Coronavirus Disease 2019 (COVID-19) and Access to Abortion
Assessing Patient Sociodemographic and Travel Characteristics

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INTRODUCTION
Abortion access has become increasingly limited in the U.S. Midwest and South. Before the coronavirus disease 2019 (COVID-19) pandemic, several states, including Kentucky, Mississippi, and Missouri, had only one abortion facility. Contrary to the recommendations of the American College of Obstetricians and Gynecologists and other medical organizations during the pandemic (https://www.acog.org/news/news-releases/2020/03/joint-statement-on-abortion-access-during-the-covid-19-outbreak), governors in 11 states attempted or succeeded in prohibiting abortion using executive orders, including Alabama, Alaska, Arkansas, Iowa, Louisiana, Mississippi, Ohio, Oklahoma, Tennessee, Texas, and West Virginia. Although every executive order has expired, the effects of these orders on abortion access is relatively unknown. A recent study in Texas found that abortions declined in the state while executive orders were in effect but increased in neighboring states. Abortions at 12 weeks of gestation or more increased after the orders expired. Another study demonstrated that lack of abortion access in Texas disproportionately affected Latinx patients, who had to travel an increase of 100 or more miles to access abortion care. To assess the potential influence of the pandemic on abortion, this study compares the sociodemographic and travel characteristics of patients receiving abortion care at four abortion facilities in Arkansas, Kansas, and Oklahoma before and during the COVID-19 pandemic.

METHODS
De-identified electronic health record data were extracted from four nonprofit abortion facilities in Arkansas, Kansas, and Oklahoma. These facilities were among 10 abortion facilities open during the pandemic period and provided approximately 51.9% of all abortions in the region in 2019. We compared data from visits that took place between April 1, 2019, and December 31, 2019 (pre–COVID-19 period), with data from visits that took place between April 1, 2020, and December 31, 2020 (COVID-19 period). Chi-square and t tests were used to compare patient self-reported sociodemographic and travel variables. McNemar and Mann-Whitney U tests were used to compare nonparametric data. The same analytic approach was used to compare sociodemographic and travel characteristics for in-state and out-of-state patients during the COVID-19 period. Mean differences and percentage changes were also calculated. This study relied on a de-identified patient data with no link to patients’ medical records and was deemed exempt by the Solutions Institutional Review Board.

RESULTS
In total, 10,204 abortions occurred during the pre–COVID-19 (n=4,457) and COVID-19 (n=5,747) periods. During the COVID-19 period more patients had medication abortions, with a 35.2% year-over-year increase. Patients in the COVID-19 period traveled more miles and were residents of Texas, Louisiana, and Tennessee. Patients in the COVID-19 period were less likely to be monogamous and were more likely to choose long-acting
reversible contraception postabortion (Table 1). Additionally, patients in the COVID-19 period had lower educational attainment.

Table 1. Comparisons of Patient Characteristics and Travel in the Pre–Coronavirus Disease 2019 (COVID-19) and COVID-19 Periods (N=10,204)

| Characteristic                           | Pre–COVID-19 (2019) (n=4,457) | COVID-19 (2020) (n=5,747) | P   |
|-----------------------------------------|-------------------------------|---------------------------|-----|
| Gestational age (total d)              | 54.7±20.2                     | 54.1±19.9                 | .145|
| Induced abortion type                  |                               |                           | <.001|
| Medication                             | 3,544 (79.5)                  | 4,793 (83.4)              |     |
| Surgical                                | 913 (20.5)                    | 954 (16.6)                |     |
| Surgical abortion                      |                               |                           | .447|
| trimester                              |                               |                           |     |
| 1st                                     | 669 (73.3)                    | 683 (71.6)                |     |
| 2nd                                     | 244 (26.7)                    | 271 (28.4)                |     |
| In monogamous relationship             |                               |                           | <.001|
| Postabortion LARC uptake               | 4,180 (93.8)                  | 4,024 (70.0)              |     |
| Miles traveled                          | 50.2±87.1                     | 59.1±98.5                 | <.001|
| Out-of-state resident                   | 2,076 (44.5)                  | 2,584 (55.5)              |     |
| State of residence                      |                               |                           | <.001|
| Arkansas                                | 550 (12.3)                    | 820 (14.3)                |     |
| Kansas                                  | 1,570 (35.2)                  | 1,611 (28.0)              |     |
| Oklahoma                                | 260 (5.8)                     | 732 (12.7)                |     |
| Missouri                                | 1,976 (44.3)                  | 2,246 (39.1)              |     |
| Texas                                   | 44 (1.0)                      | 244 (4.2)                 |     |
| Tennessee                               | 13 (0.3)                      | 32 (0.6)                  |     |
| Mississippi                             | 11 (0.2)                      | 17 (0.3)                  |     |
| Louisiana                               | 3 (0.1)                       | 14 (0.2)                  |     |
| Other states                            | 29 (0.7)                      | 31 (0.5)                  |     |
| Sociodemographics                       |                               |                           |     |
| Age (y)                                 | 26.6±6.1                      | 26.4±6.1                  | .209|
| Race*                                   |                               |                           | .103|
| Black or African American               | 960 (28.6)                    | 1,554 (29.6)              |     |
| Asian, Multiracial, Native American, Pacific Islander | 224 (6.7) | 400 (7.6) |     |
| White                                   | 2,174 (64.7)                  | 3,294 (62.8)              |     |
| Hispanic or Latinx*                     | 438 (16.8)                    | 785 (17.6)                | .368|
| Education*                              |                               |                           | <.001|
| High school or less                     | 1,063 (37.2)                  | 1,604 (45.0)              |     |
| Some college                            | 1,017 (35.6)                  | 1,201 (33.7)              |     |
| Associate’s or Bachelor’s degree        | 774 (27.1)                    | 760 (21.3)                |     |

Comparisons between in-state and out-of-state patients during the COVID-19 period (Table 2) revealed that out-of-state patients traveled more miles (mean difference 27.8 miles) and were more likely to have surgical abortions (48.4% increase). Out-of-state patients were also more likely to be in monogamous relationships. Sociodemographic data indicated that out-of-state patients were more likely to be Black and to have lower educational attainment. A greater number of in-state patients identified as Hispanic or Latinx.

Table 2. Comparisons of In-State and Out-Of-State Patient Characteristics and Travel During the Coronavirus Disease 2019 (COVID-19) Pandemic (n=5,747)

| Characteristic                           | In-State Patients (n=3,163) | Out-Of-State Patients (n=2,584) | P   |
|-----------------------------------------|----------------------------|-------------------------------|-----|
| Gestational age (total d)              | 53.1±18.7                   | 55.2±21.1                     | <.001|
| Induced abortion type                  | Medication 2,779 (87.9)     | 2,014 (77.9)                  | <.001|
| Surgical                               | 384 (12.1)                  | 570 (22.1)                    |     |
| Surgical abortion                      | trimester                   |                               | .147|
| 1st                                     | 265 (69.0)                  | 418 (73.3)                    |     |
| 2nd                                     | 119 (31.0)                  | 152 (26.7)                    |     |
| In a monogamous relationship           | Postabortion LARC uptake    |                               | <.001|
| Miles traveled                          | 46.6±56.8                   | 74.4±131.1                   | <.001|
| Socio-demographic characteristics      | Age (y)                     | 26.2±6.0                      | 26.7±6.1 | .002|
| Race*                                   | Black or African American   | 703 (24.8)                    | 851 (35.3) | <.001|
| Asian, Multiracial, Native American, Pacific Islander | 260 (9.2) | 140 (5.8) |     |
| White                                   | 1,871 (66.0)                | 1,432 (58.9)                  |     |
| Hispanic or Latinx*                     | 498 (16.8)                  | 287 (13.4)                    | <.001|
| Education*                              | High school or less         | 762 (43.5)                    | 842 (46.5) | .021|
| High school or less                     | Some college                | 584 (33.3)                    | 617 (34.1) |     |
| Associate’s or Bachelor’s degree        | 407 (23.2)                  | 353 (19.5)                    |     |

LARC, long-acting, reversible contraception.
Data are mean±SD or n (%) unless otherwise specified.
* Patient records with unknown or unreported race, ethnicity, or educational attainment were treated as missing and excluded from group comparisons.
DISCUSSION
Our findings suggest that the sociodemographic and travel characteristics among patients receiving abortion care differed during the COVID-19 pandemic and do not reflect previous state-level year-over-year abortion trends.6–8 Our findings underscore that restrictions, even when temporary, increase the need for travel, disproportionately affect patients who are Black and those with less education, result in delays in care, and ultimately lead to an increase in surgical procedures. Limitations include that our study relies on electronic health record data, does not include data from every abortion facility across the three states, and does not assess patient motivations for travel (eg, privacy, existing regulations).

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