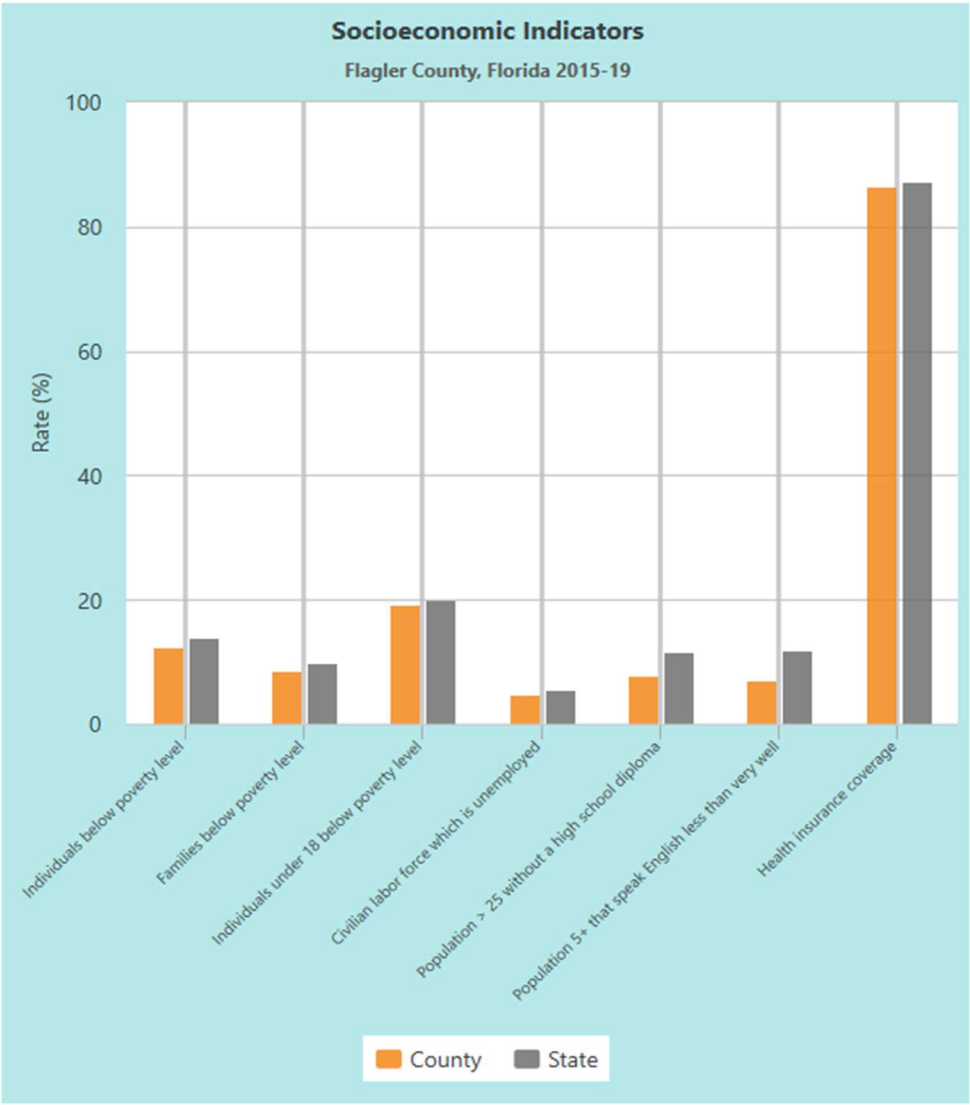


Figure I.A.3. Socioeconomic Indicators, Flagler County, Florida 2019

3. Socioeconomic Indicators

Flagler County is below the State rate for major socio economic indicators to include percentage of people below the poverty level (12.4% as compared to Florida at 14.0%) and percentage of families below the poverty level (8.6% as compared to Florida at 10.0%). In 2019, the percentage of individuals under 18 who were below the poverty level was 19.3 compared to Florida at 20.1%. It should be noted that these numbers may fluctuate due to the unknown impact of COVID 19 on employment and poverty rates.



4. Social and Mental Health

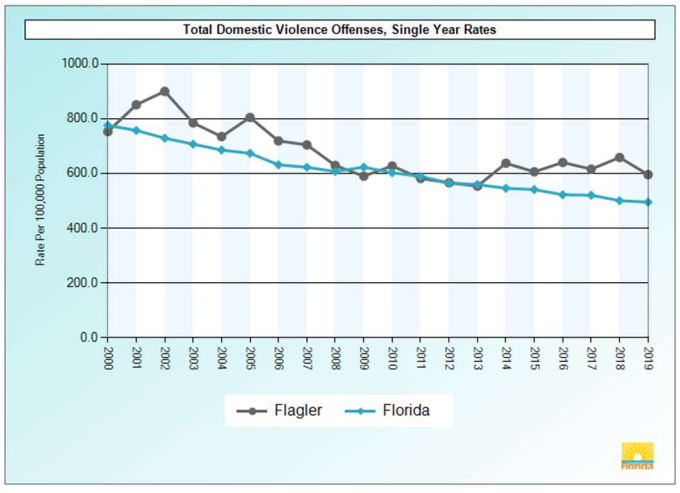
Social and Mental Health factors have a significant impact on family life and include indicators such as crime and domestic violence, alcohol use, suicide, and hospitalizations for mental disorders. Though Flagler County's poverty and employment rates are favorable when compared to Florida, certain areas related to social and mental health are higher than Florida's rate. In general, crime rates in Flagler County related to social and mental health are lower than that of Florida. However, three areas that are higher than Florida include Domestic Violence Offenses, Suicide, and Hospitalizations for mental disorders among children under age 18.

a. Domestic Violence Offenses

According to the National Coalition Against Domestic Violence, 1 in 4 women and 1 in 9 men experience severe intimate partner physical violence and women between the ages of 18-24 are most commonly abused by an intimate partner. Domestic victimization is correlated with a higher rate of depression and suicidal behavior. It is estimated that 1 in 15 children are exposed to intimate partner violence each year, and 90% of these children are eyewitnesses to this violence. In Florida in 2019, 105,298 domestic violence incidents were reported to the police. (https://assets.speakcdn.com/assets/2497/ncadv_florida_fact_sheet_2020.pdf)

In Flagler County, the rate of reported Domestic Violence Offenses saw an increase in 2014 with a rate of 637.3 and again in 2018 with a rate of 658.2 as compared with Florida's rate of 500.6. Flagler County's incidence of Domestic Violence has remained above the state rate, though there was a decline in 2019.

Figure I.A.4. a and b. Total Domestic Violence Offenses, Rate Per 100,000 Population, Single Year 2010 - 2019



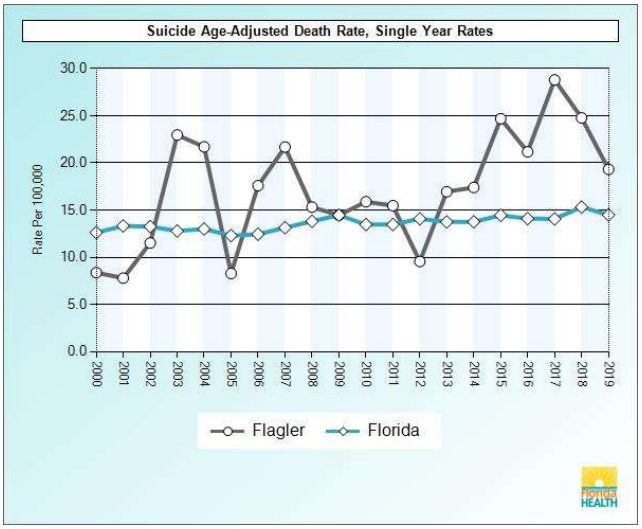
Data Source: Florida Department of Law Enforcement

Total Domestic Violence Offenses, Rate Per 100,000 Population, Single Year								
	Flagler				Florida			
Year	Count	Denom	Rate	MOV (+/-)	Count	Denom	Rate	MOV (+/-)
2019	659	110,636	595.6*	45.3	105,298	21,268,553	495.1	3.0
2018	714	108,481	658.2*	48.1	104,914	20,957,705	500.6	3.0
2017	653	106,076	615.6*	47.1	106,979	20,555,728	520.4	3.1
2016	663	103,584	640.1*	48.6	105,640	20,231,092	522.2	3.1
2015	617	101,826	605.9*	47.7	107,666	19,897,762	541.1	3.2
2014	635	99,646	637.3*	49.4	106,882	19,579,871	545.9	3.3
2013	543	98,062	553.7	46.4	108,030	19,314,396	559.3	3.3
2012	551	97,347	566.0	47.1	108,046	19,118,938	565.1	3.4
2011	561	96,443	581.7	48.0	111,681	18,941,742	589.6	3.4
2010	601	95,812	627.3	50.0	113,378	18,820,280	602.4	3.5

b. Suicide Age-Adjusted Death Rate

Suicide is defined as death caused by self-directed injurious behavior with intent to die as a result of the behavior. According to the Centers for Disease Control and Prevention (CDC), suicide is a leading cause of death in the United States, claiming the lives of over 48,000 people in 2018. Suicide was the second leading cause of death among individuals between ages 10 and 34, and the fourth leading cause of death among individuals between ages 35 and 54. (https://www.nimh.nih.gov/health/statistics/suicide.shtml) Suicide age adjusted death rates in Flagler County have been higher than Florida since 2013. In 2019, the rate in Florida was 14.5 and in Flagler County it as 19.3. It has declined since 2017, where the rate was 28.8 compared to Florida's rate that year of 14.1.

Figure I.A.5.a and b Suicide Age-Adjusted Death Rate, Single Year Rates, 2010 – 2019, Flagler County, Florida



Years	Count	Rate	Count	Rate
2019	25	19.3	3,427	14.5
2018	29	24.8	3,552	15.3
2017	31	28.8	3,187	14.1
2016	20	21.2	3,122	14.1
2015	26	24.7	3,152	14.5
2014	20	17.4	2,961	13.8
2013	17	17.0	2,892	13.8
2012	11	9.6	2,922	14.1
2011	15	15.5	2,765	13.5
2010	18	15.9	2,753	13.5

c. Hospitalizations for Mental Disorders Age Under 18

Another indicator related to Social and Mental Health is in the area of hospitalizations for mental disorders for individuals under the age of 18. Flagler County has been significantly above the rate of Florida and the rate has been increasing since 2016. From 2017 to 2019, 529 Flagler children under age 18 have been hospitalized for mental disorders. In 2019, the rate was 1,599.4 (rate per 100,000 population) more than double the rate of Florida at 646.6.

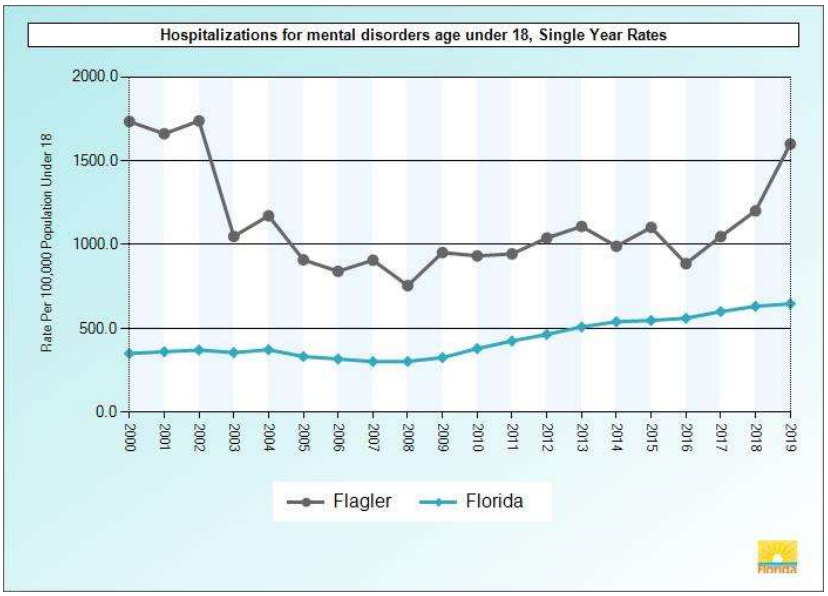


Figure I.A.6.a. Hospitalizations for mental disorders age under 18, Single Year Rates, Flagler County, Florida

Figure I.A.6.b. Hospitalizations for mental disorders age under 18, Single Year Rates, Flagler County, Florida 2010 - 2019

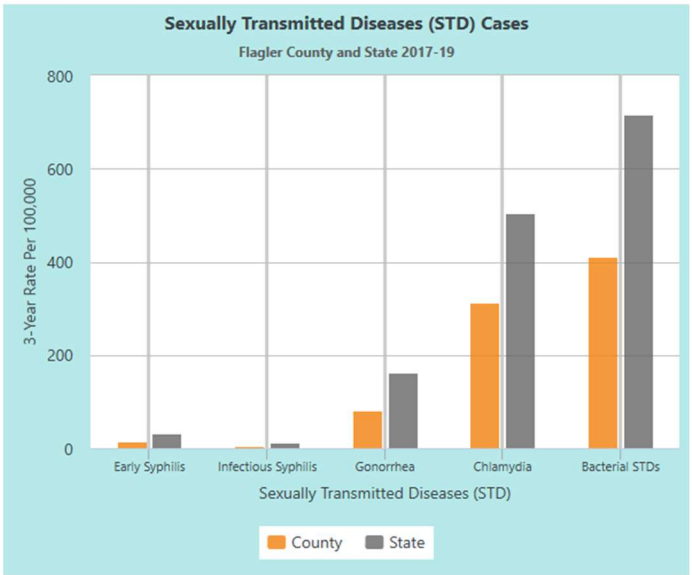
Hospitalizations for mental disorders age under 18, Rate Per 100,000 Population Under 18, Single Year								
	Flagler				Florida			
Year	Count	Denom	Rate	MOV (+/-)	Count	Denom	Rate	MOV (+/-)
2019	284	17,757	1,599.4*	184.5	27,416	4,240,077	646.6	7.6
2018	226	18,818	1,201.0*	155.6	26,501	4,193,969	631.9	7.6
2017	195	18,610	1,047.8*	146.3	24,804	4,132,215	600.3	7.4
2016	164	18,497	886.6*	135.1	22,974	4,095,126	561.0	7.2
2015	205	18,594	1,102.5*	150.1	22,221	4,058,679	547.5	7.2
2014	185	18,691	989.8*	141.9	21,755	4,029,415	539.9	7.2
2013	208	18,769	1,108.2*	149.8	20,426	4,011,779	509.2	7.0
2012	198	19,058	1,039.0*	144.0	18,644	4,016,797	464.2	6.6
2011	182	19,269	944.5*	136.6	17,177	4,039,432	425.2	6.3
2010	177	18,985	932.3*	136.7	15,185	3,997,076	379.9	6.0

The rate of hospitalizations for children under 18 for mental disorders as shown in Figure 7. a. and b. has been identified as statistically significantly higher than the state rate since the year 2000 and has been trending upward for the last two decades. The Flagler County Community Health Needs Assessment Steering Committee identified behavioral health as a focus of concern and is addressed in the County's Health Improvement Plan.

d. Sexually Transmitted Diseases (STD Cases)

Sexually Transmitted disease rates include Early Syphilis, Infectious Syphilis, Gonorrhea, Chlamydia, and Bacterial STDs. Flagler County rates are below Florida's rates in all STDs.

Figure I.A.7. Sexually Transmitted Diseases (STD) Cases, Flagler County and Florida 2017 - 2019



B. VOLUSIA COUNTY

1. Population by Age and Gender

As of 2019, Volusia County had 25,553 children under age 5, which represents 4.7% of the overall population. There were 88,195 women of reproductive age, or 31.9% of the total female Volusia County residents. The overall population by age and gender is fairly reflective of Florida as a whole.

Figure I. B.1.a. Population by Age and Gender, Volusia County, Florida 2019

Population by Age and Gender, Volusia County, Florida - 2019										
		County						State		
Age Group	Data Year	Male	Female	Total	% Male by age	% Female by age	% Total by age	% Male by age	% Female by age	% Total by age
< 5	2019	12,998	12,555	25,553	4.9%	4.5%	4.7%	5.6%	5.1%	5.4%
5-14	2019	27,227	26,057	53,284	10.3%	9.4%	9.9%	11.6%	10.6%	11.1%
15-24	2019	31,289	28,996	60,285	11.9%	10.5%	11.2%	12.2%	11.1%	11.6%
25-44	2019	60,488	59,199	119,687	23.0%	21.4%	22.2%	25.9%	24.5%	25.2%
45-64	2019	71,102	77,863	148,965	27.0%	28.2%	27.6%	25.9%	26.7%	26.3%
65-74	2019	34,890	39,032	73,922	13.2%	14.1%	13.7%	10.6%	11.8%	11.2%
> 74	2019	25,336	32,531	57,867	9.6%	11.8%	10.7%	8.2%	10.1%	9.2%

Data Source: The Florida Legislature, Office of Economic and Demographic Research.

2. Population by Race and Ethnicity

Of the 539,563 residents of Volusia County, 83.9% were White, 11.4% were Black, and 4.7% were identified as Other Race (2019 data). 14.5% identified as Hispanic, which is lower than Florida, with 26.3% identified as Hispanic.

Figure I.B.2.a. Population by Race Volusia County, Florida 2019

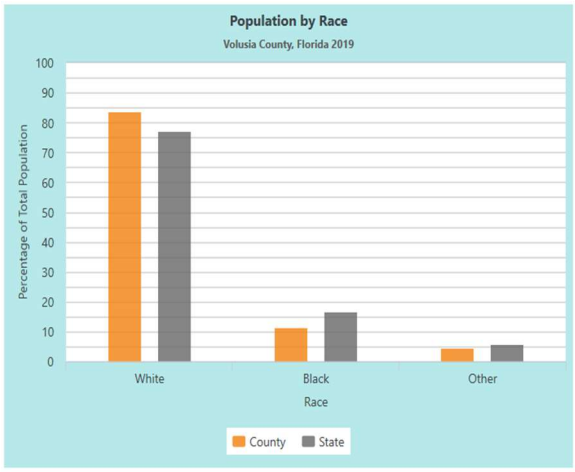


Figure I.B.2.b. Population by Hispanic/Non Hispanic Volusia County, Florida 2019

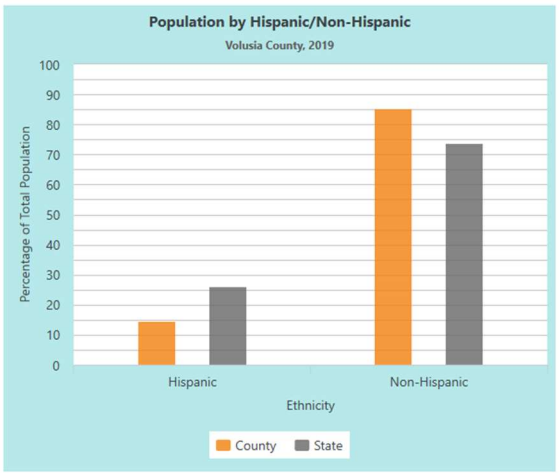
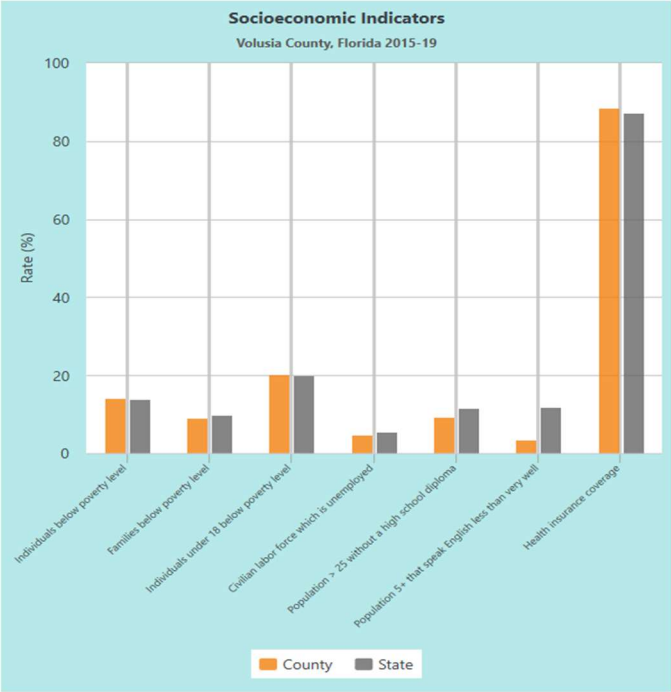
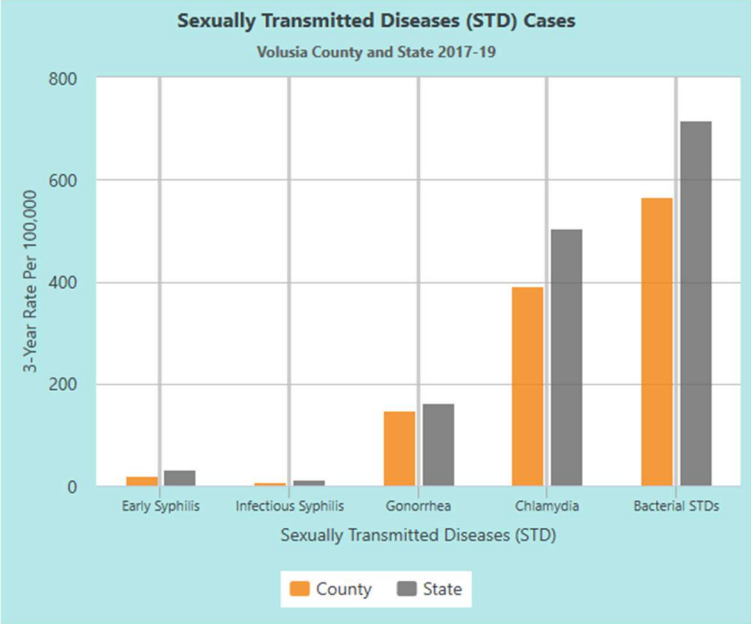


Figure I.B.3. Socioeconomic Indicators Volusia County, Florida 2015-2019

3. Socioeconomic Indicators

Volusia County is very reflective of Florida with regard to socioeconomic indicators including poverty and unemployment. Individuals with Health Insurance Coverage is slightly higher for Volusia County (88.5%) than that of Florida, at 87.2%, there are more people under 25 with a high school diploma 90.5% as compared to Florida at 88.25%





4. Sexually Transmitted Diseases (STD) Cases

Volusia County Sexually Transmitted Disease rate is below Florida for Early Syphilis, Infectious Syphilis, Gonorrhea, Chlamydia, and Bacterial STD's. However, viewing this data by zip code and at the neighborhood level, provides an opportunity to target activities and resources more effectively. This will be more thoroughly analyzed in the Health Equity section of the Needs Assessment.

Figure I.B.4. Sexually Transmitted Diseases (STD) Cases Volusia County and State 2017 – 2019

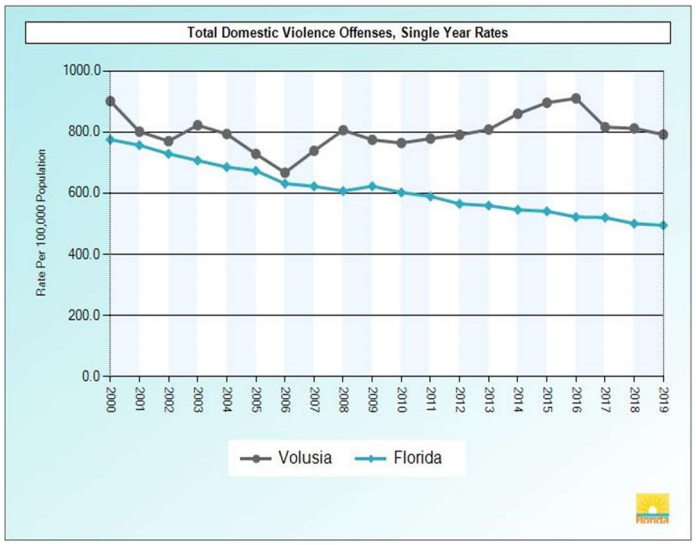
5. Social and Mental Health

Volusia County shows several social and mental health indicators with rates above Florida. Domestic Violence, Suicide, and Hospitalizations for Mental Disorders are above that of Florida.

a. Domestic Violence Offenses

Volusia County, as Flagler, has a significantly higher rate of Domestic Violence Offenses than Florida. The rate in 2019 was 791.8 per 100,000 population, which is more than 1.5 times Florida's rate of 495.1 for the same year.

Figure I.B.5.a. and b. Domestic Violence Offenses, Single Year Rates, Volusia County, Florida 2000-2019 and 2010 – 2019



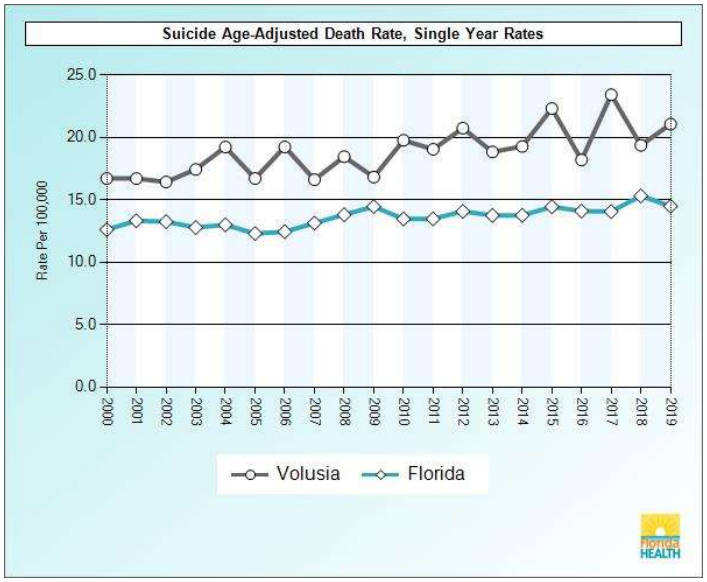
	Volusia				Florida			
Year	Count	Denom	Rate	MOV (+/-)	Count	Denom	Rate	MOV (+/-)
2019	4,272	539,563	791.8*	23.6	105,298	21,268,553	495.1	3.0
2018	4,328	532,926	812.1*	24.1	104,914	20,957,705	500.6	3.0
2017	4,285	525,121	816.0*	24.3	106,979	20,555,728	520.4	3.1
2016	4,724	519,037	910.1*	25.8	105,640	20,231,092	522.2	3.1
2015	4,589	512,247	895.9*	25.8	107,666	19,897,762	541.1	3.2
2014	4,345	505,420	859.7*	25.5	106,882	19,579,871	545.9	3.3
2013	4,040	499,893	808.2*	24.8	108,030	19,314,396	559.3	3.3
2012	3,934	497,494	790.8*	24.6	108,046	19,118,938	565.1	3.4
2011	3,860	495,835	778.5*	24.5	111,681	18,941,742	589.6	3.4
2010	3,780	494,617	764.2*	24.3	113,378	18,820,280	602.4	3.5

b. Suicides and Hospitalizations for Mental Disorders and Mood and Depressive Disorders

Suicide

The Suicide Age-Adjusted Death Rate for Volusia County is higher than that of Florida. In 2019, the rate was 21.1 per 100,000 population compared to 14.5 for Florida for the same year. We have remained above that of the rate of Florida for over two decades.

Figure I.B.6.a. and b. Suicide Age-Adjusted Death Rate, Single Year Rates, Volusia County, Florida



Suicide Age-Adjusted Death Rate, Single Year Rates				
	Volusia		Florida	
Years	Count	Rate	Count	Rate
2019	128	21.1	3,427	14.5
2018	125	19.4	3,552	15.3
2017	123	23.4	3,187	14.1
2016	103	18.2	3,122	14.1
2015	124	22.3	3,152	14.5
2014	106	19.3	2,961	13.8
2013	105	18.8	2,892	13.8
2012	121	20.8	2,922	14.1
2011	102	19.1	2,765	13.5
2010	102	19.8	2,753	13.5

Figure I.B 7 a. and b. Hospitalizations for Mental Disorders Age Under 18, Single Year Rates Volusia County, Florida

As illustrated in Figures B.7.a. and b., Volusia County has a significantly higher number of hoispitalizations for children under 18 year of age than Florida as a whole. Our two county service area has hospitalizations among the highest rates in Florida. Volusia County had a rate of 1516.9 per 100,000 in 2019 compared to Florida's rate of 646.6. As with Flagler County, this is considered a statistically significant rate higher than the state. There is a consistent increasing trend over time.

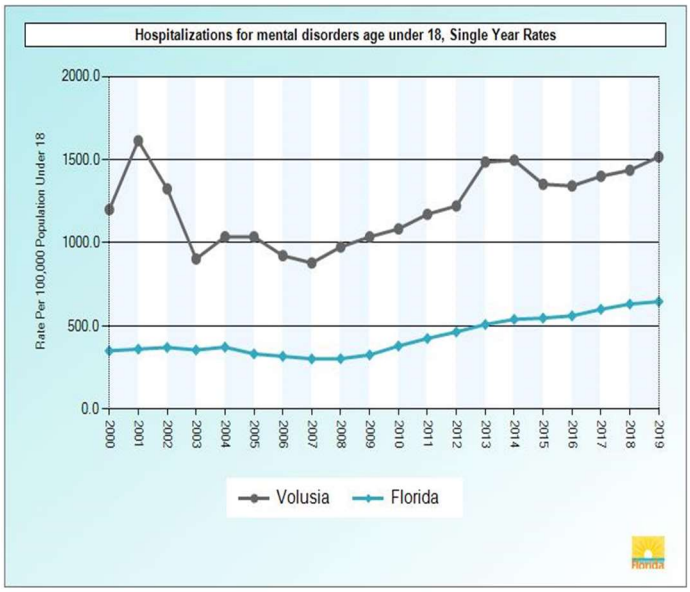
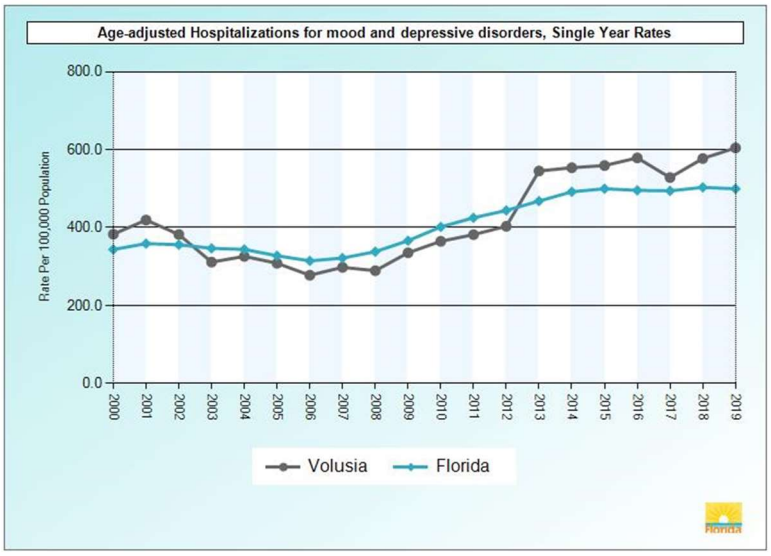


Figure I.B.7.b. Hospitalizations for mental disorders age under 18 per 100,000 Population Under 18, Single Year Volusia County, Florida 2010 - 2019

Hospitalizations for mental disorders age under 18, Rate Per 100,000 Population Under 18, Single Year								
	Volusia				Florida			
Year	Count	Denom	Rate	MOV (+/-)	Count	Denom	Rate	MOV (+/-)
2019	1,453	95,788	1,516.9*	77.4	27,416	4,240,077	646.6	7.6
2018	1,367	95,167	1,436.4*	75.6	26,501	4,193,969	631.9	7.6
2017	1,307	93,352	1,400.1*	75.4	24,804	4,132,215	600.3	7.4
2016	1,248	92,992	1,342.0*	74.0	22,974	4,095,126	561.0	7.2
2015	1,247	92,241	1,351.9*	74.5	22,221	4,058,679	547.5	7.2
2014	1,374	91,819	1,496.4*	78.5	21,755	4,029,415	539.9	7.2
2013	1,366	91,934	1,485.9*	78.2	20,426	4,011,779	509.2	7.0
2012	1,132	92,666	1,221.6*	70.7	18,644	4,016,797	464.2	6.6
2011	1,099	93,817	1,171.4*	68.9	17,177	4,039,432	425.2	6.3
2010	1,007	92,930	1,083.6*	66.6	15,185	3,997,076	379.9	6.0

Figure I. B. 8. Age-adjusted Hospitalizations for mood and depressive disorders



Volusia County is also above the state rate for hospitalizations for mood and depressive disorders since 2013 with a steady trend upward since that time.

II. Core Outcome Indicators

There are multiple ways to measure maternal and child health. The health outcome indicators that were reviewed during this planning process were selected based on commonly referenced state and national measures (for comparisons). For example, Infant Mortality is widely accepted throughout the United States and Florida as not only a primary indicator of maternal and child health, but also a primary indicator of the overall health of a community. Additional indicators have been part of our ongoing service delivery planning activities and continuity of this process was determined to be valuable for our service area, with variations on the strategies and action steps we would employ to address them.
Data related to overall births, fetal mortality and infant mortality/morbidity are from the Florida Department of Health, Office of Vital Statistics.

Because our two county service area has a relatively small number of births, we present data in multiple year averages by county or by service area and also present indicator data in single year rates so they may be viewed over longer periods of time. This is important to gain a more accurate view of trends.

Figure II. 1. Birth Data Comparison by State and Service Area Counties 2015 - 2019

Total Births					
	2015	2016	2017	2018	2019
Florida	224,273	225,018	223,579	221,508	220,010
Flagler County	797	798	810	809	843
Volusia County	4,939	5,033	4,986	4,859	4,824
Service Area	5,736	5,832	5,796	5,668	5,667

Data Note: The state total for the denominator in this calculation may be greater than the sum of county totals due to an unknown county of residence on some records. Data Source: Florida Department of Health, Bureau of Vital Statistics

In Florida, the number of births has shown a decline each year for the last three years from 2017 – 2019. Flagler County has a relatively small number of overall births but has shown an increase for the same time period. Volusia County has seen a very small decline in 2019, though the trend has been downward since 2016. The combined service area total births have declined overall in the last three years.

1. Three Year Rates for Maternal and Infant Health Indicators

Figure II.2. presents indicator data in a concise three year rolling average format by county compared to Florida for years 2017 - 2019. Rolling averages provide a more accurate assessment of trends for counties with smaller population size. For instance, Flagler County had 810 births in 2017, 809 births in 2018, and 843 births in 2019 for all races and ages. Since indicators such as infant mortality are typically calculated per 1,000 live births, in a single year and a specific subgroup such as race, a single death would significantly impact the rate. Additional charts are provided to show comparisons by year throughout the Needs Assessment.

During the 3 year period (2017-2019) the areas that portrayed a significant difference were Prenatal Care and Maternal and Family Characteristics. The comparison of the rate showed a significant difference from the statewide data results to the County rate.

Figure II. 2. Maternal and Infant Health Indicators Flagler County, Volusia County, and Florida 2017 – 2019 (Source: Florida CHARTS)

Indicators - Flagler and Volusia	State Count	State Rate	Flagler Count	Flagler Rate	Volusia Count	Volusia Rate
Births						
Total Births	665,097	10.6	2,462	7.6	14,669	9.2
Prenatal Care						
Births with Adequate Prenatal Care (Kotelchick Index)	409,747	70.6	1,532	75.3	8,891	73.6
Births to Mothers with No Prenatal Care	14,043	2.4	43	2.1	346	2.8
Births to Mothers with 1st Trimester Prenatal Care	456,446	76.5	1,583	77.1	9,660	77.7
Births to Mothers with 2nd Trimester Prenatal Care	97,202	16.3	328	16	2,031	16.3
Births to Mothers with 3rd Trimester Prenatal Care	28,741	4.8	98	4.8	401	3.2
Maternal and Family Characteristics						
WIC Eligible	1,981,770	3,156.60	7,661	2,355.80	46,648	2,919.90
Repeat births to mothers ages 15-19	4,445	14.8	14	11.7	112	14.4
Birth with Inter-Pregnancy Interval < 18months	130,565	34.7	439	35.3	2627	34.1
Births to mothers with Less than High School Education	76,013	11.6	173	7.3	1759	12.2
WIC Eligible Served	1,341,119	67.7	5,548	72.4	29405	63
Resident Live Births to Mothers who Smoked during Pregnancy	29,480	4.4	198	8	1,239	8.4
Mothers who Initiate Breastfeeding	572,403	86.1	1,980	80.4	11,475	78.2
Fertility Rate 15-44	663,057	57.8	2,453	52.9	14,639	56
Low Birth Weight						
Total Live Births Under 2500 Grams	58,262	8.8	205	8.3	1281	8.7
Preterm Births and Elective Deliveries						
Preterm Births with Low Birth Weight	40,460	6.1	134	5.5	896	6.1
Preterm Births (<37 weeks gestation)	68,861	10.4	219	8.9	1491	10.2
Cesarean Section Deliveries	244,968	36.8	868	35.3	4954	33.8
Maternal and Fetal Deaths						
Maternal Deaths	140	21	1	40.6	7	47.7
Fetal Deaths	4,563	6.8	12	4.9	92	6.2
Infant Deaths						
Total Infant Deaths	4,017	6	16	6.5	91	6.2
Leading Causes of Infant Death						
Neonatal Infant Deaths	2,716	4.1	13	5.3	62	4.2
Post neonatal Infant Deaths	1,301	2	3	1.2	29	2
Infant Deaths from Congenital & Chromosomal Anomalies	764	114.9	3	121.9	20	136.3
Infant Death from Perinatal Conditions	2,067	316.5	8	330.4	41	283.3
Infant Deaths from Unintentional Suffocation and Strangulation in	247	0.4	0	0	2	0.1
Total Sudden Infant Death Syndrome (SIDS)	190	0.3	1	0.4	8	0.4
Infant Deaths from Unintentional Suffocation and Strangulation	269	0.4	0	0	4	0.3
Other Selected Causes of Infant Mortality						
Total Sudden Unexpected Infant Deaths (SUID)	637	1	1	0.4	15	1

KEY
Indicates the county rate is statistically significantly different from the statewide rate

a. Total Live Births
Between the years 2017 to 2019 the total live births in the state of Florida consisted of 665,097 where 2% (14,669) births were in Volusia County and 0.3% in Flagler County at a rate of 7.6 and 9.2 respectively showing a significant difference from the states rate of 10.6.

b. Adequacy of Prenatal Care (Kotelchuck Index)
The Kotelchuck Index, also called the Adequacy of Prenatal Care Utilization (APNCU) Index, classifies the adequacy of initiation as follows: pregnancy months 1 and 2, months 3 and 4, months 5 and 6, and months 7 to 9. A ratio of observed to expected visits is calculated and grouped into four categories: Inadequate (received less than 50% of expected visits), Intermediate (received 50%-79% of expected visits), Adequate (received 80%-109% of expected visits), Adequate Plus (received 110% or more of expected visits). Mothers with unknown prenatal care are excluded from the denominator in calculating the percentage.

For adequacy of prenatal care, Flagler and Volusia Counties had a higher rate than Florida at 75.3 and 73.6 respectively compared to Florida at 70.6.

c. Entry to Prenatal Care

Volusia and Flagler Counties have a more favorable rate of entry into prenatal care than that of Florida. The rate of entry to prenatal care in the first trimester was 77.1 in Flagler County and 77.7 in Volusia County compared to 76.5 in Florida. Entry to prenatal care in the second trimester was equivalent to Florida for Volusia County at a rate of 16.3 and Flagler had a second trimester rate of 16.0. For third trimester entry, Flagler had the same rate as Florida at 4.8 and Volusia had a rate of 3.2.

Between 2017 and 2019, 14,043 recorded mothers received no prenatal care, 2.5% of those mothers were from Volusia County and 0.3% from Flagler County. Florida's rate was 2.4 and Volusia County recorded 2.8 while Flagler County recorded 2.1.

d. Births to Mothers with Less than High School Education
Births to mothers who received less than high school education showed a positive comparison from the State and Volusia County, 11.6 and 12.2 rates respectively. Flagler County recorded a noticeable difference recording a 7.3 rate.

e. WIC Eligible Mothers Served
Flagler County's rate for WIC eligible mothers served was 72.4 compared to Florida's rate of 67.7. Volusia County's rate was lower than Florida for the three-year period at 63.0.

f. Resident Live Births to Mothers Who Smoked During Pregnancy
Flagler and Volusia County continue to have a significantly higher rate of women who smoke during pregnancy than Florida. For the three-year period, Flagler County had a rate of 8.0 and Volusia County had a rate for the same period of 8.4.

g. Mothers who Initiate Breastfeeding
The initiation of breastfeeding was lower in Volusia County at a rate of 78.2 compared to the State 86.1. Flagler County showed a higher rate for the three-year period at 80.4, which was still lower than Florida's rate.

h. Maternal Death

Maternal death refers to a woman who dies within one year after the end of their pregnancy. The rate of maternal death for the three-year total 2017-2019 in Florida was 21.0, and in Flagler the rate was 40.6 (which was 1 death in the three-year period). Volusia County had a total of 7 maternal deaths at a rate of 47.7. Though the number is

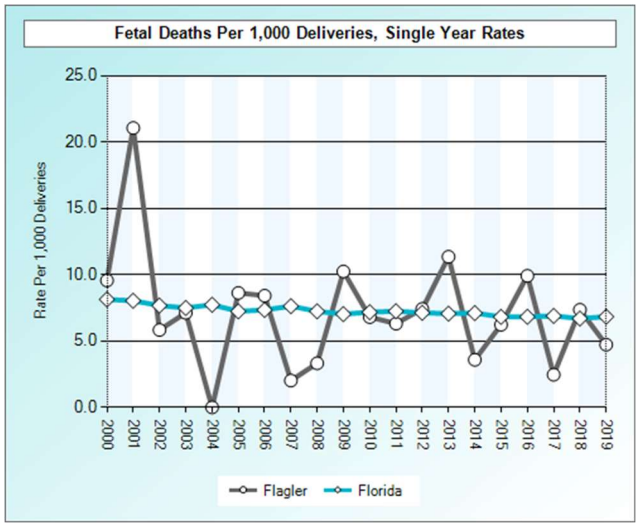
2. Single Year Rates for Maternal and Infant Health Indicators

Maternal and infant health indicators have been provided in single year rates over multiple years in chart and table form to provide a more thorough analysis of core indicators.

a. Fetal Deaths

Fetal Death, fetal mortality or stillbirth is the death of a fetus after 20 weeks of gestation. It results in a baby born without signs of life. The term is in contract to miscarriage (less than 20 weeks of gestation) and live birth (where the baby is born alive, even if the baby dies shortly after birth). Fetal mortality and the fetal mortality rate reflect the health and well-being of the population's reproductive age women and their pregnancies as well as the quality of the health care available.

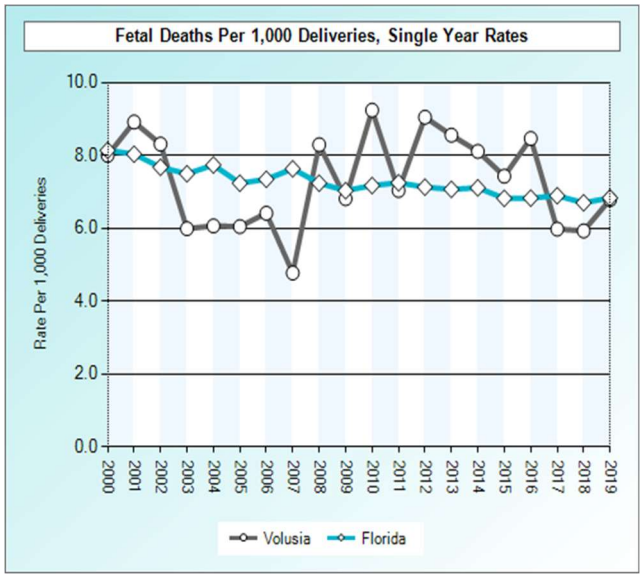
Figure II. 3 a. and b. Fetal Deaths Per 1,000 Deliveries, Single Year Rates Flagler County, Florida



Fetal Deaths Per 1,000 Deliveries Single Year Rates								
	Flagler				Florida			
Years	Count	Denom	Rate	MOV	Count	Denom	Rate	MOV
2019	4	847	4.7		1,515	221,525	6.8	0.3
2018	6	815	7.4	5.9	1,495	223,003	6.7	0.3
2017	2	812	2.5		1,553	225,132	6.9	0.3
2016	8	806	9.9	6.8	1,548	226,566	6.8	0.3
2015	5	802	6.2	5.4	1,541	225,814	6.8	0.3
2014	3	836	3.6		1,576	221,481	7.1	0.4
2013	9	792	11.4	7.4	1,533	216,727	7.1	0.4
2012	6	808	7.4	5.9	1,530	214,484	7.1	0.4
2011	5	792	6.3	5.5	1,558	214,795	7.3	0.4
2010	6	881	6.8	5.4	1,551	216,070	7.2	0.4

During 2019 Flagler County (above Figure II.3.a and b.) had a fetal death rate of 4.7 (number per 1,000 deliveries) which represented a total of four fetal deaths. Volusia County had a rate of 6.8 during the same year which represented a total of 33 fetal deaths. (Figure II. 3 b. and c.)

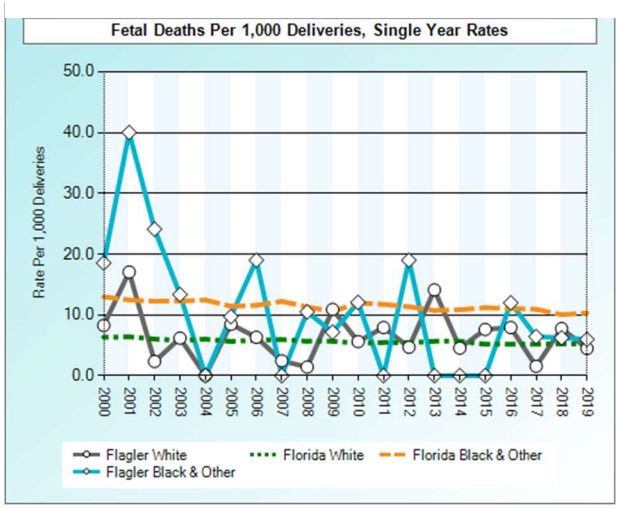
Figure II. 3 b. and c. Fetal Deaths Per 1,000 Deliveries, Single Year Rates, Volusia County, Florida

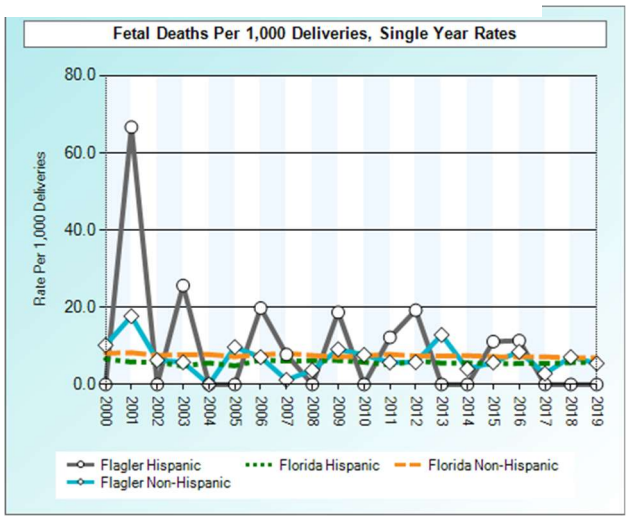


Fetal Deaths Per 1,000 Deliveries Single Year Rates								
	Volusia				Florida			
Years	Count	Denom	Rate	MOV	Count	Denom	Rate	MOV
2019	33	4,857	6.8	2.3	1,515	221,525	6.8	0.3
2018	29	4,888	5.9	2.2	1,495	223,003	6.7	0.3
2017	30	5,016	6.0	2.1	1,553	225,132	6.9	0.3
2016	43	5,076	8.5	2.5	1,548	226,566	6.8	0.3
2015	37	4,976	7.4	2.4	1,541	225,814	6.8	0.3
2014	39	4,806	8.1	2.5	1,576	221,481	7.1	0.4
2013	40	4,672	8.6	2.6	1,533	216,727	7.1	0.4
2012	43	4,749	9.1	2.7	1,530	214,484	7.1	0.4
2011	33	4,687	7.0	2.4	1,558	214,795	7.3	0.4
2010	44	4,758	9.2	2.7	1,551	216,070	7.2	0.4

Fetal Deaths by Race, Ethnicity and County

Figure II.4. a. and b. Fetal Deaths Per 1,000 Deliveries, Race and Ethnicity, Single Year Rates, Flagler County, Florida

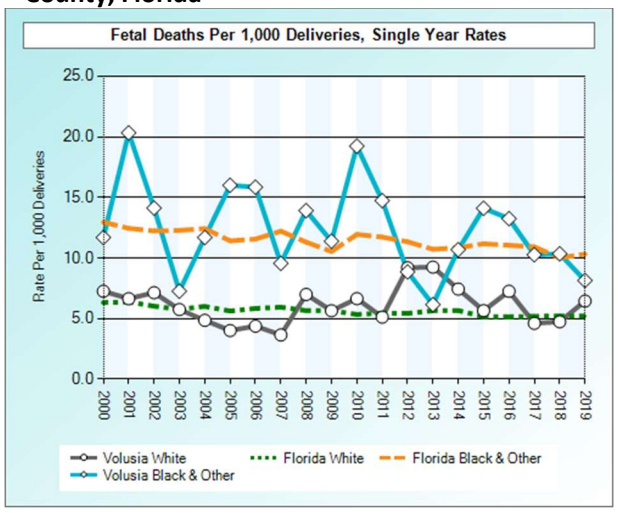


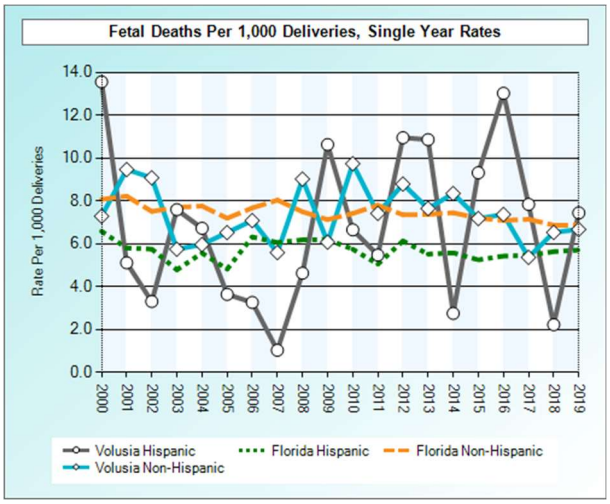


Fetal Death Rates for Flagler County by Race and Ethnicity show rates less than the state rates over time by race and ethnicity and reflects less disparity between Black and White rates and Hispanic than the state rates. (Figure II. 4. a. and b.)

Fetal Death Rates for Volusia County reflect a trend of fetal death for Black and Other declining since 2015 to below the Florida rate in 2019. For White and Hispanic fetal deaths, there was a decline in 2018 and an increase to above the state rate in 2019. (Figure II. 4 below)

Figure II.4. c. and d. Fetal Deaths Per 1,000 Deliveries, Race and Ethnicity, Single Year Rates, Volusia County, Florida

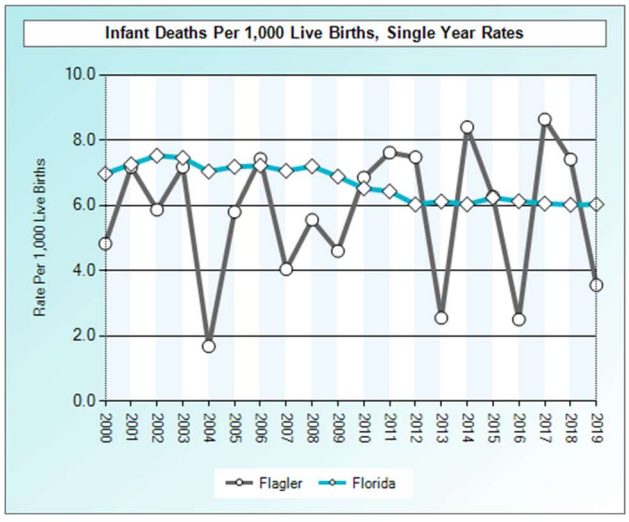




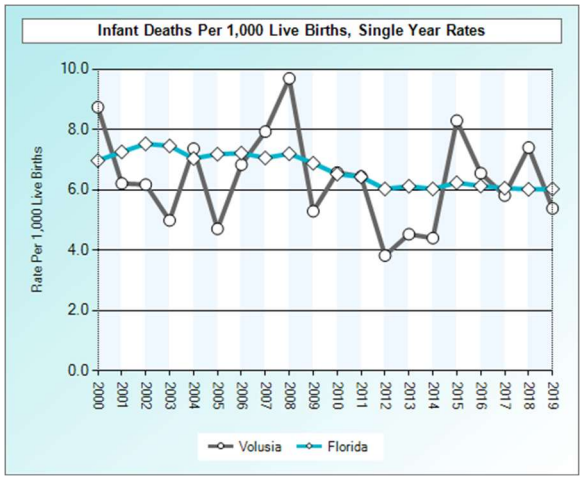
b. Infant Mortality - Infant mortality refers to the death of a live-born baby during the first year of life. Infant mortality is viewed as a sentinel event that serves as a measure of a community's general health status as well as its social and economic well-being.

Flagler County Infant Deaths - Because the denominator is small (N=843), single events may show a visual fluctuation that seem severe when compared to the state rates. The total number of infant deaths in 2019 in Flagler County was 3 or a rate of 3.6 per 1,000 live births. In 2018, the total number of deaths was 6, with a rate of 7.4 per 1,000 live births. (Figure II.5.b. below) In the last three years, Flagler County has not had any infant deaths due to unintentional suffocation or strangulation.

Figure II.5. a. and b. Infant Deaths Per 1,000 Live Births, Race and Ethnicity, Single Year Rates, Flagler County, Florida



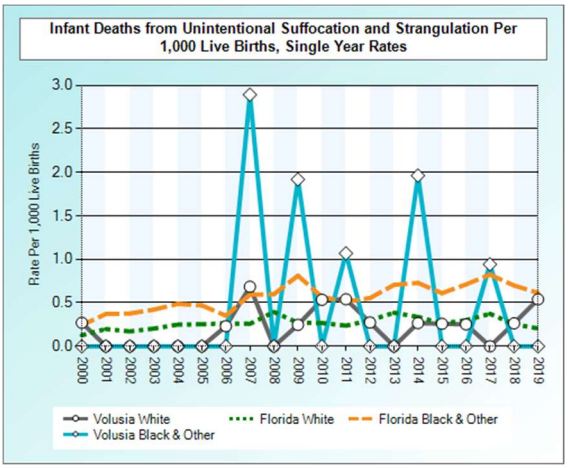
Infant Deaths Per 1,000 Live Births Single Year Rates								
	Flagler				Florida			
Years	Count	Denom	Rate	MOV	Count	Denom	Rate	MOV
2019	3	843	3.6		1,328	220,010	6.0	0.3
2018	6	809	7.4	5.9	1,334	221,508	6.0	0.3
2017	7	810	8.6	6.4	1,355	223,579	6.1	0.3
2016	2	798	2.5		1,380	225,018	6.1	0.3
2015	5	797	6.3	5.5	1,400	224,273	6.2	0.3
2014	7	833	8.4	6.2	1,327	219,905	6.0	0.3
2013	2	783	2.6		1,318	215,194	6.1	0.3
2012	6	802	7.5	6.0	1,285	212,954	6.0	0.3
2011	6	787	7.6	6.1	1,372	213,237	6.4	0.3
2010	6	875	6.9	5.5	1,400	214,519	6.5	0.3



Infant Deaths Per 1,000 Live Births Single Year Rates								
	Volusia				Florida			
Years	Count	Denom	Rate	MOV	Count	Denom	Rate	MOV
2019	26	4,824	5.4	2.1	1,328	220,010	6.0	0.3
2018	36	4,859	7.4	2.4	1,334	221,508	6.0	0.3
2017	29	4,986	5.8	2.1	1,355	223,579	6.1	0.3
2016	33	5,033	6.6	2.2	1,380	225,018	6.1	0.3
2015	41	4,939	8.3	2.5	1,400	224,273	6.2	0.3
2014	21	4,767	4.4	1.9	1,327	219,905	6.0	0.3
2013	21	4,632	4.5	1.9	1,318	215,194	6.1	0.3
2012	18	4,706	3.8*	1.8	1,285	212,954	6.0	0.3
2011	30	4,654	6.4	2.3	1,372	213,237	6.4	0.3
2010	31	4,714	6.6	2.3	1,400	214,519	6.5	0.3

Volusia County Infant Deaths- In 2019, the Volusia County Infant Death Rate was 5.4 per 1,000 live births, or a total of 26 deaths. (Figure II. C and d.) This was below Florida's Infant Mortality rate of 6.0, though in 2018, Volusia County had a rate of 7.4 compared to Florida's rate of 6.0. For infant deaths in 2019, 2 were from unintentional suffocation and strangulation, an increase from 2018, where there was one infant death for the same cause. All three of these cases were babies identified as white.

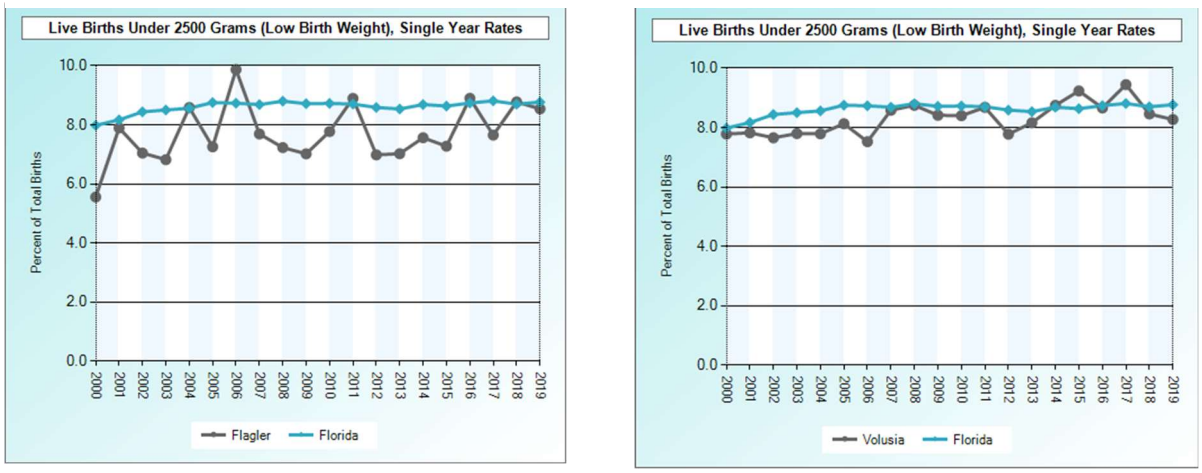
Figure II.5. e. Infant Deaths from Unintentional Suffocation and Strangulation Per 1,000 Live Births, by Race, Single Year Rates, Volusia County, Florida



Infant deaths due to suffocation or strangulation are infants who may have been sleeping alone or who may have been sharing a bed with an adult, have accidentally been hung or strangled, have been in a low oxygen environment, or have had another unspecified threat to breathing. As a preventable cause of death, this is a very important number to examine to determine strategies related to safe sleep promotion. Small numbers in Volusia County reflect severe fluctuations. The infant deaths due to unintentional suffocation and strangulation were among White babies in Volusia County and are equivalent to the rate of Black infant deaths. Statewide, there is a historic racial disparity related to infants who die due to suffocation or strangulation.

c. Low Birth Weight – Low Birth Weight is the birthweight of an infant less than 2500 grams (5.5 pounds). This is an important measurement since birthweight is one of the strongest predictors of an infant's health and survival.

Figure II.6. a. and b. Live Births Under 2500 Grams (Low Birth Weight), Single Year Rates, Flagler and Volusia County, Florida



Low birth weight rates for both Flagler and Volusia Counties have shown a decline in 2019 and are currently below the state rate. From 2017 to 2019, in Flagler County, there were a total of 141 low birth weight births to white women with an increase over the last three years. Women identified as Black or Other Race had seen a steady increase from 2013 to 2018 and a decline in 2019. Because the number of Black births in Flagler County is low (2019 denominator 167 total births and 19 total births identified as low birth weight), a decrease of 3 low birth weight births (2018 number was 22 of 160 births), can show as a seemingly significant change.

Low Birth Weight by Race and Ethnicity - Low birth weight rates in both Flagler and Volusia Counties reflect significant racial disparity among Black and Other race when compared to White race. The rate for white babies born at low birth weight was below 8.0 per 1,000 live births, where the rate for Black and Other was above 10.0 in Flagler County and 12.0 in Volusia County. (below)

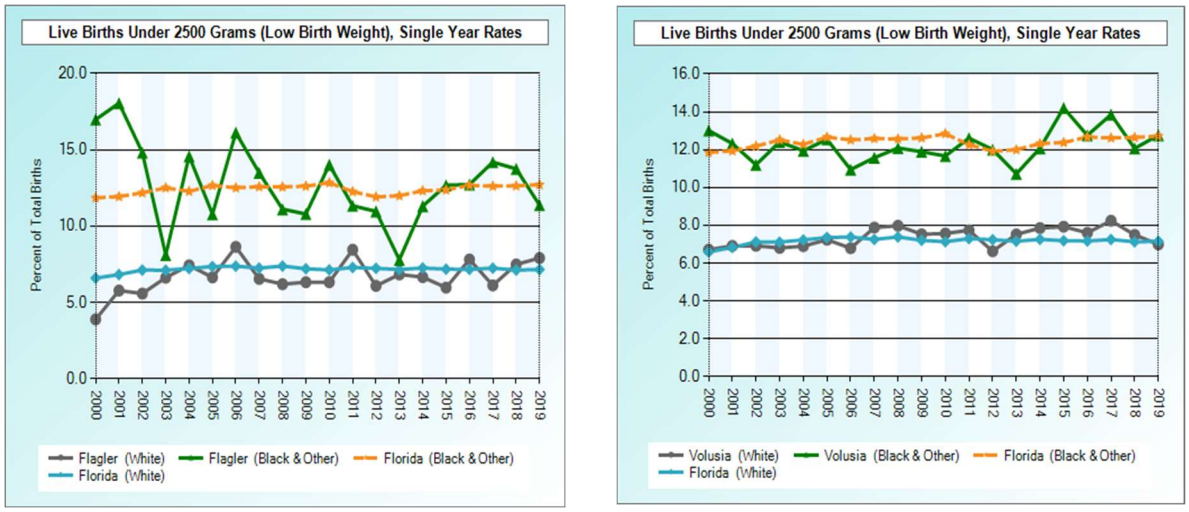
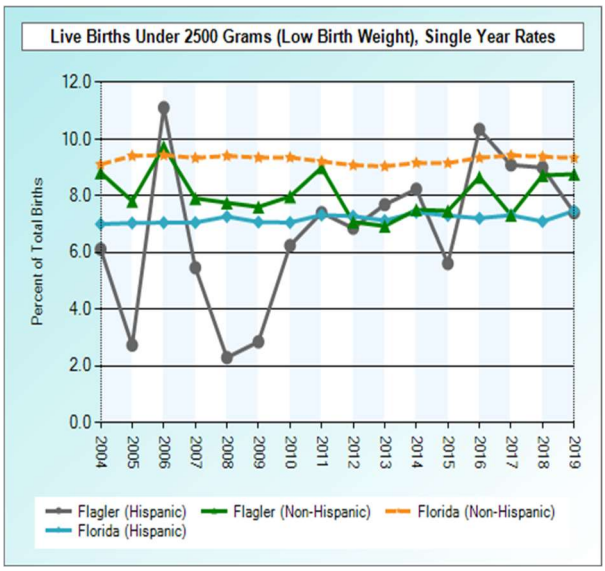


Figure II.7 a. and b. Live Births Under 2500 Grams (Low Birth Weight), by Race, Single Year Rates, Flagler and Volusia County, Florida



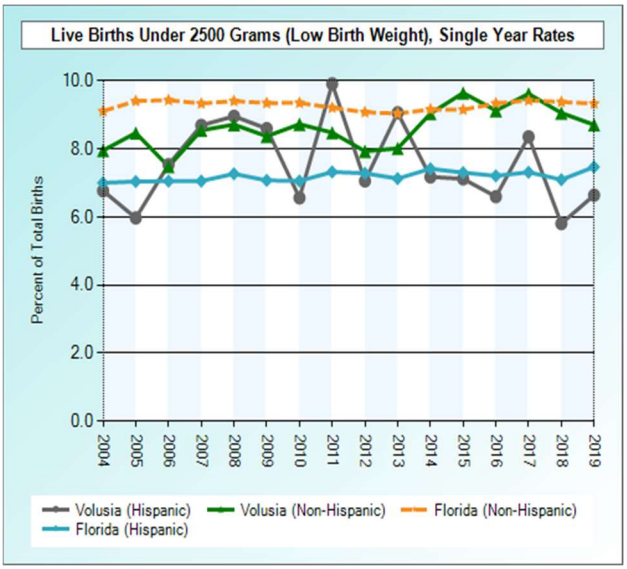


Figure II.7 c. and d. Live Births Under 2500 Grams (Low Birth Weight), Hispanic and Non-Hispanic, Single Year Rates, Flagler and Volusia County, Florida

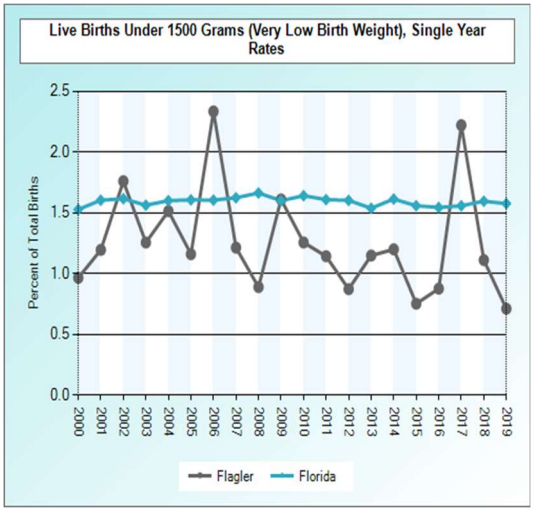
Low Birth Weight by County by ethnicity shows a higher rate among Non-Hispanic Infants than Hispanic Infants in Flagler and Volusia Counties as well as Florida.

d. Very Low Birth Weight

Very Low Birth Weight refers to birthweight less than 1500 grams, or 3.3 pounds. Since birth weight is one of the strongest predictors of an infant's survival, infants who are very low birth weight need extraordinary care at birth and have typically been born too soon. Very low birth weight babies may suffer from long term problems such as delayed motor and social development or learning disabilities.

Flagler and Volusia County Very Low Birth Weight rates fluctuate annually due to small denominators and numerators. For both counties, both counties showed a rate higher than that of Florida in 2017 and a decline in 2019.

Figure II.8 a. and b. Live Births Under 1500 Grams (Very Low Birth Weight), Single Year Rates, Flagler and Volusia County, Florida



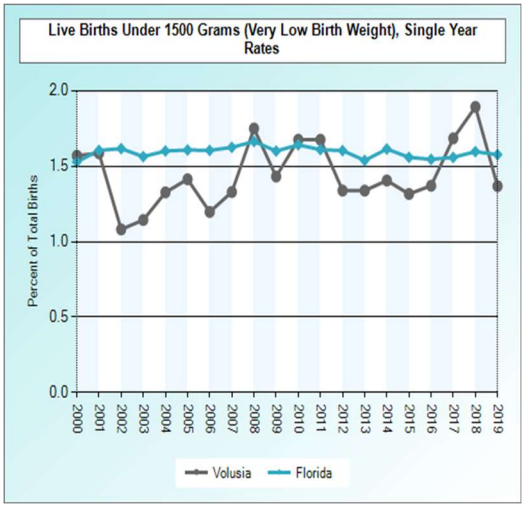
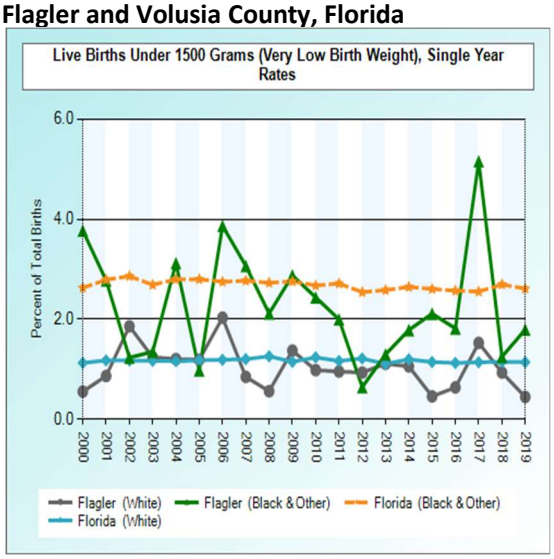
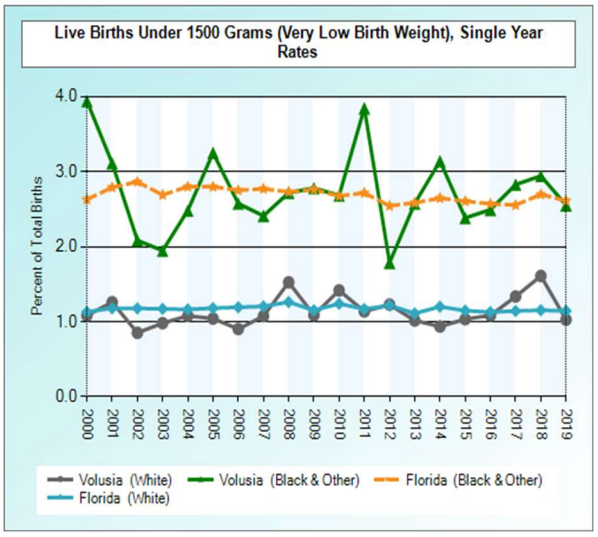


Figure II.8 c. and d. Live Births Under 1500 Grams (Very Low Birth Weight), Single Year Rates by Race, Flagler and Volusia County, Florida



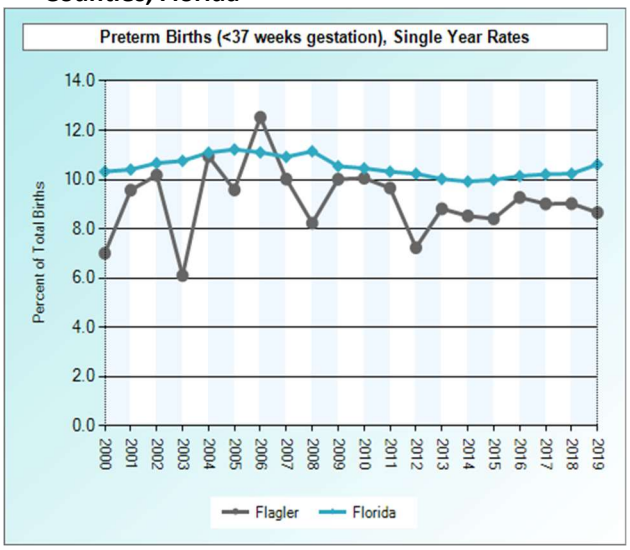


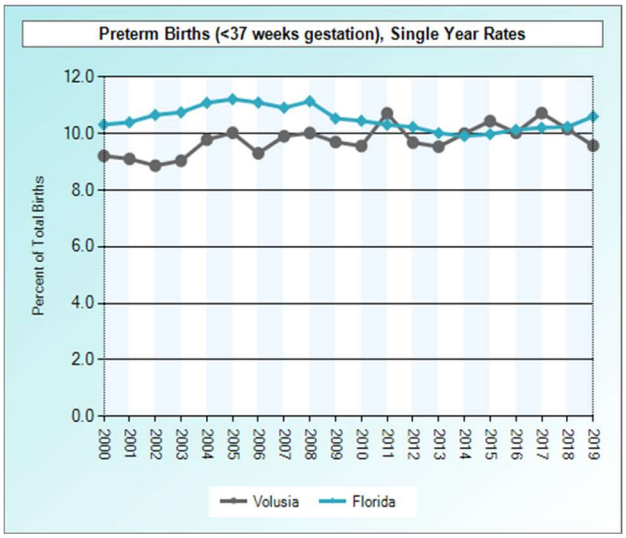
As illustrated in Figure II.8.a. and b. there is a disparity between White and Black and Other in Flagler and Volusia Counties and Florida. In the county rates, there are severe fluctuations due to low numbers overall.

e. Preterm Births (less than 37 weeks gestation)

Births that occur before 37 weeks gestation have lower chances of survival and higher chances of short - and long-term health problems when compared to term births. According to the March of Dimes, 39 weeks gestation is best if the pregnancy is healthy. The lungs, brains, liver, and other important organs are still developing in the last weeks of pregnancy.

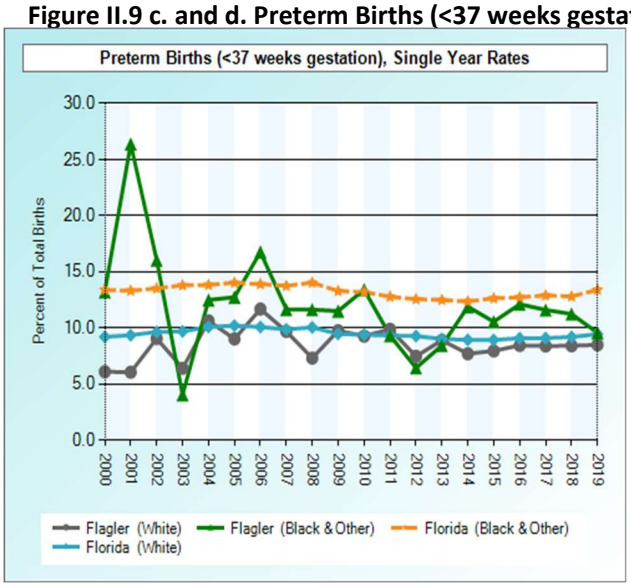
Figure II.9 a. and b. Preterm Births (<37 weeks gestation), Single Year Rates, Flagler and Volusia Counties, Florida

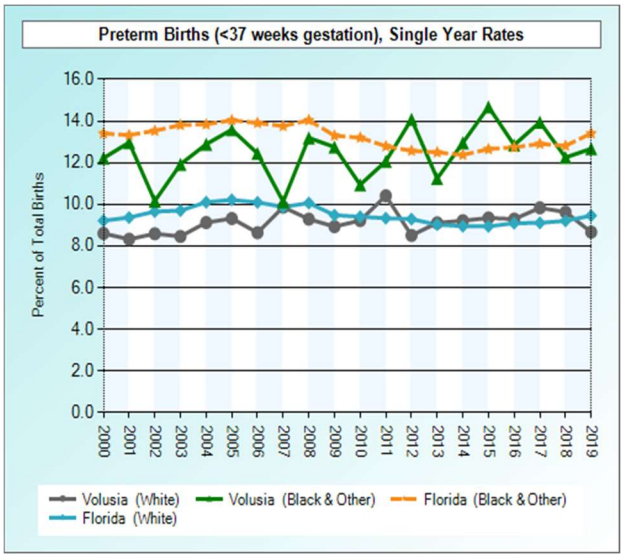




For preterm births, Flagler and Volusia Counties were below the Florida rates in 2019. Flagler rates have been below the Florida rate since 2007, while Volusia County has been similar to Florida rates since 2010. Both counties as well as Florida show racial disparity in preterm births, though Flagler County has been narrowing the disparities over the last three years. Volusia County preterm births among Black and Other shows similar disparity to Florida. (Figure II.9. below)

Figure II.9 c. and d. Preterm Births (<37 weeks gestation), Single Year Rates, Flagler and Volusia



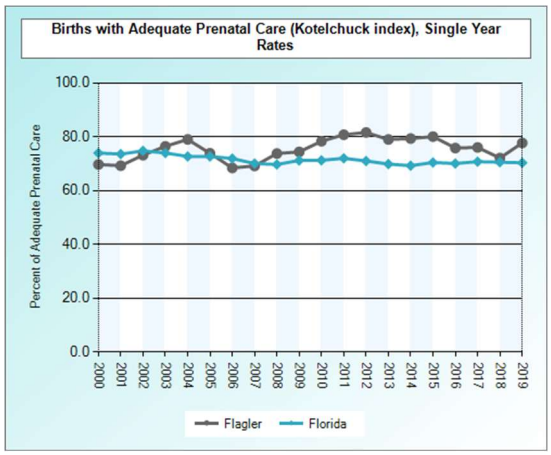


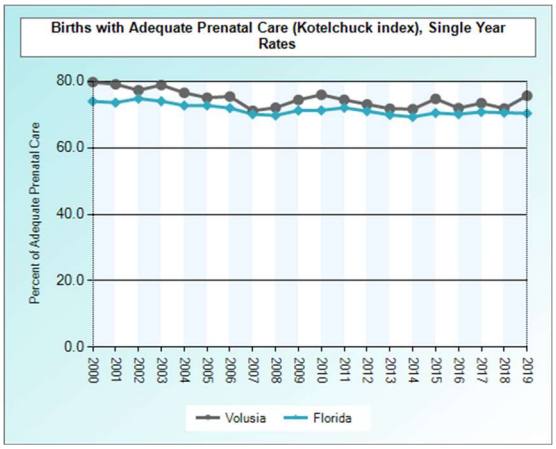
f. Births with Adequate Prenatal Care (Kotelchuck Index)

Adequacy of prenatal care rates in both Flagler and Volusia Counties are higher than Florida. Flagler County has few prenatal care providers and does not have a delivery hospital. Consequently, the Health Department in Flagler County provides clinical prenatal services and

contributes to this county's rate. Our Coalition works diligently with all prenatal providers to encourage early quality and consistent care.

Figure II.10. a. and b. Births with Adequate Prenatal Care (Kotelchuck Index), Single Year Rates, Flagler and Volusia Counties, Florida





In 2019, Flagler County's rate was 77.8 and Volusia County's was 75.7compared with 70.4 in Florida.

Figure II.10. c. and d. Births with Adequate Prenatal Care (Kotelchuck Index), Single Year Rates, Flagler and Volusia Counties, Florida (Tables)

Births with Adequate Prenatal Care (Kotelchuck index), Single Year Rates

	Flagler				Florida			
Year	Count	Denom	Percent	MOV (+/-)	Count	Denom	Percent	MOV (+/-)
2019	542	697	77.8*	3.1	134,853	191,637	70.4	0.2
2018	513	711	72.2	3.3	136,908	193,983	70.6	0.2
2017	477	627	76.1*	3.3	137,986	194,945	70.8	0.2
2016	503	663	75.9*	3.3	139,433	198,869	70.1	0.2
2015	572	714	80.1*	2.9	142,913	202,754	70.5	0.2
2014	586	738	79.4*	2.9	139,307	201,023	69.3	0.2
2013	539	682	79.0*	3.1	139,000	198,837	69.9	0.2
2012	574	703	81.7*	2.9	140,627	197,966	71.0	0.2
2011	585	724	80.8*	2.9	137,448	190,786	72.0	0.2
2010	613	782	78.4*	2.9	131,093	183,900	71.3	0.2

Births with Adequate Prenatal Care (Kotelchuck index), Single Year Rates

	Volusia				Florida			
Year	Count	Denom	Percent	MOV (+/-)	Count	Denom	Percent	MOV (+/-)
2019	2,956	3,907	75.7*	1.3	134,853	191,637	70.4	0.2
2018	3,035	4,226	71.8	1.4	136,908	193,983	70.6	0.2
2017	2,900	3,948	73.5*	1.4	137,986	194,945	70.8	0.2
2016	3,041	4,226	72.0*	1.4	139,433	198,869	70.1	0.2
2015	3,308	4,427	74.7*	1.3	142,913	202,754	70.5	0.2
2014	3,066	4,280	71.6*	1.4	139,307	201,023	69.3	0.2
2013	2,981	4,153	71.8*	1.4	139,000	198,837	69.9	0.2
2012	3,105	4,249	73.1*	1.3	140,627	197,966	71.0	0.2
2011	3,123	4,194	74.5*	1.3	137,448	190,786	72.0	0.2
2010	3,235	4,259	76.0*	1.3	131,093	183,900	71.3	0.2

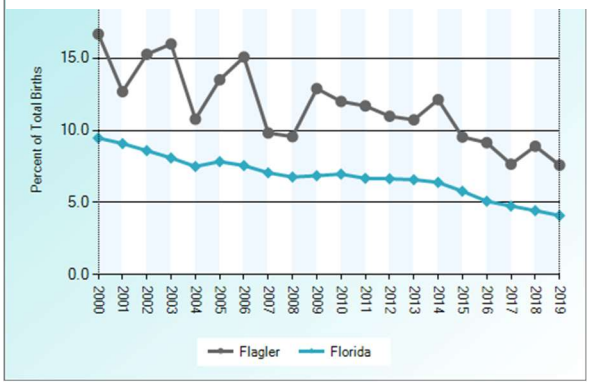
g. Smoking During Pregnancy

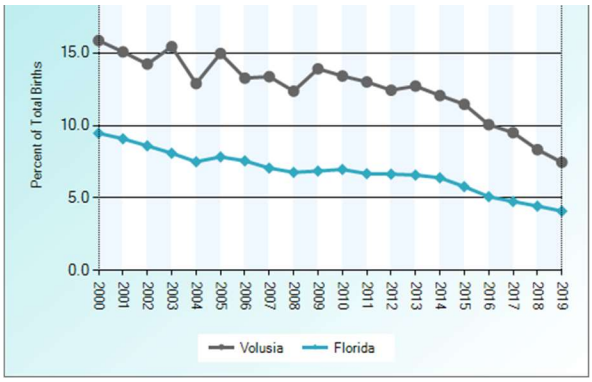
Smoking during pregnancy is associated with increased risk of low birth weight and sudden infant death syndrome (SIDS). Flagler and Volusia Counties have a higher rate of women who

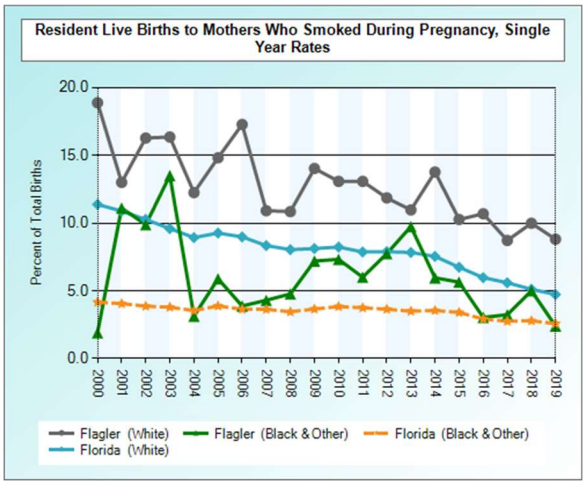
smoke during pregnancy than Florida as a whole. Flagler County had a rate of 8.9 in 2018 and 7.6 in 2019. Volusia County's rate was 8.3 in 2018 and 7.5 in 2019. Florida's rate in 2018 was 4.4 and in 2019 was 4.1. Our two county service area's rates are statistically significantly higher than the state rate, though the trend continues in the right direction.

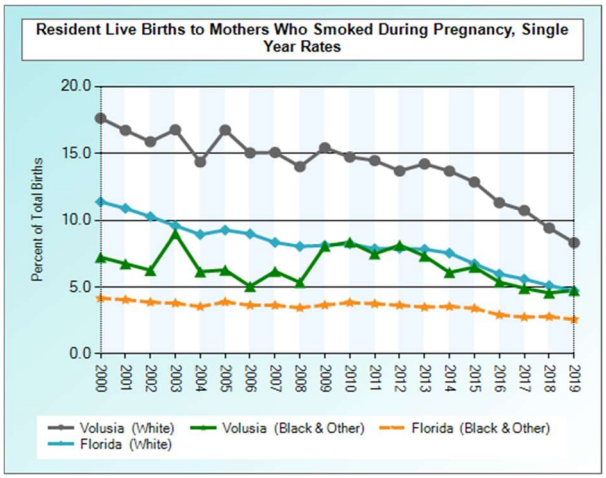
Figure II.11. a. and b. Resident Live Births to Mothers Who Smoked During Pregnancy, Single Year Rates, Flagler and Volusia Counties, Florida

Figure II.11. c. and d., Resident Live Births to Mothers Who Smoked During Pregnancy Single Year Rates, Flagler and Volusia Counties, Florida (Tables)









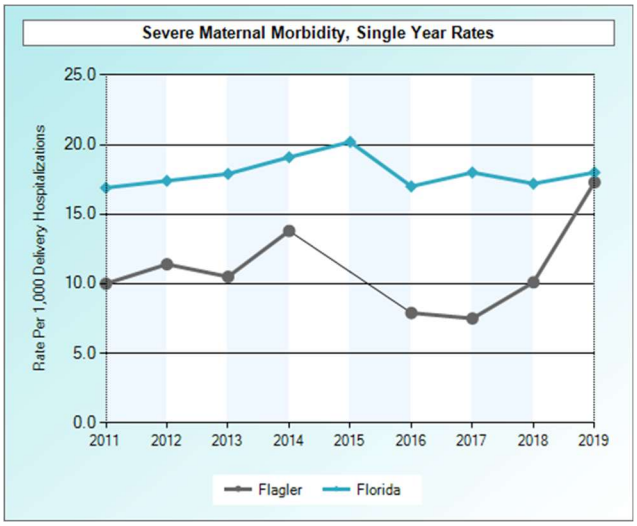
When reviewing resident live births to women who smoked during pregnancy for both counties, White women represent a higher rate than Black or Other.

h. Maternal Morbidity and Mortality

The U.S. has one of the highest rates of maternal mortality of all developed countries and unfortunately mortality ratios have more than doubled over the last 30 years, going from 7.2 in 1997 to 17.3 in 2017 Source: Centers for Disease Control and Prevention (2019). Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015, and Strategies for Prevention, 13 States, 2013–2017Weekly / May 10, 2019 / 68(18);423–429. In addition, significant racial disparities exist – Black women are three times more likely than white women to die from a pregnancy-related condition, yet experts estimate that half of these maternal deaths are preventable.

Source: Chen et al., 2018. PubMed ID: https://pubmed.ncbi.nlm.nih.gov/29723900/ Florida has the 14th highest rate of maternal mortality in the U.S. which places our state very near the bottom of the developed world for a crucial measure of maternal health.

Figure II.12. a. and b., Severe Maternal Morbidity, Single Year Rates, Flagler County, Florida

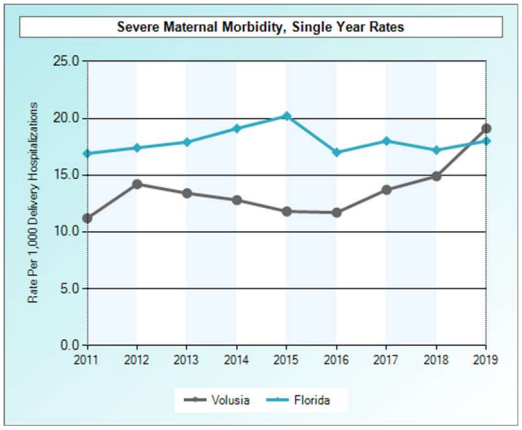


Severe Maternal Morbidity, Rate Per 1,000 Delivery Hospitalizations, Single Year				
	Flagler	Flagler	Florida	Florida
Year	Count	Rate	Count	Rate
2019	14	17.3	3,835	18.0
2018	8	10.1	3,678	17.2
2017	6	7.5	3,885	18.0
2016	6	7.9	3,698	17.0
2015			4,342	20.2
2014	11	13.8	4,039	19.1
2013	8	10.5	3,682	17.9
2012	9	11.4	3,548	17.4
2011	6	10.0	2,636	16.9

Flagler County Maternal Morbidity

Maternal morbidity and mortality is rising in Flagler County and should be watched closely. While the overall numbers of deaths are very small, it is important to keep in mind that for every maternal death that occurs three are many more instances of maternal morbidity. Further, the hospital costs associated with a high risk birth are nearly three times those of a 'normal' birth ($11,000 vs $4300).[i]

Figure II.12. c. and d., Severe Maternal Morbidity, Single Year Rates, Volusia County, Florida



Severe Maternal Morbidity, Rate Per 1,000 Delivery Hospitalizations, Single Year				
	Volusia	Volusia	Florida	Florida
Year	Count	Rate	Count	Rate
2019	88	19.1	3,835	18.0
2018	69	14.9	3,678	17.2
2017	65	13.7	3,885	18.0
2016	56	11.7	3,698	17.0
2015	55	11.8	4,342	20.2
2014	58	12.8	4,039	19.1
2013	59	13.4	3,682	17.9
2012	64	14.2	3,548	17.4
2011	38	11.2	2,636	16.9

Volusia County Maternal Morbidity

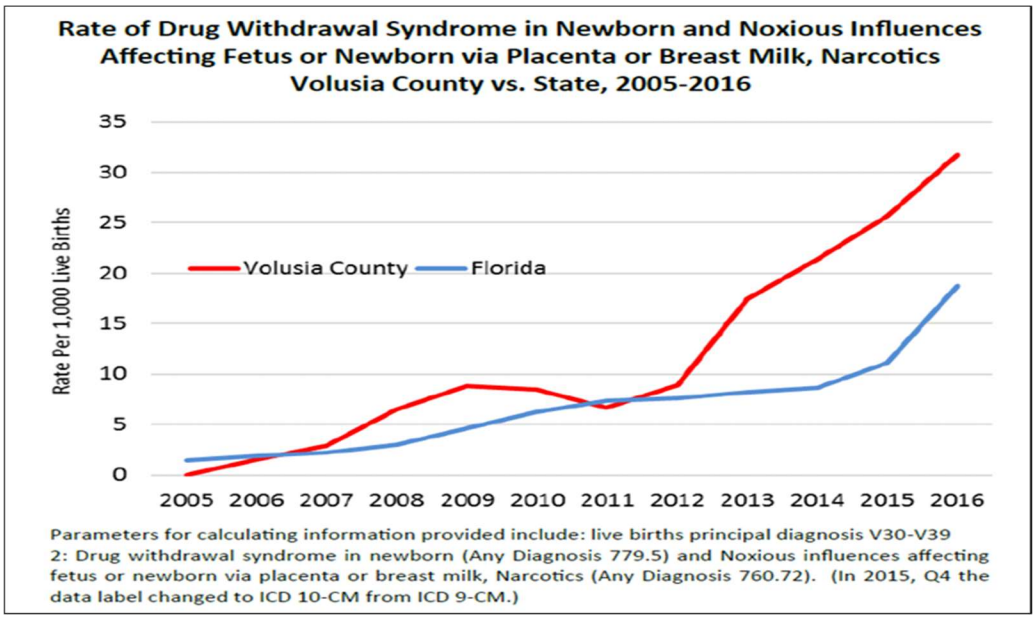
Maternal morbidity and mortality in Volusia County is also an area of tremendous concern. Not only are rates rising over time, but Volusia County exceeds the state rate (19.1 vs. 18.0).

Additional discussion of the issue of maternal morbidity and mortality as well as Healthy Start Coalition of Flagler and Volusia Counties' ongoing strategizing in this area will be discussed with respect to data regarding maternal substance use and opioids.

i. Maternal Substance Use Disorder

Maternal Substance Use Disorder has become a significant challenge in Volusia County. While the use of substances poses risk to the mother and fetus during pregnancy, it can also have an adverse impact on the newborn. Obtaining data on maternal substance use can be difficult, since there is no uniform diagnostic code used by OB/GYNs that is collected, and self-reporting information by pregnant or post-partum women is not considered consistently reliable. Prior to regular surveillance by the Florida Department of Health, our Coalition looked at data from the Agency for Health Care Administration to be able to review the scope of the issue. Figure II.13. shows the comparison between Volusia County and Florida over the period from 2005 to 2016 based on diagnostic data collected from newborns in the hospital setting.

Figure II.13. Rate of Drug Withdrawal Syndrome in Newborn and Noxious Influences Affecting Fetus or Newborn via Placenta or Breast Milk, Narcotics Volusia County vs. Florida 2005-2016



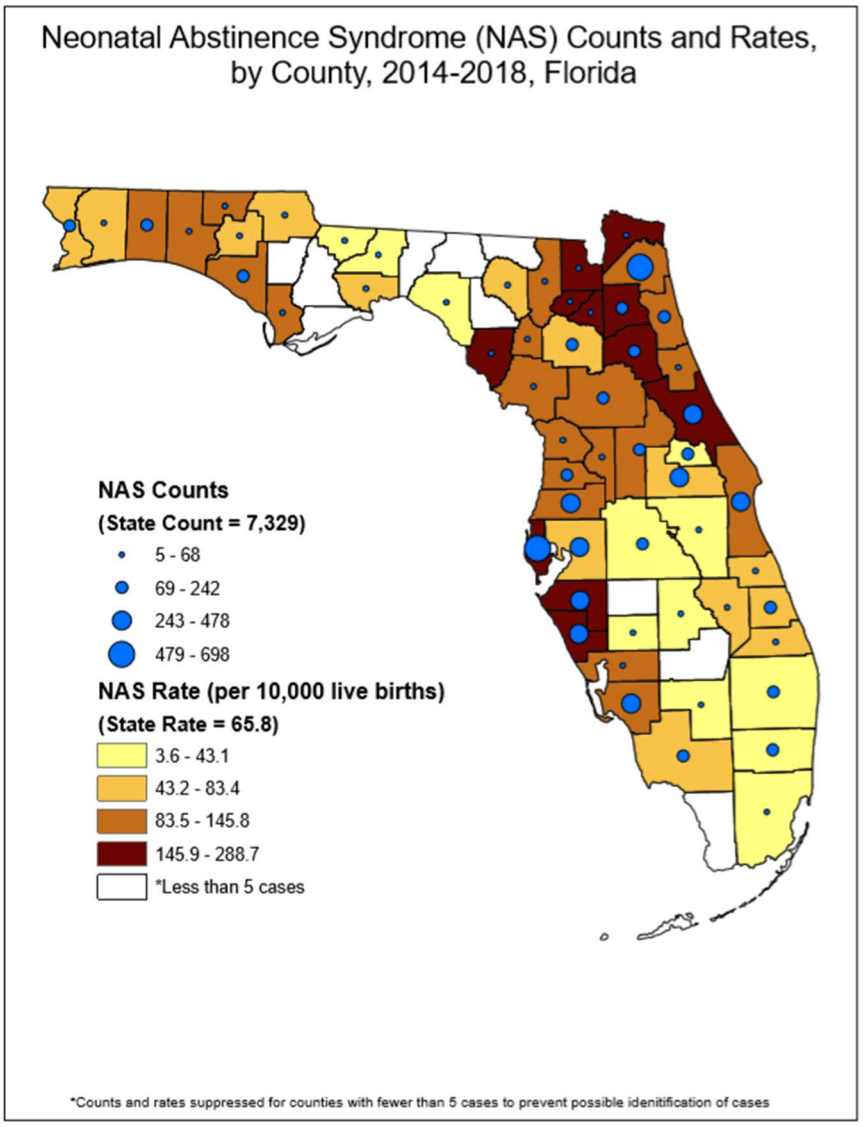
We were able to see that the rates in Volusia County of newborns exhibiting symptoms associated with exposure was continuing to increase and was above the rate of Florida. By 2016, Volusia County showed a rate of over 30 per 1,000 live births and continuing at an upward trend.

j. Neonatal Abstinence Syndrome

Neonatal Abstinence Syndrome (NAS) is a condition experienced by newborns exposed to alcohol, opioids or other substances that result in symptoms of withdrawal or discomfort such as excessive high-pitched crying, irritability feeding difficulties and gastrointestinal problems, sleep-wake disturbances, and in some cases hyperreflexia and seizures. Most infants will be observed and treated as needed in a Neonatal Intensive Care Unit (NICU).

In 2018, the rate of NAS according to the Department of Health, Birth Defects Surveillance, was at a rate of 107.2 per 1,000 live births. Figure II.14. shows comparisons across the state by county with a visual illustration of the high rate and count in Volusia County 2014-2018.

Figure II.14. Neonatal Abstinence Syndrome (NAS) Counts and Rates, by County 2014 - 2018



Because of the significant rates in Volusia County, our Coalition has worked closely with our stakeholders to inventory unmet need, map the early intervention activities and leverage resources to respond to the challenge.

1) Inventory of Current Unmet Needs and Current Early Intervention and Home Visitation Program

The Healthy Start Coalition of Flagler and Volusia Counties, Inc., (HSC) has worked to respond to the growing number of cases by leveraging of local and regional resources, mobilizing a Substance Exposed Newborn Task Force, and developing an integrated model for families involved in the child welfare system with Community Partnership for Children and other partners. Even with these added resources, there are unmet needs that must be addressed including:

- Lack of prenatal clinical providers who prescribe a range of Medication Assisted Treatment interventions – specifically treating pregnant and postpartum women
- Lack of prenatal clinical providers on the west side of our county and no prenatal clinical providers other than the health department in Flagler County.
- No birth care center in Flagler County.
- Hospital delivery sites who still do not prescribe Medication Assisted Treatment as women are delivering babies and in need of pain management and recovery support through the birth process
- Housing inadequacies for women who, during and immediately after pregnancy, cannot work full time and experience poverty-related social determinants of health.
- Stigma of health providers in our system of care who still do not understand that substance use disorder is a chronic and progressive illness and not a moral failure.
- Last year over 1,000 people in our county were turned away from detox services because of lack of capacity.
- Upon removal of an infant and order to residential treatment for the mother, the baby is often placed with a relative or foster home where caregivers are in need of instruction on how to minimize effects of NAS and care for challenging symptoms that put infants at risk for abuse such as shaken baby syndrome or neglect.

2) Current System of Care and Response

During the Initial Intake, families are offered an array of services available within the Healthy Start system and the community at large. This includes home visiting through Healthy Start Care Coordination and Healthy Families. Both of these home visiting programs use evidence-based curriculum and have a proven track record of improving maternal and child health outcomes and reducing child abuse and neglect. Some of our highest risk families require additional outreach and intervention when substance use and behavioral health concerns are prominent. For this reason, our CIR also has two outreach and intervention positions who handle all referrals and intakes for families for which alcohol or other drug use may pose a threat to maternal or child health outcomes.

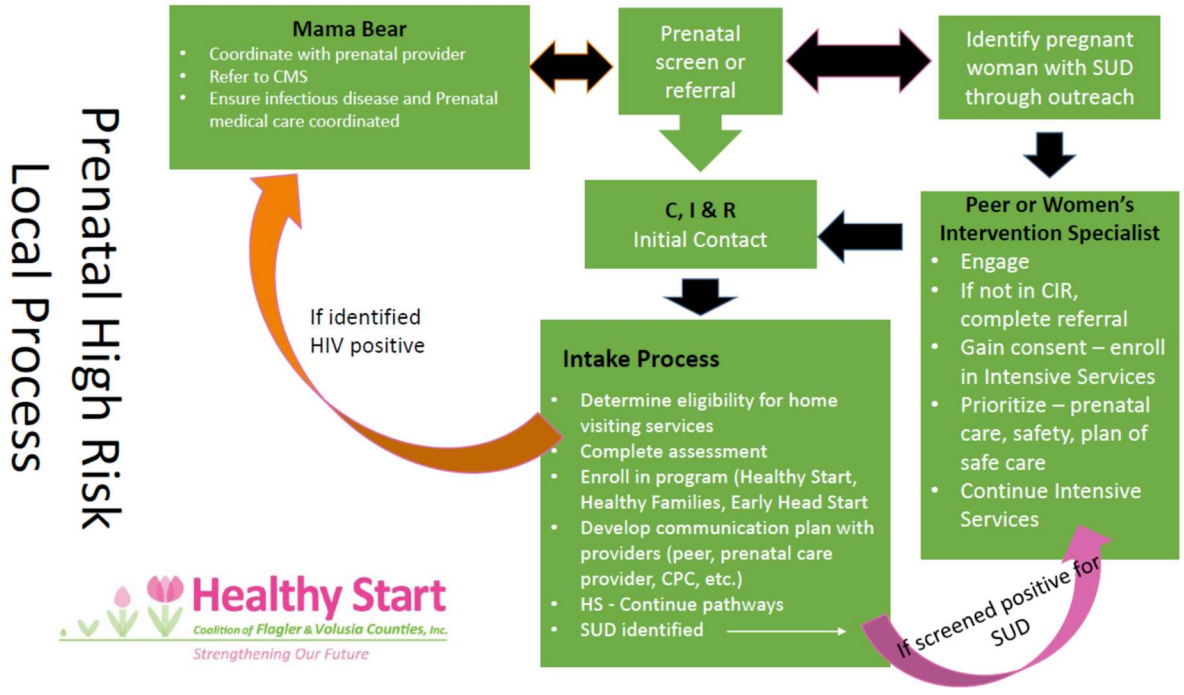
We have created algorithms to show how these families are connected and supported throughout pregnancy and after the baby is born. Since not all infants are able to stay with the

biological mother because of safety concerns and lack of supports, Healthy Start supports the caregivers and the biological mother in alignment with the spirit of the CARA Act of 2016.

During pregnancy, HSC prioritizes engaging and linking to services while developing a Plan of Safe Care in accordance with the Department of Children and Families Operating Procedure 170-8. If the woman has a chronic medical condition co-occurring with substance use disorder, there is coordination with medical providers such as MAT physicians, OB/GYNs and Infectious Disease. If the woman is HIV positive, HSC conducts a staffing with her and the Mama Bear team to ensure adequate protocols are in place to prevent perinatal transmission of HIV or other STD's.

As we "wrap around" a pregnant woman, we utilize motivational interviewing to help her to understand that substance use disorder is a chronic and progressive illness and not a moral failure. HSC recognizes that trauma often plays a part in the behaviors and fears that may be present and our primary approach is to help women feel safe in our care. Our team provides education about what will happen when the baby is born and how our system of care works together to support mother and infant. Identifying strengths is an important part of plan development.

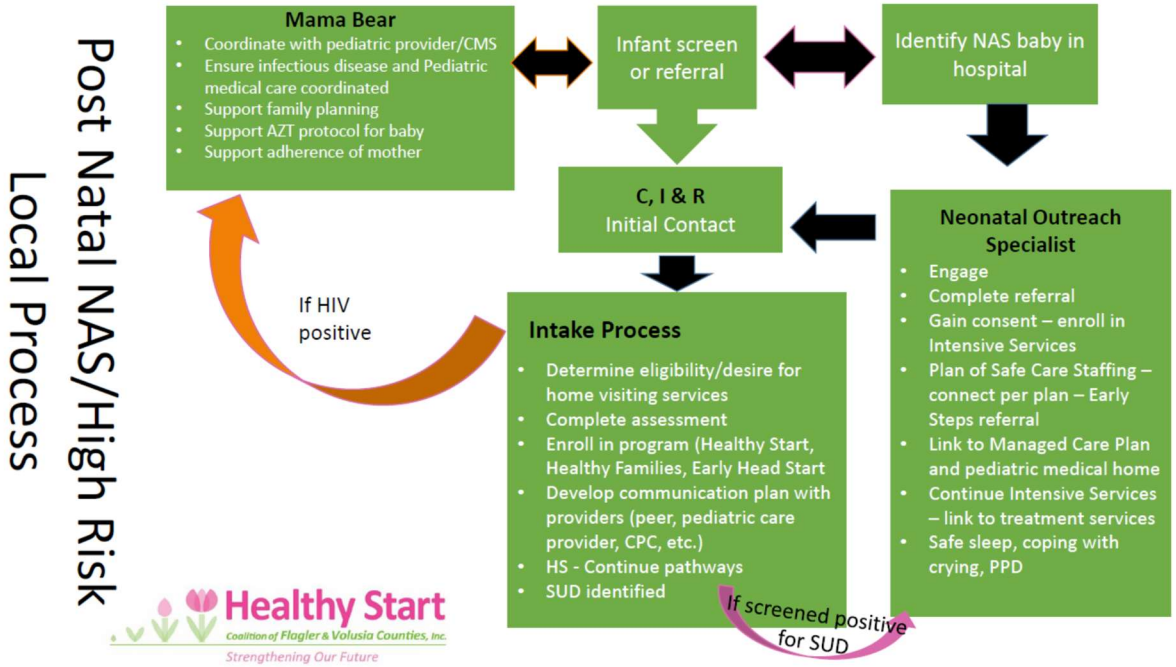
Figure II.15.a. Volusia County Local Process Algorithm for Serving High Risk Prenatal Women with Substance Use Disorder



For families who are already in our Healthy Start service system when the baby is born, HSC opens the infant to services through Coordinated Intake and Referral and develop a new Plan of Safe Care specifically for the infant. The mother is provided postpartum and interconception support and home visiting continues with a plan update for her. When needed, special services for the infant are coordinated and an individualized plan of care is developed with the parent or caregiver.

For infants who are identified in the hospital with Neonatal Abstinence Syndrome or Fetal Alcohol Syndrome, regardless of previous services, the identified hospital contacts the Neonatal Outreach Specialist at Healthy Start and a Plan of Safe Care staffing is coordinated with the family and the Department of Children and Families at the hospital. Community Partnership for Children also participates in these staffings for prevention and intervention services, as needed. At that time, HSC works as a team to determine what supports will be needed to ensure the safety and well-being of mom and baby upon discharge. This may include arranging for residential treatment, connecting mom to a peer and home visitor with consent, or connecting to other supports that may be needed. If the CPI determines that a Safety Plan is required, Healthy Start works within its capacity to implement a plan that can support baby safely being with mother or another relative caregiver. In cases where an infant must be removed based on the determination of the staffing, HSC develops a Plan of Safe Care for the biological mother to support her safety and well-being through the challenges of the removal and case planning. This includes but is not limited to follow up with a postpartum visit, continuation of treatment for substance use disorder such as Medication Assisted Treatment or recovery support and connecting her to community partners through Community Partnership for Children to help her gain the stability and parenting capacity required to complete a case plan for reunification.

Figure II.15.b. Volusia County Local Process Algorithm for Serving High Risk Infants with NAS



Our team works to help our families succeed. HSC works with our families in the following ways:

- Offering of assistance to families in consideration of the Protective Factors Framework – supporting: 1) resilience, 2) social connections, 3) concrete supports, 4) parent knowledge of child development, 5) social and emotional competence (self and children), and 6) nurturing and attachment.
- Provision of early, comprehensive support – an individualized plan based on history, diagnosis, needs of family and infant, knowledge of available resources, and safety.
- Promoting fatherhood involvement and co-parenting support based on the unique family dynamics.
- Provision of parenting support to develop/improve/sustain parenting skills using the evidence-based FSU Partners for a Healthy Baby curriculum.
- Support family stability and economic self-sufficiency through connection to career building, vocational rehab, budgeting, credit repair, and improved self-esteem.
- Assist in connecting families to concrete supports to include safe housing, transportation, childcare, communication (reliable phone and internet), formula (WIC), food, Medicaid or insurance exchange as needed, and other critical needs as identified.
- Support the special needs of families with a family member with a disability
- Promote parent leadership through participation of consumer families in the Family Engagement Advisory Board, Parent Café Dialogues, We Time parenting support groups, and parent leader certification when a parent shows a desire and capacity to lead.
- Ensure referral and follow up to early screening, assessment and intervention and pediatric care

Determining the treatment modalities and referrals when developing a Plan of Safe Care is very individualized based on the woman's history and current situation. Pregnant women need to be assessed with a medical consult for services such as detoxification and Medication Assisted Treatment based on the type of substances they have been using, the trimester they are in, and potential medical complications. It is also imperative that the women's preferences and previous successes and challenges be a central consideration in the Plan of Safe Care.

For infants, the Plan of Safe Care considers the unique medical needs of the baby and the potential caregivers who will be primary after discharge from the hospital. Whenever possible if the biological mother is motivated to stay with her infant, treatment modalities that offer the most safety and support are optimal, such as residential treatment that accommodate one or more children. Each case is individual and requires information gathering and consideration of all available options that align with the family's circumstances.

Fathers are encouraged to be an active part of the planning process and are linked to treatment as needed and provided parenting support. Some fathers may be the sole caregiver of an infant and will have a Plan of Safe Care unique to their situation.

III. SERVICE DATA

1. Universal Screening of Pregnant Women and Infants

Through Florida Legislation (383.14 and 383.011 F.S., screening of pregnant women and infants is to be done by all medical providers and completed forms are then submitted to the local County Health Department Office of Vital Statistics for data input. Screens where a woman has consented to receive services are sent to Coordinated Intake and Referral in the designated Service Area where contact is made to the eligible participant as well as the referring provider to ensure appropriate available services are offered and provided as capacity allows.

Screening is a first step to the provision of services and, even if no risk is detected through self-reported information of the mother during the prenatal period, clinical providers can refer women to services "based on other factors." This might include some indication to the provider that a family may need help even if the screening process did not reveal a risk factor. In addition, even if a screen is declined at the time of the offer of the screen, Coordinated Intake and Referral can receive a referral from a parent, clinical provider, or community provider to connect a family to available services.

a. Prenatal Screens

Prenatal screens are administered by clinical prenatal providers at the first prenatal visit. The screening instrument asks questions related to associated pregnancy risk based on mother's medical history, age and race, social and mental conditions, and modifiable risk behaviors such as smoking and alcohol consumption. Maintaining high rates of screening and consent to screening accomplishes two important objectives: 1) we can identify women early in pregnancy to mitigate risk where possible, and 2) we gather information at the county, state, and coalition level that informs us about pregnancy health overall and helps us target activities and resources accordingly. Screening is free and voluntary.

Figure III.1.a. Prenatal Screening Results from July 2019 through June 2020 Flagler, Volusia, Coalition Service Area, and Florida

Area	Est # Pregnant Women	Total Forms Processed	Total Consent to Screen	% Women Screened	% Women Consented	# Positive Screens	% Positive Screens	# Based On Other Factors	# Consent to Participate	# Agreeing to Share Information
Flagler	799	652	598	74.84%	91.72%	148	24.75%	330	473	430
Volusia	4728	4103	3853	81.49%	93.91%	962	24.97%	2093	2984	2691
Coalition	5527	4755	4451	80.53%	93.61%	1110	24.94%	2423	3457	3121
Florida	216752	156429	140917	65.01%	90.08%	37257	26.44%	60098	94819	88403

Flagler County's percentage of women screened during Fiscal Year 2019 to 2020 was 74.84% and the percentage of women who consented was 91.72%. For Volusia County, the percentage of women screened was 81.49% and the percentage of women who consented was 93.91%. The county rates and coalition rates were above that of Florida at 65.01% screened and 90.08% consenting to the screen.

b. Infant Screens

Infants are screened in each delivery hospital or delivery site in Florida. While Volusia County has three delivery hospitals that can serve all risk levels (Level II and III Neonatal Intensive Care Units), pregnant women in Flagler County typically deliver their babies in Volusia County, St. John's County, or Jacksonville, depending on the risk level and prenatal care provider. Each Coalition works with the delivery hospitals in their service area to train staff on how to ensure proper administration of the screening instrument, which is connected to the infant's electronic birth record. Coalitions work with each other when delivery hospitals are outside of their service area but still complete the screen for infants who will return to another county.

Infant screening identifies babies who have abnormal conditions at the time of the birth requiring advanced care, birthweight less than 2000 grams, or other risk factors that might impact the development of the baby.

Figure III.1.b. Infant Screening Results from July 2019 to June 2020 Flagler and Volusia, Coalition Service Area, and Florida.

Area	Total # of Infants	Total Screened	% of Infants Screened	Number of Positive Screens	Positives as % of Total Screened	Referred Based on Other Factors	Number of Participants
Flagler	799	659	82.48%	104	15.78%	183	228
Volusia	4728	4487	94.90%	734	16.36%	1184	1489
Coalition	5527	5146	93.11%	838	16.28%	1367	1717
Florida	216752	207959	95.94%	34443	16.56%	62011	85280

Flagler County had a total of 799 infants born during the time period 7-1-19 to 6-30-20 and of these, 659, or 82.48% were screened. Volusia County had 4728 infants with 4487 screened at a rate of 94.9%. The Coalition as a whole had a rate of 93.11%, which was below Florida at 95.94%. There were 228 infant participants from Flagler County and 1489 from Volusia County for a total of 1717 infant participants referred through the infant screen.

2. Coordinated Intake and Referral Services

Coordinated Intake and Referral reports are generated through the Well Family Data System (WFS). The screening reports reflects screens by number and percentage and provides an analysis of Initial Intake data. This information is compared to the state rate.

Figure III.2.a. Prenatal Coordinated Intake and Referral Report from 7-1-19 to 6-30-20

	FLAGLER		VOLUSIA		Coalition		State	
	#	%	#	%	#	%	#	%
SCREENS								
Total Prenatal Screens Received	393		2591		2984		83081	
Women with positive screen	110	28.0%	762	29.4%	872	29.2%	28774	34.6%
Women referred for other factors	283	72.0%	1829	70.6%	2112	70.8%	54307	65.4%
Total Prenatal Referrals Received	191		1400		1591		61736	
Total Prenatal Screens and Referrals	**584**		**3991**		**4575**		**144817**	
Successful Initial Intake								
Women who completed Initial Intake	305	52.2%	2059	51.6%	2364	51.7%	85011	58.7%
Women who chose Healthy Start home visiting	45	14.8%	298	14.5%	343	14.5%	22411	26.4%
Women who chose other home visiting program	29	9.5%	236	11.5%	265	11.2%	15109	17.8%
Women who were closed at time of initial intake	231	75.7%	1525	74.1%	1756	74.3%	47491	55.9%
Initial Intake Not Completed								
Women who did not complete Initial Intake	279	47.8%	1932	48.4%	2211	48.3%	59806	41.3%
Total number of women unable to complete initial intake	25	9.0%	184	9.5%	209	9.5%	23467	39.2%
Total number of women unable to locate at initial intake	249	89.2%	1673	86.6%	1922	86.9%	31970	53.5%
Total number of women attempt to contact only	5	1.8%	75	3.9%	80	3.6%	4369	7.3%

During Fiscal Year 2019 – 2020 Coordinated Intake and Referral received 4,575 prenatal referrals. Of these, 584 were from Flagler County and 3,991 were from Volusia County. For the Coalition, 872 or 29.2% referrals were from positive scores on the Healthy Start Prenatal Screen, and 2,112 were referred for other factors. There were an additional 1,591 prenatal referrals received.

In our service area, 2,364, or 51.7% of referred pregnant women completed an initial intake. Of those, 14.5% chose Healthy Start home visiting, 265 chose another home visiting program, and 1,756 were closed at the time of initial intake. All women closed to services are advised that they can reconnect with us at any time and that our Family Place locations can assist them with other resources that might be needed in the future. Family Place data is input to a “local” tab of the Well Family Data System (WFS).

There were a total of 2,211 women in the service area who did not complete and initial intake. The majority of these, or 86.9% were categorized as unable to locate at time of initial intake.

Figure III.2.a. Postnatal Coordinated Intake and Referral Report Flagler, Volusia, Coalition and Florida from 7-1-19 to 6-30-20

	FLAGLER		VOLUSIA		Coalition		State	
	#	%	#	%	#	%	#	%
SCREENS								
Total Postnatal Screens Received	222		1484		1706		82599	
Infants with positive screen	58	26.1%	341	23.0%	399	23.4%	22354	27.1%
Infants referred for other factors	164	73.9%	1143	77.0%	1307	76.6%	60245	72.9%
Total Postnatal Referrals Received	56		461		517		17277	
Total Postnatal Screens and Referrals	**278**		**1945**		**2223**		**99876**	
Successful Initial Intake								
Infants who completed Initial Intake	182	65.5%	1336	68.7%	1518	68.3%	64566	64.6%
Infants who chose Healthy Start home visiting	52	28.6%	390	29.2%	442	29.1%	18498	28.6%
Infants who chose other home visiting program	14	7.7%	72	5.4%	86	5.7%	5966	9.2%
Infants who were closed at time of initial intake	116	63.7%	874	65.4%	990	65.2%	40102	62.1%
Initial Intake Not Completed								
Infants who did not complete Initial Intake	96	34.5%	609	31.3%	705	31.7%	35310	35.4%
Total number of infants unable to complete initial intake	12	12.5%	55	9.0%	67	9.5%	14242	40.3%
Total number of infants unable to locate at initial intake	81	84.4%	491	80.6%	572	81.1%	16154	45.7%
Total number of infants attempt to contact only	3	3.1%	63	10.3%	66	9.4%	4914	13.9%

During Fiscal Year 2019-2020 there were a total of 2,223 post-natal referrals received at Coordinated Intake and Referral for the service area of which 77% were postnatal screens and 23% were other referrals. The majority of screens and referrals (87%) were from Volusia County. For those who had a successful intake completed, (N=1518), 29.1% chose Healthy Start home visiting and 5.7% chose another home visiting program. There were 990 closures at the time of initial intake, which represents 65.2% of initial intakes completed.

There were a total of 705 infants for whom an initial intake was not completed, of which 572, or 81.1% were unable to locate at initial intake.

Our team has been working to establish mechanisms for finding phone numbers or other contact information when we receive the records with no successful means of contact. We utilize Zip Whip texting to utilize text features for women whose phones may not be activated for phone calls due to lack of available minutes, and we work with providers to obtain more recent contact information to update records to contact women more successfully. Those who successfully complete an initial intake and chose Healthy Start services, are referred to a care coordinator for assessment and follow up with Pathway Services and other enhanced services during home visiting such as parenting, childbirth education, breastfeeding education, and smoking cessation.

3. Healthy Start Pathway Service Data

As Healthy Start has evolved, our services focus on specific "pathways" through evidence-based components to identify areas of specific need through targeted screening and intervention activities. These services are subcontracted in our Service Area through the Children's Home Society. These services are monitored for Quality Assurance by our Coalition staff regularly and the agency receives technical assistance throughout the fiscal year. During Fiscal Year 2019-2020, Pathway goals were exceeded for both counties in all categories.

Figure III.3.a. Pathway Services, Goal and Achieved Rate – Volusia County 2019-2020

Pathway	Goal	County	Rate Achieved
Depression Screening (prenatal)	75% enrolled will be screened using Edinburgh screen according to schedule	Volusia	**94.3%**
Depression Screening (1 month)	75% enrolled will be screened using Edinburgh screen according to schedule	Volusia	**83.2%**
Depression Screening (2 month)	75% enrolled will be screened using Edinburgh screen according to schedule	Volusia	**88.6%**
Depression Screening (All)	75% enrolled will be screened using Edinburgh screen according to schedule	Volusia	**88.5%**
Positive Depression Screen Referral	75% screened with a positive score will be appropriately referred based on recommendation	Volusia	**96.6%**
Ages & Stages (ASQ3 or S-E) (Month 2)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Volusia	**88.6%**
Ages & Stages (ASQ3 or S-E) (Month 4)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Volusia	**87.4%**
Ages & Stages (ASQ3 or S-E)(Month 8)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Volusia	**97.4%**
Ages & Stages (ASQ3 or S-E) (Month 12)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Volusia	**93.3%**
Ages & Stages (ASQ3 or S-E) (ALL)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Volusia	**89.8%**
Ages & Stages (ASQ3 or S-E) (ALL)	75% of infants who score below the cut-off value on the ASQ3 or ASQ S-E shall be referred for intervention	Volusia	**100%**
Family Planning Waiver	75% of post partum women enrolled in the Interconception Care Pathway shall receive education about the Family Planning Waiver	Volusia	**94.7%**

For families served in Volusia County, goals for Pathway services well exceeded the goals of 75%. The goal with the lowest performance was Edinburgh Depression screening at one month at 83.2%. Developmental Screening results continue to be high with 100% of all those scoring below the cut-off value successfully referred for further evaluation based on recommendations.

Figure III.3.b. Flagler County Pathway Services and Goal Achievement

Pathway	Goal	County	Rate Achieved
Depression Screening (prenatal)	75% enrolled will be screened using Edinburgh screen according to schedule	Flagler	**94.1%**
Depression Screening (1 month)	75% enrolled will be screened using Edinburgh screen according to schedule	Flagler	**90.5%**
Depression Screening (2 month)	75% enrolled will be screened using Edinburgh screen according to schedule	Flagler	**85.7%**
Depression Screening (All)	75% enrolled will be screened using Edinburgh screen according to schedule	Flagler	**89.8%**
Positive Depression Screen Referral	75% screened with a positive score will be appropriately referred based on recommendation	Flagler	**100%**
Ages & Stages (ASQ3 or S-E) (Month 2)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Flagler	**90.0%**
Ages & Stages (ASQ3 or S-E) (Month 4)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Flagler	**84.2%**
Ages & Stages (ASQ3 or S-E)(Month 8)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Flagler	**100%**
Ages & Stages (ASQ3 or S-E) (Month 12)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Flagler	**100%**
Ages & Stages (ASQ3 or S-E) (ALL)	75% of Healthy Start infants enrolled will receive the required developmental screenings on schedule	Flagler	**88.4%**
Ages & Stages (ASQ3 or S-E) (ALL)	75% of infants who score below the cut-off value on the ASQ3 or ASQ S-E shall be referred for intervention	Flagler	**100%**
Family Planning Waiver	75% of post partum women enrolled in the Interconception Care Pathway shall receive education about the Family Planning Waiver	Flagler	**100%**

For families served in Flagler County, all goals associated with Pathway services exceeded established goals. The lowest recorded rate achieved was the Ages and Stages Developmental Screening goal at month 4 at 84.2%, which is 9.2% points above the goal of 75%. As with cases served in Volusia County, 100% of all cases of developmental screens scoring below the cut off value were referred for follow up in accordance with recommendations. In addition, 100% of positive screens for post-partum depression had a follow up referral based on recommendation and 100% of post-partum women enrolled in the Interconception Care Pathway received education about the Family Planning Waiver for enrolled cases in Flagler County.

4. Enhanced Services

Healthy Start Enhanced Services are delivered through a subcontract with Children's Home Society. This subcontract has been closely monitored and Children's Home Society works closely with our staff on a Continuous Quality Improvement Plan aimed at achieving exceptional results. The Healthy Start Coalition and Children's Home Society sets local core performance measures related to enhanced services above and beyond those established through contract with the Florida Department of Health or the Healthy Start MomCare Network. We conduct record reviews and record results on a quarterly and annual basis.

Figure III.4.a. Local Core Performance Measures For All Insurance Types for Service Area Performance Report by Quarter and Annual Rates from 7-1-19 to 6-30-20

		Quarter 1	Quarter 2	Quarter 3	Quarter 4	
	Goal %	Children 'sHome Society	Children 's Home Society	Children 's Home Society	Children 's Home Society	Annual %
ADDITIONAL LOCAL CORE PERFORMANCE MEASURES						
a. 95% of appropriately referred Healthy Start participants will receive a completed Initial Contact.	95%	95%	95%	100%	100%	97.50%
b. 90% of Healthy Start participants identified as smoking during pregnancy will receive a Maternal and Child Health Tobacco Assessment or appropriate referral. *(Data Source: Record Review Results.)*	90%	90%	100%	90%	95%	94%
c. 90% of Healthy Start records will contain documentation of referrals and referral follow-up in relation to identified risk(s).	90%	90%	95%	90%	90%	93%
d. 90% of closed Healthy Start records will contain documentation of written follow-up with the healthcare provider regarding the date and reason for closure within thirty (30) calendar days of closure.	90%	90%	90%	90%	90%	90%
e. 95% of babies diagnosed with neonatal abstinence syndrome or fetal alcohol syndrome will have documented referral and follow-up for developmental services.	95%	95%	95%	95%	95%	95%
f. 100% of babies diagnosed with neonatal abstinence syndrome or fetal alcohol syndrome will have documentation that a pediatric appointment has been scheduled, or an attempt to schedule has been made, within five (5) days of hospital discharge.	100%	100%	100%	100%	100%	100%
g. At least 80% of participants receiving Neonatal Outreach Services, who have accepted Healthy Start services, will receive at least one (1) transitional follow-up visit by a Healthy Start Care Coordinator.	80%	85%	90%	90%	90%	89%
h. 100% of parent and caregivers that receive an infant car seat from the Provider will be trained in safe installation in a vehicle.	100%	100%	100%	100%	100%	100%
i. 75% of mothers that receive a single electric breat pump kit from the Provider will breastfeed for thirty (30) days or more.	75%	N/A	N/A	N/A	N/A	N/A
j. 100% of pack n' plays and sleep sacks will be distributed with proper safe sleep information, and this will be documented in the client record.	100%	100%	100%	100%	100%	100%
ADDITIONAL PARTICIPANT/SYSTEM OUTCOME MEASURES						
a. 85% of the Provider's Healthy Start staff, including supervisors, will be in compliance with the training requirements referenced in Section B.4.c. Training/Competency Requirements. *(Report the numerator and denominator for determination of this outcome measure.)*	85%	50% 4/8	50% 4/8	75% 6/8	75% 6/8	64%
b. The Provider will participate in 100% of Healthy Start Service Delivery Planning meetings held during the contract period.	100%	100%	100%	100%	100%	100%
c. The Provider or designated representative(s) will participate in 100% of quarterly Healthy Start Coalition meetings to present information regarding Contract deliverables and related services, a summary of program data and any system-related challenges encountered during the course of Contract related activities.	100%	100%	100%	100%	100%	100%
d. The Provider's Healthy Start Program Director or supervisory designee will participate in 100% of FIMR Data Committee meetings held during the contract period.	100%	100%	100%	100%	100%	100%
e. The Provider's Healthy Start Program Director or supervisory designee will participate in 100% of FIMR CRT meetings held during the contract period.	100%	100%	100%	100%	100%	100%
f. The Provider will participate in 100% of CMS Mama Bear meetings held during the contract period.	100%	100%	100%	100%	100%	100%
g. The Provider will participate in 100% of Substance Exposed Newborn Taskforce meetings held during the contract period.	100%	100%	100%	100%	100%	100%
h. 85% of the relevant responses to completed participant satisfaction surveys received during the quarter will be either "Agree" or "Strongly Agree."	85%	100%	100%	100%	100%	100%

Figure III.4. a. shows the set goal for each enhanced service or related referral to an enhanced service and the quarterly and annual achieved percentage rate of those records reviewed.

All established measures related to performance outcomes were met or exceeded.
For additional Participant or System Outcome Measures, all goals were achieved except for training compliance. The established goal is 85% of staff following our established training requirements. This item remains a performance objective for the subcontractor and is reviewed monthly in the new fiscal year.

Figure III. 4.b. Subcontractor Enhanced Service Outcome/Performance Measures Rates Per Quarter and Annual

		Quarter 1	Quarter 2	Quarter 3	Quarter 4	
FY 2019-2020 Performance Measures by Quarter	Goal %	Children's Home Society	Children's Home Society	Children's Home Society	Children's Home Society	Annual %
OUTCOME/PERFORMANCE MEASURES						
a. 90% of Healthy Start participants enrolled in care coordination services and determined to be in need of Breastfeeding Education and Support services will receive these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	90%	90%	100%	90%	95%
b. 90% of Healthy Start participants enrolled in care coordination services and determined to be in need of Childbirth Education services will receive these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	95%	100%	100%	95%	98%
c. 90% of Level 3 Healthy Start participants will receive Parenting Education and Support services will receive these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	N/A	N/A	N/A	N/A	N/A
d. 90% of Level 3 Healthy Start participants determined to be in need of Psychosocial Counseling services will be referred to these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	N/A	N/A	N/A	N/A	N/A
e. 90% of Healthy Start participants determined to be in need of Tobacco Education and Cessations services will receive and/or be referred to these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	95%	95%	90%	90%	92%
f. 90% of Healthy Start participants enrolled in care coordination services and determined to be in need of Interconception Education and Counseling services will receive these services as indicated by the Healthy Start S&G and local policy and procedure. (Data Source: Record Review Results.)	90%	95%	100%	95%	100%	98%

Performance Measures associated with Enhanced Services is monitored quarterly and annually based on established goals. All measures were met or exceeded for all four quarters and annually. For the fiscal year, 95%of records reviewed showed breastfeeding education and support for those participants in need in accordance with the Healthy Start Standards and Guidelines and local policy and procedure. For three of the four quarters reviewed, the rate was 90%. The established goal was 90%.

Childbirth education services exceeded the goal of 90% in all four quarters with an annual rate of 98%. Records reviewed for adherence to guidelines associated with tobacco education and cessation showed an annual rate of 92%, with the first two quarters at 95% and a slight decline in the last two quarters to 90%.

Interconception Education and Counseling services exceeded to goal of 90% with an annual review rate of 98%. The rate exceeded the goal during all four quarters in fiscal year. 2019-2020.

IV. Community Level Initiatives

1. Fetal Infant Mortality Review (FIMR)

Fetal and Infant Mortality Review (FIMR) is a community process that can address challenges related to maternal and child health for the purpose of assessing, planning, improving and monitoring the service systems and broad community resources that support and promote the health and well-being of women, infants and families.

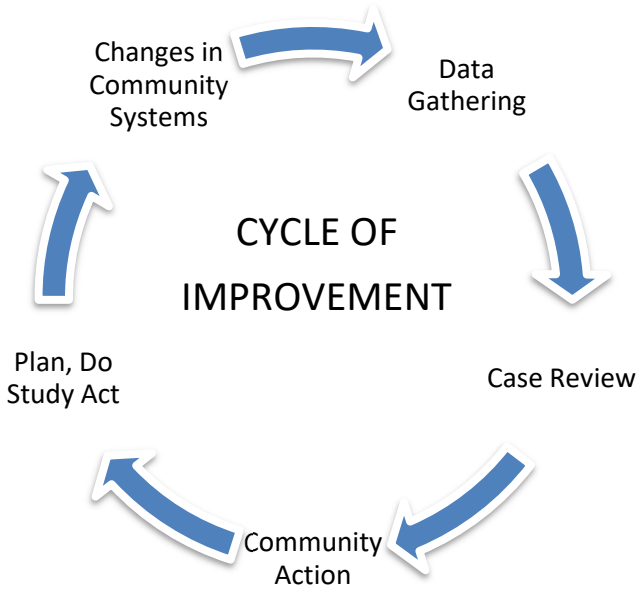


Figure IV. 1. Cycle of Improvement in the FIMR Model – Data Gathering, Case Review, Community Action, Plan-Do-Study-Act, and Changes in Community Systems

a. Data Gathering

In 2019 and 2020 we reviewed 43 cases of infant or fetal death. During case deliberation, factors are identified as being present in the case or a contributing factor to the fetal or infant death.

b. Case Review Team (CRT)

The FIMR Case Review Team (CRT) convenes and reviews data gathered through case abstraction of cases of fetal and infant death. Our Coalition meets to review a minimum of 7 cases quarterly for a minimum total of 28 cases annually. The Case Review Team makes recommendations which are reviewed by the Healthy Start Coalition and a Community Action Group selects an area of focus for a two year cycle. Healthy Start considers other data for service delivery planning and strategy development on an annual basis.

c. Community Action Team/Group (CAT/CAG)

The Community Action Group is chaired by a community leader who is willing to facilitate a group process where recommendations associated with a specific area are translated into actionable

items. During the 2019-2020 fiscal year, health equity was an area of focus for the Community Action Tea. The work of this group helped our Coalition explore neighborhood level issues associated with social determinants of health and engage new partners in aiming to improve maternal and child health outcomes.

d. Plan, Do Study, Act

The Plan, Do Study, Act (PDSA) cycle is utilized by the CAT/CAG and the Service Delivery Planning Committee of our Healthy Start Coalition. For Health Equity, we have conducted planning activities with the CAT/CAG, and multiple partners including local parents/residents, Florida Department of Health in Volusia County, the City of Daytona Beach, the Daytona Beach Housing Authority, Bethune-Cookman University, One Voice for Volusia, Head Start, and Volusia County Schools. We will continue this strategy in 2020-2021.

e. Changes in Community Systems

Through many FIMR cycles we have made impactful and sustainable change in our service area and continue to work with multiple systems and partners to improve outcomes. In fiscal year 2019-2020 our Coalition leveraged $1,133,862 in funding in addition to Department of Health and Medicaid/Healthy Start MomCare Network contracts to respond to the identified needs of our families. Because of our review of many cases where social determinants of health, substance use, and inequities contributed to our findings, we have implemented the following strategies and services:

1) **Health Equity Zones** – partnership with residents, municipalities, county health department, schools, housing authority and hospital systems to bring health equity to the forefront. Our Coalition has been instrumental in creating two "health equity zones" in Volusia County where our neighborhood level data associated with infant and fetal death and low birth weight rates indicated a need to target activities and resources.

2) **Maternal Substance Use Disorder and Neonatal Abstinence Syndrome** – Convening community partners in a Substance Exposed Newborn Task force as our previous CAT/CAG, we created 6.0 FTE positions directly working with pregnant women and infants to conduct outreach, intervention, and home visiting to improve the response to this increasing high risk population. We have integrated this strategy into our ongoing service delivery plan.

3) **Family Place ACCESS Centers** – Drop-in locations where any family can gain assistance in obtaining resources, applying for Medicaid and SNAP (Food Stamps) , and connecting to housing services through the Homeless Management Information System and Coordinated Entry to homeless services. There are two Family Place locations in Volusia County.

4) **Parent Partner and Family Engagement** – in response to an increasing number of infant removals based on verified maltreatment related to substance use, mental health disorders, or other safety concerns, as well as related infant death cases. **Parent Partner** - Parents with lived experience in the Child Dependency system work with families who have experienced a removal and provide advocacy, support, parenting, and linkage to available services as the family navigates their way through the child dependency system. **Family Engagement** – we engage families formally and informally on many levels so they can inform

our work and we can build peer capacity in our activities. We have a Family Engagement Advisory Board in partnership with the Community Partnership for Children to recommend system improvements and provide an environment where parents involved in the system can have their concerns heard and responded to by agency leadership. COFI- Community Organizing and Family Issues – training for parents and other family members to facilitate parent empowerment around connecting with one another and organizations and policy makers to bring about meaningful change.

2. Additional Home Visiting and Community Services

a. Healthy Families – serves up to 150 families. Eligibility is based on scoring factors associated with the Healthy Families Florida Assessment Tool (HFFAT) and the primary objective of the home visiting program is to reduce child abuse and neglect. Volusia Flagler has a positive record of achievement as the lead entity for our service area's Healthy Families program. This home visiting program aligns well with maternal and child health objectives related to immunizations, developmental screening and intervention, domestic violence, well child and well woman visits, and family safety and self-sufficiency.
During the 2019-2020 fiscal year the Healthy Families program served 121 families in home visiting. There are many data elements gathered for our families in the Healthy Families program but the ultimate objective is to prevent child maltreatment. During the 12 months prior to the end of the reporting period for fiscal year 2019-2020, 91% of families showed no verified maltreatment. (N=165).

b. CAPTA Nurse Home Visiting Program- Our Coalition was able to work with the Community Partnership for Children (our local Community based Care agency), to apply for and receive a grant to provide nurse home visitation services to women with substance use disorder during pregnancy and their infants. This program began in August 2020 and can serve 20 women for home visiting at any time. Referrals for this program are received through Coordinated Intake and Referral but might be originally initiated by medical providers, Department of Corrections, Department of Children and Families, Behavioral Health agencies, self-refer, or other community-based organizations. Nurse began accepting cases in October 2020.

c. Community Health Nurse – Through Private Foundation funding and local match, we have partnered with the Florida Department of Health in Volusia County in the established Health Equity Zone to fund a community health nurse to focus on reproductive health needs for families where our low birth weight rates and infant mortality rates are highest in the service area. The nurse can conduct surveillance, link to family planning and pediatric services, HIV, and WIC, and follow up with families in the neighborhood.

3. Service Delivery Planning

The Service Delivery Planning Committee meets quarterly to review our local service data and determine where partners may need support to meet performance measures and other objectives.
As Healthy Start has evolved to centralize intake and utilize local capacity for services, the broad nature of care coordination services was unfortunately diminished. Through focused meetings with stakeholders including consumers, we worked to identify where the change in service delivery was creating a gap and developed strategies to address the needs. We have been intentional in our strategic planning and action steps and as a result we have leveraged

resources to increase capacity in home visiting and family services. The impact of COVID -19 is being reflected in our recent data and will be a major consideration as we plan for service delivery in our upcoming plan.

IV. Needs Summary

Figure V. 1. Summary of Indicators and Proposed Action Items for Five Year Service Delivery Plan

Indicator	Action
Screening and CIR	Develop strategies to decrease the number of 'Unable to Locate' on Initial Intakes
Domestic Violence	Coordination across systems in order to incorporate specific objectives into 2021 Service Delivery Plan
Social Determinants of Health	Health Equity work and targeted zones, Parent Engagement and Leadership initiatives, Community/ municipality partnerships. Continue to cultivate parent leadership Continue as well as strategize expansion of housing and family stability initiatives in Flagler and Volusia counties.
Fetal and Infant Mortality	Continue FIMR work and incorporate strategies
Maternal Mortality	Develop Issue Awareness initiatives, Coalition-building toward Community goals.
Breastfeeding Initiation	Incorporate additional strategies to improve breastfeeding rates.
Maternal Mental Health/ Maternal Substance Use & Neonatal Abstinence Syndrome	Continue high intensity initiatives (CAPTA nurses) and leverage additional resources to focus on these issues. Continue to support Family Planning initiatives. SEN Task Force and Community-wide collaborative efforts.
Low Birthweight/VLBW	Develop strategies to improve Smoking/Tobacco Cessation
Teen Births	Coordination and strategic planning across organizations. (DCF, Volusia County Schools, public health, juvenile justice, foster care, etc.)
Economic Impacts Resulting from COVID	Continue to leverage resources to effectively respond to increased needs of pregnant women and families with infants and young children.

Needs Assessment information is the driving force behind creating additional strategies for service delivery and community awareness in our service area. Stakeholders continue to convene to further define these strategies and action steps toward ongoing improvement in maternal and child health outcomes.

Sources

Florida Charts
March of Dimes
Centers for Disease Control
Healthy Start Well Family Data System
Healthy Families Florida Data Tracking System
National Center for Fatality Review and Prevention
American College of Obstetricians and Gynecologists National Fetal and Infant Mortality Review Program (NFIMR)