

Geographic distribution of freestanding birth centers in relation to Black populations in the contiguous United States

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My Background

Birth center administrator in
Pittsburgh, PA from 2013-2018

AABC Research Committee
member since 2018

Third-year **doctoral student** in
public health, carving out a birth
center research niche through a
racial equity lens



Rationale

Spatial analysis methods not only allow us to illustrate **where people or places are** in relation to others, but they can also demonstrate statistical associations with the **variables of space and time.**



Rationale

We have current information about where active birth center locations exist in the United States (about 345); and the approximate proportion of birth center births to Black childbearing people (6-8%).

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We know that this population experiences more socioeconomic barriers to timely prenatal care, as well as higher risk of adverse perinatal outcomes, compared to non-Hispanic Whites.

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We know that this population experiences more socioeconomic barriers to timely prenatal care, as well as higher risk of adverse perinatal outcomes, compared to non-Hispanic Whites.

We **do not** have evidence of the degree to which Black childbearing people have access to birth center services.

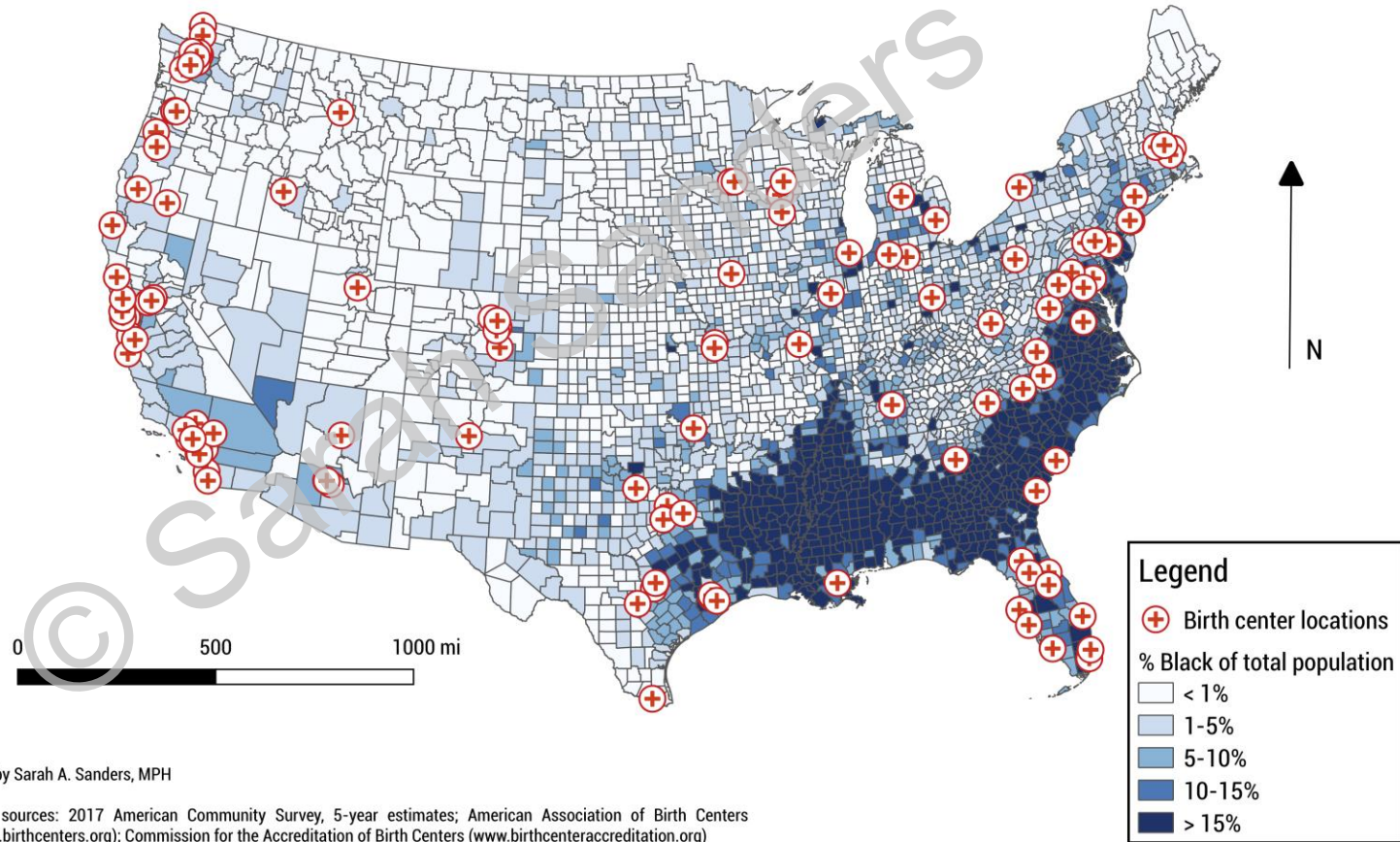
Rationale

*To inform and influence **state- and national-level policies** that impact birth centers and their clients, we must have a better understanding of the relationship between **where Black childbearing people reside**, particularly those with Medicaid, and the **locations and attributes of existing birth centers.***

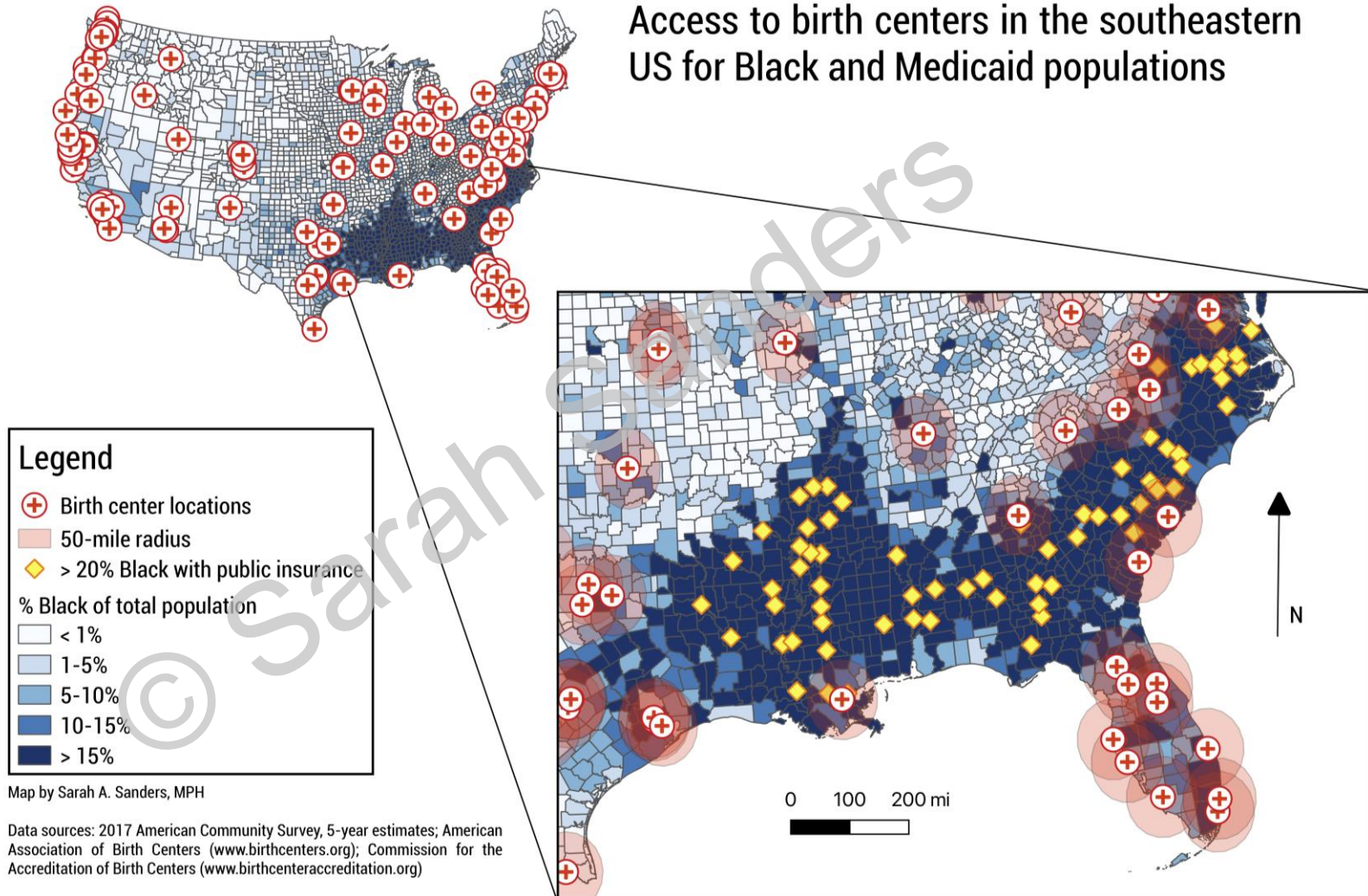
Methods and data sources

- 160 birth center locations found via **public websites** for American Association of Birth Centers (AABC) and Commission for the Accreditation of Birth Centers (CABC)
- 122 birth center addresses successfully **geocoded**
- Demographic data, at census tract and county levels, from the **2017 American Community Survey**, 5-year estimates (US Census Bureau)
- QGIS (Version 3.12) and GeoDa (Version 1.14) software

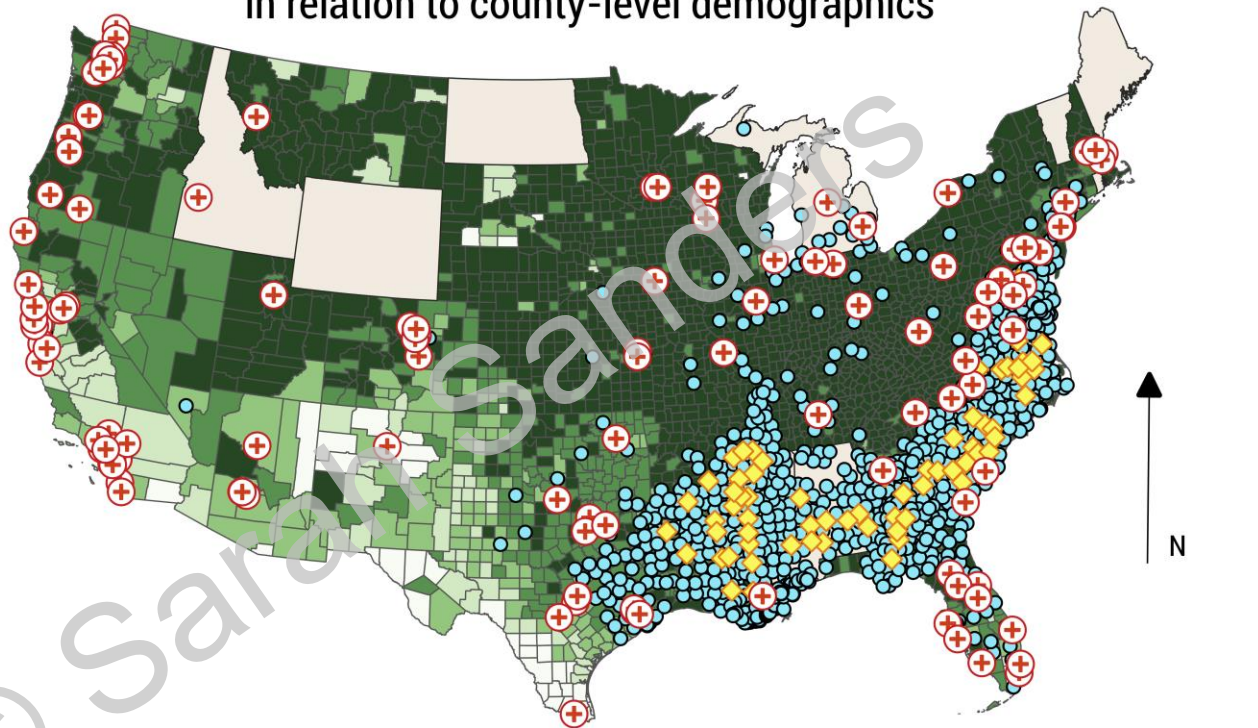
Birth center locations in relation to county-level population proportions of Black people in the contiguous United States



Access to birth centers in the southeastern US for Black and Medicaid populations



Birth center locations in the contiguous US in relation to county-level demographics



Legend

- Birth center locations
- > 20% Black with public insurance
- > 10% Black of total population
- No Medicaid credentialing for birth centers

% White of total population

- < 20%
- 20-40%
- 40-60%
- 60-80%
- > 80%



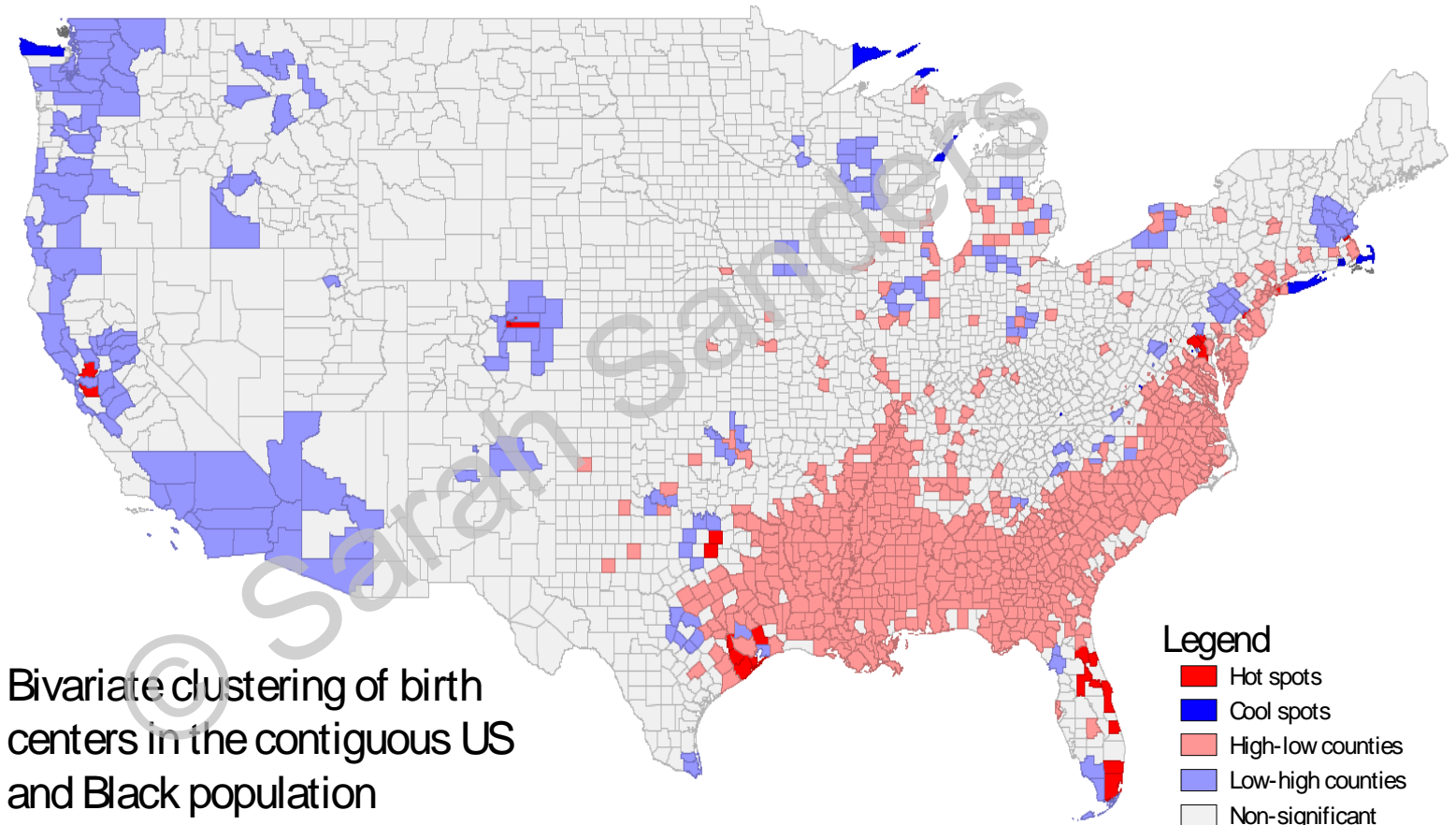
Map by Sarah A. Sanders, MPH

Data sources: 2017 American Community Survey, 5-year estimates; American Association of Birth Centers (www.birthcenters.org); Commission for the Accreditation of Birth Centers (www.birthcenteraccreditation.org); Kaiser Family Foundation (<https://www.kff.org/other/state-indicator/medicaid-benefits-freestanding-birth-center-services/>)

Birth centers and Medicaid

Between 2013-2017, birth centers participating in Strong Start reported a **cesarean rate of 12.3%** among clients with Medicaid insurance

Nine states are without licensing regulations for birth centers, preventing them from being able to accept Medicaid insurance



Bivariate clustering of birth centers in the contiguous US and Black population densities at the county level

Main Findings

- Total population size largely explains the number of birth centers in a county
- Geographic distribution of birth centers appears to be inversely related to higher population densities of Black people in the US
- Spatial autocorrelation of birth centers in the contiguous US shows a significant, positive relationship (local Moran's I: 0.731, pseudo p-value=0.001)

Implications

- Expansion of **policy** regarding the licensing and credentialing of freestanding birth centers with **Medicaid** payors
- Increased **technical support** from professional and advocacy organizations for birth center clinicians and stakeholders in areas with higher population densities of Black people
- Future research needed to address **facility- and environmental-level factors** associated with access to birth center care, particularly for at-risk populations

Next Steps

- Examine **spatial clustering** of birth centers with different attributes (e.g., accreditation, Medicaid credentialing, AABC membership) in relation to Black population densities
- Compare the demographic make-up of birth center **catchment areas**, where residents theoretically have geographical access to demographics of registered clients at PDR-participating centers

