

# South Carolina Birth Outcomes Initiative Deliveries and Births CY2019

DECEMBER 2020

For nearly a decade, SCDHHS has been the lead agency supporting the South Carolina Birth Outcomes Initiative (SCBOI), a statewide coalition of over 100 multi-sector stakeholders working together to improve the health outcomes for all moms and babies.

To help SCBOI continue its innovative approach to addressing maternal and infant health, this summary provides delivery characteristics, outcomes, and contextual factors for the most recent available data, CY 2019. These data may be used to shape priorities and next steps in addressing communities of opportunity including geographic areas of greatest social vulnerability and women more likely to experience poor outcomes.



## SC Perinatal Regions and (% of Total SC Births by Region)-2019



Perinatal Regions were established to ensure risk-appropriate care for pregnant women and newborns. SC is recognized as a national leader for the development of this cooperative. More delivery site information is available in the mapping application at [boi.ifsreports.com](http://boi.ifsreports.com).

Since the start of SCBOI's effort to help designate hospitals as Baby-Friendly, there has been a 16% increase in the percent of newborns being breastfed in the hospital. Nearly 80% of SC newborns are breastfed, and 40% of SC births now occur in a Baby-Friendly facility.<sup>2</sup>

### SC LABOR AND DELIVERY UNITS

#### CLOSED

Marion-2018  
Spartanburg-2018  
Cheraw-2018  
East Gaffney-2018  
Charleston-2019

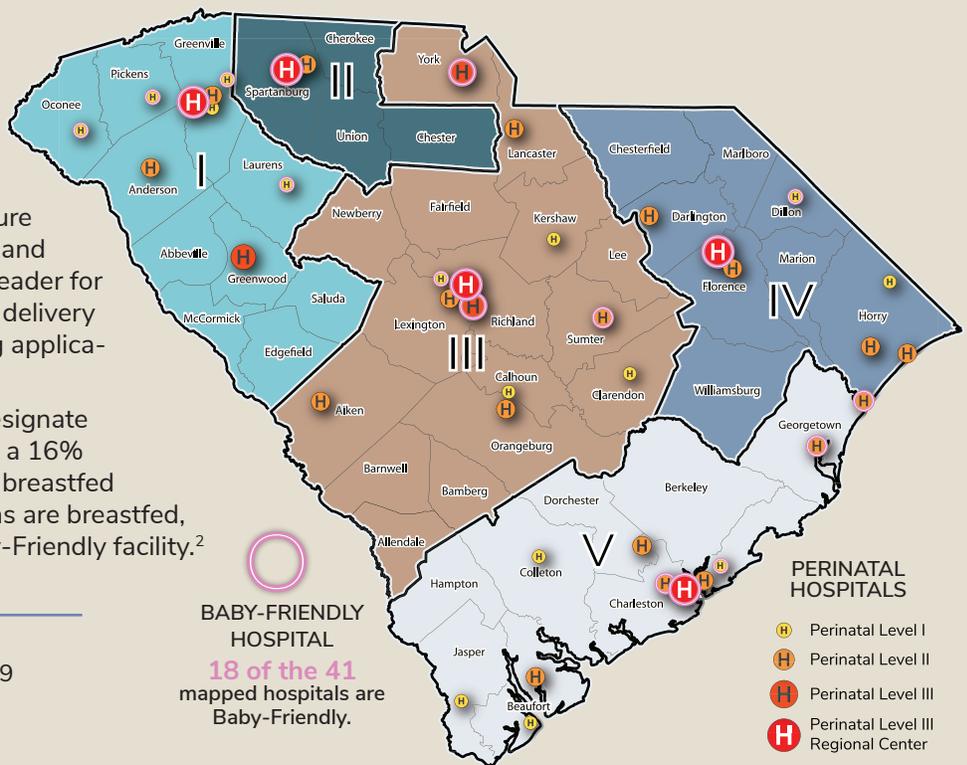
#### OPENED

Berkeley-2019

**BABY-FRIENDLY HOSPITAL**  
18 of the 41 mapped hospitals are Baby-Friendly.

### PERINATAL HOSPITALS

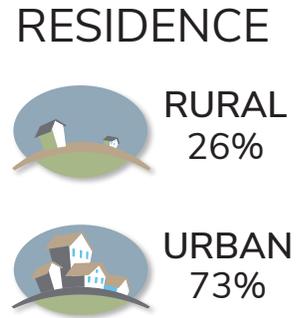
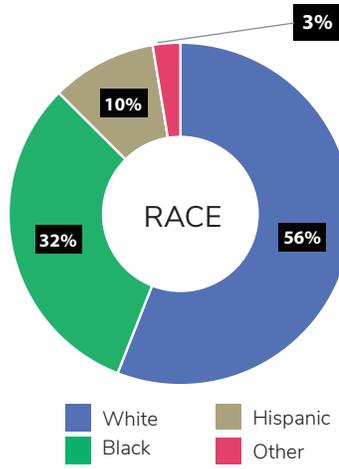
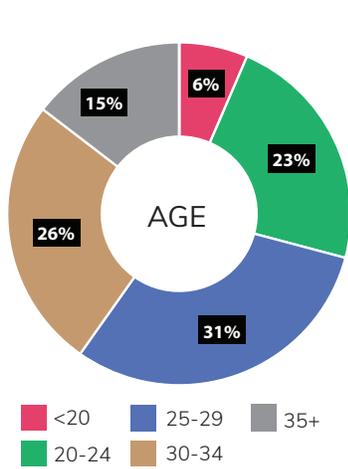
- Perinatal Level I
- Perinatal Level II
- Perinatal Level III
- Perinatal Level III Regional Center



Nearly all SC births occur in a hospital (98%).<sup>1</sup> While most occur equally within Perinatal Level II specialty care (44%) or Level III subspecialty care (38%) birthing hospitals, a smaller proportion (13%) occur in a Level I basic care birthing hospital.

*Access to labor and delivery care is a particular concern for rural communities.*

# CY2019: STATEWIDE MATERNAL CHARACTERISTICS

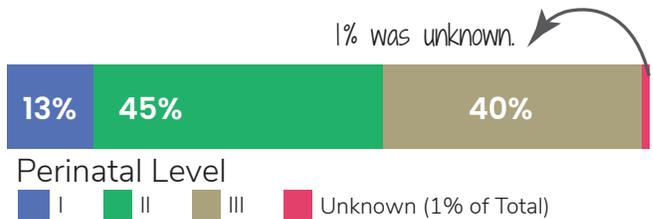
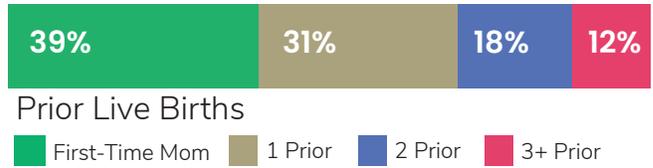
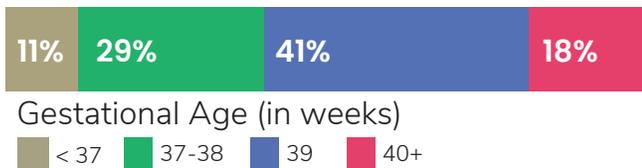
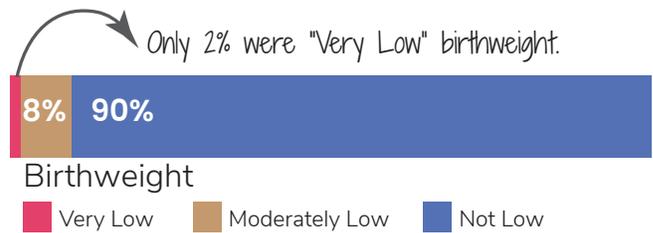


## DELIVERIES



Total	First-Time Moms	Inductions	C-Sections
48,914	19,128	19,887	16,206

## CY2019: DELIVERY CHARACTERISTICS



To further explore the data and definitions in this report, visit the SCBOI interactive dashboard at [boi.ifsreports.com](http://boi.ifsreports.com).

Percentages may not total to 100 due to rounding.

# Implications for Obstetric Patient Safety

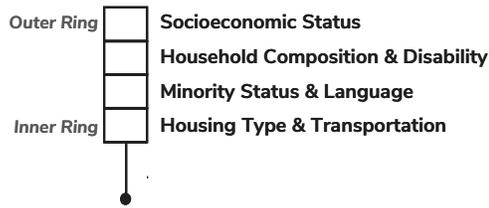
Women who are Medicaid enrollees, over the age of 30, give birth in a Level II facility, live in a rural area, or identify as Black race are more likely to experience poor labor and delivery and birth outcomes in SC than women who have private insurance, are younger, give birth in a Level I facility, live in an urban area, or identify as White race, respectively ( $p < .05$ ).<sup>3</sup>

In the ring map below, counties shaded yellow are the highest for 3 or more domains of the social vulnerability index (SVI) and may represent communities of opportunity for SCBOI outreach. The base map represents the percent of statewide births with darker counties having a greater percent.

Chesterfield and Marion, two of the counties with the highest social vulnerability, were also counties that had a maternity unit closure in 2018. Two others with closures, Charleston and Spartanburg, were shaded as having the highest percentage of births in the state. All but one of the counties with the highest SVI were in the highest class for lower socioeconomic status. Nine of these high SVI counties were also in the highest class for household composition and disability. Addressing these two domains will require investments in access to care, education, and economic mobility.



## Social Vulnerability Index (SVI) & 2019 County Births



### Definitions

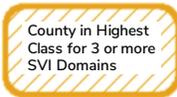
**Socioeconomic status** is defined by 4 factors: below poverty, unemployed, income, and no high school diploma.

**Household composition & disability** is defined as percent age 65 or older, age 17 or younger, older than 5 with a disability, and living in single-parent households.

### Ring Classification:

- Low
- Medium
- High

Classes represent tertile breaks

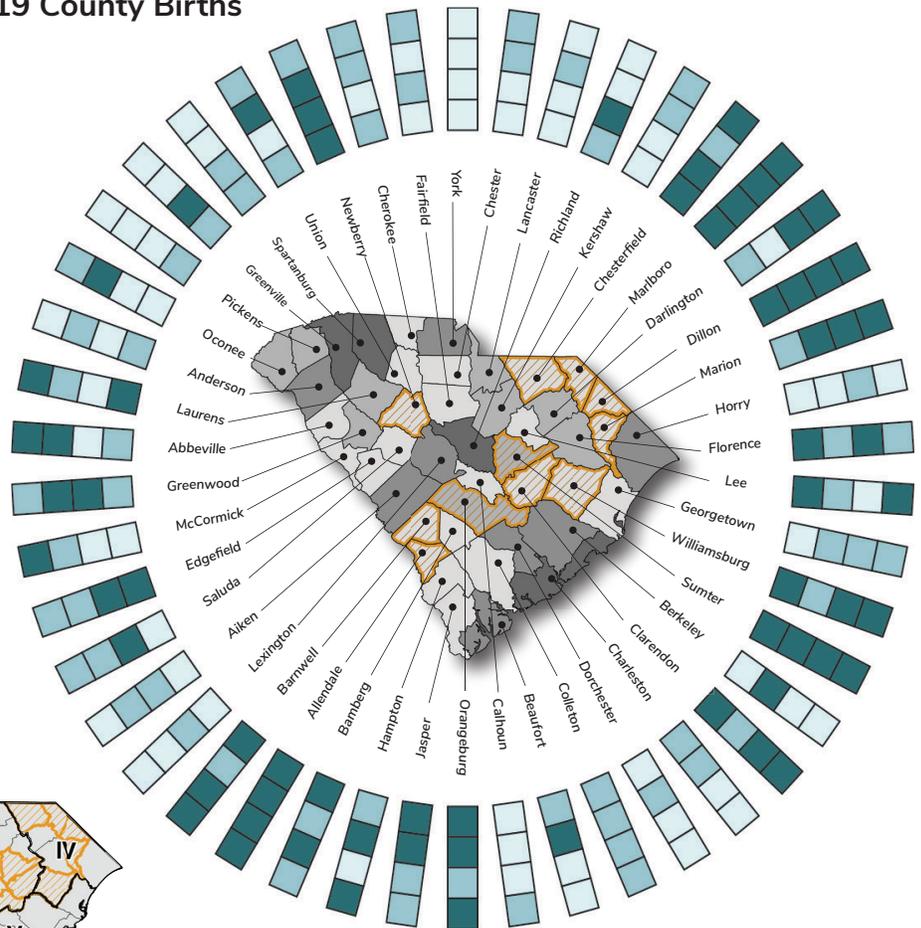


### Basemap:

Percent of Statewide Births within County

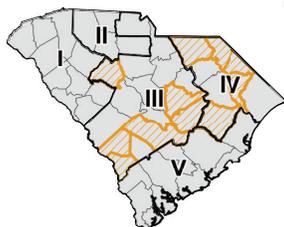
- <1.2%
- 1.2% - 2.9%
- 3.0% - 5.6%
- >5.6%

Classes represent natural breaks



## Births by Perinatal Region

Perinatal Region	Number of Births	% of Births
I	12,682	22.2
II	5,297	9.3
III	18,636	32.7
IV	7,347	12.9
V	13,076	22.9



Data: SC DHEC 2019 Birth Data US CDC Social Vulnerability Index 2018

# Labor and Delivery Outcomes

The SC Medicaid program plays a key role in addressing access to improved maternity care. The agency's support of SCBOI has been instrumental in SC leading the nation for its efforts to reduce early elective deliveries, designate hospitals as Baby-Friendly, screen pregnant women, increase access to immediate postpartum contraceptives, and expand statewide group prenatal care and milk depots.

## In 2019, SCDHHS Medicaid paid for...

- 61% of all deliveries
- 73% for women residing in rural areas
- 75% for women identifying as Hispanic
- 84% for women identifying as Black
- 93% for women under age 20



Since 2016, total deliveries have declined among all patients ( $-<1\%$ ) and Medicaid enrollees ( $-1\%$ ), but trends are not yet statistically significant.<sup>4</sup>

- Among women who did not have a coded medical reason for an early-term delivery, over 40% still had an early elective delivery at 37-38 weeks gestation. The rate of early elective induction was 24%, which was a 9% relative improvement compared to CY2018. More information on how to reduce elective deliveries is available in the less than 39 weeks toolkit.<sup>5</sup>
- Total C-Sections are decreasing, but primary C-Sections are trending up. Neither result is statistically significant. 26% of first-time mothers delivering a term, singleton baby in a vertex position will still have a primary C-section. SCBOI should consider reintroducing the SCBOI Supporting Vaginal Birth bundle as needed.<sup>6</sup>
- For every 500 deliveries in SC, 8 women experience severe maternal morbidity (SMM), which is an unexpected outcome of labor and delivery that results in significant consequences to a woman's health. To read more about how SCBOI is addressing SMM, visit [shealthviz.sc.edu/aim](https://shealthviz.sc.edu/aim).
- Rates of prematurity and low birthweight are increasing. The increase for LBW is statistically significant for Medicaid enrollees ( $p=0.001$ ). SCBOI continued efforts to monitor and support birth equity are needed to improve these birth outcomes, including addressing maternal mental health, increasing access to prenatal and postpartum care, and enhancing family support.

## NOTES

- 1 CDC Wonder Natality Information. Accessed November 13, 2020, at <https://wonder.cdc.gov/natality.html>
- 2 SCDHEC. SCAN. Accessed November 13, 2020, at [https://apps.dhec.sc.gov/Health/SCAN\\_BDP/tables/birthtable.aspx](https://apps.dhec.sc.gov/Health/SCAN_BDP/tables/birthtable.aspx)
- 3 Bivariate logistic regression models were constructed for linked data from October 1, 2015 to March 31, 2020 to study the association between each outcome measure of interest and the various demographic and maternal covariates. Outcomes included early elective deliveries, early elective inductions, potentially avoidable primary cesareans, severe maternal morbidity, prematurity, and low birthweight. These communities of opportunity had statistically higher odds than the referent group for a minimum of two of these outcomes (residing in a rural area) to a maximum of all six of these outcomes (delivering in a Perinatal Level II facility).
- 4 Quarterly trend testing using a general linear model was conducted for all post-ICD10 quarters (Q4 2015 – Q1 2020).
- 5 The Less than 39 Weeks Toolkit is available at <https://www.leapfroggroup.org/sites/default/files/Files/LessThan39WeeksToolkit.pdf>.
- 6 The SCBOI Supporting Vaginal Birth Bundle is available at <https://www.scdhhs.gov/site-page/supporting-vaginal-birth-bundle>.

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## DISCLAIMER

This document was prepared under contract to the SC Department of Health and Human Services (SC-DHHS). The views and opinions of the authors expressed herein do not necessarily state or reflect those of the SCDHHS.

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