3. Pregnancy Outcomes
Ranked AL's Third Health Indicator

Pregnancy outcomes remained in the top three primary health indicators for AL. Biological and social factors affecting the length of the pregnancy or the infant's survival may impact pregnancy outcomes.

The complications and possible loss of a baby is physically and mentally difficult, and a long recovery for both parents.[1] AL ranks 47th for infant mortality rate in 2019.[2] About 1 in 100 pregnancies result in stillbirth, which is the death of a baby before or during delivery.[1]

Strategies to improve pregnancy outcomes include breastfeeding and family planning. Breastfeeding is the best source of nutrition for most infants and can reduce the risk of health conditions for both infants and mothers.[2] Breastfeeding also helps strengthen the infant's immune and digestive system during the first year of their life.

Family planning can help reduce unexpected pregnancies, particularly in teen mothers. Contraception can increase safe sexual practices and protect individuals from sexually transmitted infections (STIs).[2] Reversible birth control methods can include intrauterine contraception, hormonal methods, and barrier methods. Permanent methods of birth control include female and male sterilization, such as tubal ligation and vasectomy.

Vulnerable Populations

Many social and biological factors also affect the time the mother begins prenatal care and the number of visits she receives. For AL, AA/black women have double the infant mortality rate than white women, highlighting racial and ethnic disparities present for expecting mothers to overcome.[2] Improving generational health outcomes start with family planning, lowering maternal stress, implementing good nutritional choices, detecting and preventing diabetes.

Geographic Variation

The areas with the highest rates of teen pregnancy are in Wilcox and Greene counties. The areas with the highest rates of infant mortality are in Coosa and Greene counties. As demonstrated in this chapter, poor pregnancy outcomes mainly occur where there is a lack of public obstetrical services in the state.

Topics Addressed for This Indicator are:

- Inadequate prenatal care.
- Obstetrical services in AL, 1980-2019.
- Infant mortality.
- Low birth weight.
- Teen pregnancy.

Highlights

Data are collected by hospitals and transmitted electronically to ADPH Center for Health Statistics. Data are also retrieved from ADPH Office of Primary Care and Rural Health:

- The infant mortality rate was 7.7 deaths per 1,000 births for 2019. In the 2015 CHA, the infant mortality rate was 8.5 deaths per 1,000 births.
- The disparity of infant mortality in minority females is two times higher when compared to white females.
- Over 1 out of every 10 births in AL were babies born with low birth weights.

Risk Factors:

- Socioeconomic disadvantage.
- Failure of natural labor progression.
- Chronic health conditions.
- Inadequate prenatal care.
- Smoking, alcohol, and illicit drug use.
- Untreated STIs.
- Transportation to prenatal care.
- Stress or physical abuse during pregnancy.

Inadequate Prenatal Care

Inadequate prenatal care is defined as seeking medical or prenatal services after the fourth month of pregnancy or prenatal care that included fewer than half of the recommended visits:[1]

- In 2019, 1 in 4 pregnancies in AL had inadequate prenatal care (25.8 percent). In the 2015 CHA, the percentage was similar; 24.8 percent had inadequate prenatal care.
- Urban areas have higher rates of inadequate prenatal care (27.2 percent) than rural areas (23.8 percent).
- Mothers who were not married during their pregnancy were more likely to not receive adequate prenatal care (34.4 percent) than mothers who were married (18.8 percent).
- Young mothers under 20 years old have the highest inadequate prenatal care rate (35.6 percent) than any other age group.

Table 3.1 – Inadequate Prenatal Care, 2019		
	Count	**%**
AL	**15,115**	**25.8**
U.S.	**-**	**-**
Public Health Districts		
Northern	3,309	26.4
Northeastern	2,276	25.4
West Central	1,802	34.1
Jefferson	2,584	30.5
East Central	1,972	22.4
Southeastern	921	20.1
Southwestern	1,066	23.1
Mobile	1,185	22.1
Geographic Variation		
Rural	5,761	23.8
Urban	9,354	27.2
Sex		
N/A	-	-
Race/Ethnicity		
White	8,851	23.3
AA/black	5,715	30.6
Other	549	-
Marital Status		
Not married	9,019	34.4
Married	6,088	18.8
Mother's Age (in years)		
Under 20	1,424	35.6
20-24	4,499	29.5
25-29	4,660	25.0
30-34	3,007	21.8
35+	1,525	22.1
Mother's Education		
N/A	-	-

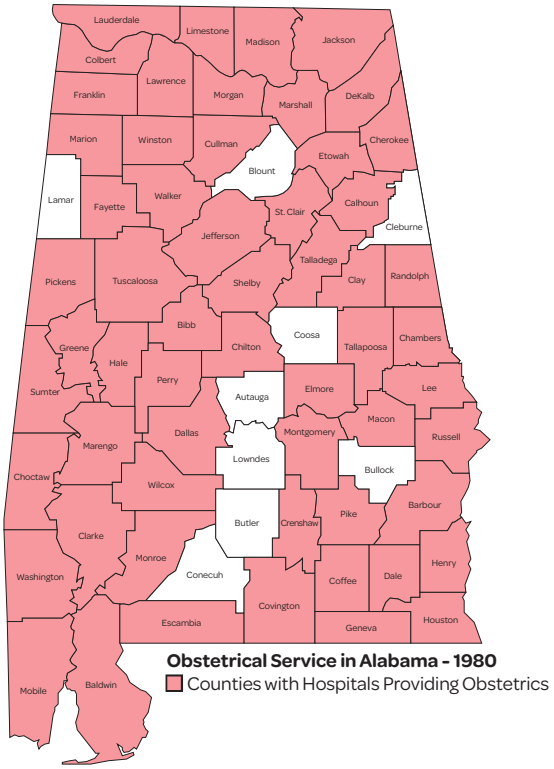
Obstetrical Servicers in Alabama 1980-2019

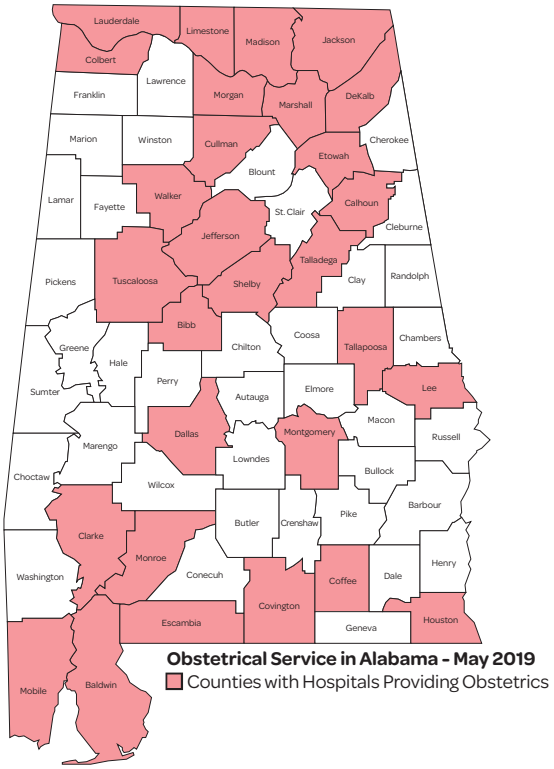
Many primary care physicians are expanding their rural obstetrical care due to the drastic reduction of available OB-GYN services in rural areas.[3] In 2019, 16 rural counties offered hospital-based obstetrical services in AL, compared to the 45 rural counties with hospitals providing obstetrical services in 1980.

Prenatal care availability may have been impacted by access to obstetrical services:

- According to the ADPH Center for Health Statistics Natality records, in 2019, there were 1,478 births in AL that received no prenatal care.
- In 2019, over 25 percent of all births in AL involved females who had less than adequate prenatal care during their pregnancy.[4]
- This percentage was the highest in rural Greene and Hale counties, 59.3 and 42.5 percent, respectively.

Figure 3.1 – A picture of the loss of rural obstetrical services in rural AL in the past 40 years. Source: ADPH Office of Primary Care and Rural Health.





Infant Mortality

Infant mortality is the number of children who died before their first birthday divided by the number of live births during the year.[1] In AL, the leading cause of infant deaths includes low birthweight and gestation under 37 weeks, congenital malformations, Sudden Infant Death Syndrome (SIDS), and bacteria sepsis of newborns:[2]

- The infant mortality rate was 7.7 deaths per 1,000 births for 2019. In the 2015 CHA, the infant mortality rate was 8.5 deaths per 1,000 births.
- The West Central Public Health District had the highest infant mortality rate of 10.8 deaths per 1,000 births.
- Coosa County had the highest infant mortality rate with 26.3 deaths per 1,000 births followed by Greene County (23.3 deaths), and Marengo County (21.8 deaths).
- AA/black mothers have twice the infant mortality rate than white mothers.

*In Table 3.2, this rate is unstable due to low sample.

Table 3.2 – Infant Mortality, 2019

	Count	Rate per 1,000 births
AL	**449**	**7.7**
U.S.	**20,921**	**5.6**
Public Health Districts		
Northern	79	6.3
Northeastern	55	6.1
West Central	57	10.8
Jefferson	85	10.0
East Central	72	8.2
Southeastern	36	7.9
Southwestern	28	6.1
Mobile	37	6.9
Geographic Variation		
N/A	-	-
Sex		
N/A	-	-
Race/Ethnicity		
White	191	5.6
AA/black	222	11.9
Hispanic	35	7.2
Household Income		
N/A	-	-
Mother's Age (in years)		
15-17	9	9.3*
18-19	25	8.3
20-29	262	7.7
30-39	141	7.2
40+	11	9.9
Mother's Education		
Less than high school	75	9.1
High school or GED	180	9.5
Some college	128	7.3
College graduate or higher	62	4.5

Low Birth Weight

Low birth weight is defined as live-born infants with birth weight less than 5.5 pounds (2,500 g), and it was the third leading cause of infant morbidity and mortality in 2019:[2,5]

- In AL, 1 out of every 10 births were babies born with low birth weights.
- East Central District had the highest percentage of low birth weight infants in the state (12.5 percent).
- AA/black mothers' low birth weight prevalence (16.3 percent) was higher than white mother's (7.8 percent).

Table 3.3 – Low Birth Weight, 2019

	Count	%
AL	**6,153**	**10.5**
U.S.	**311,245**	**8.3**
Public Health Districts		
Northern	1,163	9.3
Northeastern	788	8.8
West Central	601	11.4
Jefferson	928	10.9
East Central	1,095	12.5
Southeastern	474	10.4
Southwestern	458	9.9
Mobile	646	12.0
Geographic Variation		
Rural	2,409	9.9
Urban	3,744	10.9
Sex		
N/A	-	-
Race/Ethnicity		
White	2,957	7.8
AA/black	3,042	16.3
Other	154	-
Mother's Marital Status		
Not married	3,768	14.4
Married	2,382	7.4
Mother's Age (in years)		
10-19	444	11.1
20-24	1,635	10.7

25-29	1,837	9.8
30-34	1,415	10.3
35+	822	11.9
Mother's Education		
Less than high school	941	11.5
High school or GED	2,281	12.1
Some college	1,878	10.7
College graduate or higher	1,041	7.5

Teen Pregnancy

Teen pregnancy can be influenced by socio-economic factors and the availability of social support programs. The U.S. data includes females aged 1519 years old. For AL, teenage pregnancy includes females aged 1019 years old.[6]

- The Southeastern Public Health District had the highest teen pregnancy rate with 15.8 pregnancies per 1,000 females aged 10-19 years old.
- In 2019, Wilcox County had the highest teen pregnancy rate with 32.1 pregnancies per 1,000 females aged 10-19 years old, followed by Greene County at 25.8 pregnancies.
- St. Clair County had the lowest teen pregnancy rate, with 4.8 pregnancies per 1,000 females aged 10-19 years old.

Table 3.4 – Teen Pregnancy, 2019

	Count	Rate per 1,000 females aged 10-19 years old
AL	**4,002**	**13.0**
U.S.	**171,674**	**16.7**
Public Health Districts		
Northern	865	12.9
Northeastern	595	11.7
West Central	416	14.8
Jefferson	449	10.9
East Central	583	12.9
Southeastern	369	15.8
Southwestern	352	14.0
Mobile	373	14.3
Geographic Variation		
Rural	1,839	14.3
Urban	2,163	12.1
Sex		
N/A	-	-
Race/Ethnicity		
White	1,867	-
AA/black	1,615	-
Hispanic	484	-
Household Income		
N/A	-	-
Mother's Marital Status		
Not married	3,583	-
Married	419	-
Mother's Age (in years)		
Under 19	4,002	13.0
Mother's Education		
Less than high school	1,763	-
High school or GED	1,816	-
Some college	417	-
College graduate or higher	-	-

A Closer Look into Pregnancy Outcomes

AL rates of poor pregnancy outcomes are higher than the national average, specifically for mothers who are young, reside in rural areas, and identify with a minority racial or ethnic group. The ADPH Bureau of Family Health Services and community partner, the University of AL at Birmingham, conducted the Title V Maternal and Child Health (MCH) Block Grant Needs Assessment. This process was used to identify where AL experiences worse pregnancy outcomes and determine the best approaches to promote health equity.[7]

Maternal and Child Health Assessment

The workgroup met in early 2020 to align evidence-based strategies with the identified needs from the MCH population. A total of 1,247 and community members from across the state participated in surveys, focus groups, and key informant interviews. The survey was disseminated in online and paper versions for three populations: family, providers, and adolescents. The family survey comprised the largest representative group (874 respondents) and respondents mostly identified as female. The provider survey respondents were primary healthcare providers representing specialties under family medicine, OB-GYN, pediatrics, and adolescent medicine. The adolescent survey had 86 respondents between the ages of 12 and 26 years old.

Additional qualitative information was collected through interviews and focus groups. The key informant interviews included 22 individuals who had expert knowledge in one or more MCH populations (i.e., reproductive, maternal, neonatal, child, or adolescent health) for AL. They were asked in their interview to address strengths, barriers, and gaps/areas of

need for local, state, public, and private groups. The stakeholder focus group had 147 participants and included underrepresented populations, such as women with disabilities; people who identified as lesbian, gay, bisexual, transgender, and queer (LGBTQ+); and Spanish-speaking families.

The health issues addressed in the survey were perinatal/infant, child, adolescent, children/youth with special healthcare needs, and women/maternal domains. In this section, the perinatal/infant health concerns are discussed with eight broad themes identified below. Several of these themes are further explored with supporting quantitative statistics and qualitative stakeholder feedback. Hale County was the only county not represented by a survey respondent in these results.

The eight identified perinatal/infant health themes were:

- Pregnancy and parenthood for teens, young families, and new parents.
- Safe sleep education.
- Breastfeeding.
- Infant mortality.
- Mental health.
- Reproductive and prenatal/perinatal care.
- Smoking, substance, and alcohol use.
- Health/dental care access, cost, and insurance.

Safe Sleep Education

According to the National Vital Statistics System, the sleep-related sudden unexpected infant deaths rate for AL was 175.8 per 100,000 live births between 2015 – 2019.[8] This statistic is higher than the national average of 90.1 deaths per 100,000 in 2019. The American Academy of Pediatrics recommends infants should be placed to sleep on their backs until 12 months of age during a Safe to Sleep campaign that started in 1994.[9] According to the Pregnancy Risk Assessment Monitoring System (PRAMS), the U.S. average of infants placed on their backs was 79.6 percent in 2019. In AL, the percentage of infants placed on their backs has increased from 71.3 percent in 2015 to 79.6 percent in 2019.[10]

In response to determining care gaps, stakeholders identified that some parents and caregivers struggled to access essential supplies, such as cribs aligned with safe sleep guidelines. Key informants noted a need to recognize and appropriately address cultural issues around co-sleeping. Survey respondents further explained that having a baby in bed makes nighttime feedings easier (66 percent), having a baby sleep in bed with family is preferable (52 percent), and a baby will be safe in bed with family (50 percent).

Breastfeeding

Breastfeeding is a natural source of nutrition and provides a healthy start for infants. AL breastfeeding percentage is lower than the national average, but it has been trending better with 77.8 percent of mothers able to breastfeed in 2019, according PRAMS.[10] Additionally, community members reported a perceived lack of support from service providers and older family members to encourage breastfeeding; they reported that mothers were prompted to use baby formula more from these groups. Lactation support was reported to be widely available for most women after delivery, but long-term support was unavailable in the community, especially for women who did not qualify for WIC or other support services.

Infant Mortality

In AL, the infant mortality rate was 7.1 deaths per 1,000 live births in 2019, improving from the 2015 CHA rate of 8.5 deaths per 1,000 live births.[4] Despite the statewide decrease, AA/black mothers have twice the infant mortality rate of White mothers (11.9 deaths compared to 5.6 deaths per 1,000 live births). Hispanic mothers also have a high infant mortality rate (7.2 deaths per 1,000 live births).[4] Furthermore, stakeholders felt that limited access to consistent, high-quality care during the full spectrum of birth (primary, prenatal, postnatal, and mental health) might have contributed to the high infant mortality rate in AL. Service providers and key informants connected infant mortality to broader social and health issues such as co-sleeping, poverty, systemic racism, smoking, substance abuse, lack of access to family planning services, and the mother's overall health.

Reproductive and Prenatal/Perinatal Care

As discussed earlier in this section, obstetric services have significantly decreased in rural areas. In the survey group, 23 percent of respondents reported they or someone in their house did not have health insurance. Stakeholders identified socioeconomic status, education, neighborhood crime and safety, literacy, and housing as barriers to health maintenance. Specific populations expressed unique experiences when interacting with reproductive health providers and care facilities. Women with disabilities expressed concerns about the lack of accessibility and accommodations during health appointments. This population also identified the lack of education tailored toward parenting with a disability. Spanish-speaking populations identified that health education materials in Spanish were either unavailable or poorly translated. LGBTQ+ stakeholders reported that LGBTQ+ centered care was difficult to find, noting that they were either refused care, received poor care, misgendered by office staff, or had the added burden of educating their service provider about their health considerations.

Data Sources

Table 3.1 – Inadequate Prenatal Care, 2019. ADPH, Center for Health Statistics Birth and Death Files, 2019. Data requested March 2021.

Figure 3.1 – A Picture of the Loss of Rural Obstetrical Services in AL, 1980 to 2019. ADPH, Office of Primary Care and Rural Health, 2020. Data requested March 2021.

Table 3.2 – Infant Mortality, 2019. ADPH, Center for Health Statistics Birth and Death Files, 2019. Data requested March 2021.

Table 3.3 – Low Birth Weight, 2019. ADPH, Center for Health Statistics Birth and Death Files, 2019. Data requested March 2021.

Table 3.4 – Teen Pregnancy, 2019. ADPH, Center for Health Statistics Birth and Death Files, 2019. Data requested March 2021.

Written Sources

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2. ADPH, AL Perinatal Program, 2020.
3. Center for Medicare and Medicaid Services, Improving Access to Maternal Healthcare in Rural Communities, 2018.
4. ADPH, Center for Health Statistics, 2020.
5. WHO, Definitions for Newborns with Low Birth Weight, 2006.
6. CDC, Social Determinants and Eliminating Disparities in Teen Pregnancy, 2019.
7. ADPH MCH Services Block Grant, Comprehensive Needs Assessment, 2020.
8. National Vital Statistic System, SIDS Statistics, 2019.
9. Academy of Pediatrics, Back to Sleep Campaign, 2021.
10. PRAMS, Prevalence of Selected MCH Indicators for AL, 2019.

Community Resources

AL Abstinence Education Program
Location: Dallas County, AL
Type: Federally Funded Program

American Humane Association
Location: Washington, DC
Type: Federal Government Organization

AL Healthy Teen
Location: Montgomery County, AL
Type: State Governmental Program

AL Prison Birth Project
Location: Lee County, AL
Type: Non-profit Organization

AL Women's Wellness Center
Location: Madison County, AL
Type: Health Center

Black Mamas Matter Alliance
Location: Atlanta, GA
Type: Advocacy Organization

CDC
Location: Atlanta, GA
Type: Federal Government Organization

Cheaha Women's Health and Wellness
Location: Calhoun County, AL
Type: Health Center

Her Choice
Location: Jefferson County, AL
Type: Health Center

USDHHS
Office of Adolescent Health
Location: Washington, DC
Type: Federal Government Organization

Kids Count
Location: Statewide
Type: Research Institution

The National Campaign to Prevent Teen and Unplanned Pregnancy
Location: Nationwide
Type: Public Health Campaign