SARS-CoV-2 Mitigation Strategies, Testing, and Cases at 254 Jails in the US Southeast, October 2020 to May 2021

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Objectives. To characterize severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) mitigation strategies, testing, and cases across county jails in the Southeastern United States, examining variability by jail characteristics.

Methods. We administered a 1-time telephone survey to personnel of 254 jails in Alabama, Georgia, North Carolina, and South Carolina between October 2020 and May 2021.

Results. Some SARS-CoV-2 mitigation strategies (e.g., screening at intake, isolation and masking for symptomatic persons) were commonly reported (≥ 75% of jails). Other measures, such as masking regardless of symptoms (52%) and screening at release (26%), were less common and varied by jail state or population size. Overall, 41% of jails reported no SARS-CoV-2 testing in the past 30 days. Jails with testing (59%) tested a median of 6 per 100 incarcerated persons; of those jails, one third reported 1 or more cases of positive tests. Although most jails detected no cases, in the 20% of all jails with 1 or more case in the past 30 days, 1 in 5 tests was positive.

Conclusions. There was low testing coverage and variable implementation of SARS-CoV-2 mitigation strategies in Southeastern US jails during the first year of the COVID-19 pandemic.

Jails are common outbreak sites for COVID-19, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[1] Jails' crowded, confined spaces greatly inhibit social distancing, and access to hygiene products and protective equipment is often inadequate.[2,3] Early in the COVID-19 pandemic, mass testing among incarcerated persons in jails across the United States revealed SARS-CoV-2 infection prevalence as high as 87%,[4] and more recent studies have reported COVID-19 case rates up to 3 times as high for incarcerated populations and staff compared with the general population.[1,5,6] As Black, Latinx, and other persons of color are overrepresented in the criminal justice system, the high COVID-19 burden in these settings further contributes to ongoing racial health disparities.[1,7–9] And, although efficacious COVID-19 vaccines are now available, preventive effects may be suboptimal in jails because vaccine hesitancy and limited delivery slow uptake[10,11] while constant population churn and emerging variants can reseed infection.[12–14]

The Centers for Disease Control and Prevention (CDC) issued guidance on COVID-19 management in correctional and detention facilities in March 2020, with updates in 2021.[15] Recommendations include suspending transfers and visitation, providing hygiene supplies and protective equipment, and instituting social distancing, symptom screening, quarantine, and isolation. Though measures such as suspending visitation have been successfully adopted in some jails,[16] jail administrators have faced challenges in implementing others, particularly because of constraints of dormitory housing and limited capacity for isolation and quarantine.[17] The CDC also

recommends that jails use diagnostic testing for persons with COVID-19 symptoms or exposure and screening testing to identify asymptomatic cases.[15] However, early reports from some jails suggest that testing may be largely symptom-driven, without regular asymptomatic screening.[6,18] While some prisons have instituted mass testing for SARS-CoV-2, the few studies reporting testing in jails suggest considerably lower testing rates in these settings.[4,6,19]

Understanding COVID-19 disease burden and control measures is critical to reducing morbidity and mortality in the highly vulnerable populations associated with jails. Little is known about SARS-CoV-2 cases, testing, and mitigation measures in jails in the US Southeast, where incarcerated populations are predominantly Black[20] and there have been high COVID-19 case rates[1] as well as suboptimal vaccination uptake.[21] Furthermore, the limited jail-related research on SARS-CoV-2 conducted in the United States has generally focused on single jails or a collection of facilities within a single county or state.[10,17] Against this backdrop, we aimed to characterize SARS-CoV-2 mitigation strategies and to estimate testing rates and test positivity in all county jails across 4 Southeastern US states. By examining variability by jail characteristics, we sought to identify potential predictors of successful SARS-CoV-2 mitigation and testing implementation in these settings.

METHODS

We invited jail administrators, health care leadership, and health care providers at all county jails in Alabama (n = 66), Georgia (n = 143), North Carolina (n = 93), and South Carolina (n = 44) on a rolling basis between October 2020 and May 2021 to participate in a 1-time telephone survey on internal and community health care resources available to Southeastern jails. Temporary holding facilities (often referred to as city jails) were excluded. The survey lasted 45 to 60 minutes, and, when allowable by the jail, respondents received remuneration of $35.

Measures

With SARS-CoV-2 emerging during survey development, a section was designed specifically to address jails' COVID-19 policies and practices. Items were developed based on CDC recommendations for COVID-19 management in jails[15] and the general state of knowledge in the first 6 months of the pandemic. The survey was refined through qualitative interviews with 8 jails and tested in 2 cognitive interviews and 2 pilot surveys.

The COVID-19 items assessed the use of SARS-CoV-2 mitigation measures in respondents' jails. These measures included screening (via symptom reports and temperature checks), along with isolation and mask use after a positive screen or upon subsequent development of symptoms. Other mitigation measures assessed were facility cleaning, availability of soap and hand sanitizer, off-site transport, telemedicine, cohorting (in which incarcerated persons are grouped together based on day of admission), masking regardless of symptoms, and reductions to the jail population size.

In addition to mitigation measures, the survey addressed SARS-CoV-2 testing practices and reported positive cases. Respondents were asked about the frequency of testing for incarcerated persons, including after a positive screen or close contact with a case, and whether all staff were tested after a case in the incarcerated population. They also reported on the jail's use of isolation and early release following a positive SARS-CoV-2 test, as well as screening and quarantine for contacts of SARS-CoV-2 cases. Finally, respondents were asked to report the numbers of incarcerated persons tested and cases that had been detected at the jail in the past 30 days.

Other survey items concerned characteristics of jails (population size, health care staffing) and of respondents (demographics, current position, and duration of employment at the jail).

Statistical Analysis

We performed descriptive analyses to summarize jail and respondent characteristics across facilities. Prevalence of each SARS-CoV-2 mitigation measure was calculated as the percentage of jails reporting the measure's implementation, stratified by state (AL, GA, NC, or SC) and jail population size (≤ 50, 51–200, or ≥ 201 incarcerated persons). A mitigation measure was considered to be commonly adopted if reported by at least 75% of jails in each state and size stratum. For measures reported by fewer than 75% of jails in any state or size stratum, we assessed meaningful variability, which we defined as a difference of at least 10 percentage points between at least 2 state or size categories.

We calculated SARS-CoV-2 testing rates by dividing the reported number of incarcerated persons tested in the past 30 days by the total currently incarcerated at the jail. Respondents reported the population size at the time of the survey, which we assumed to be stable over the past 30 days. Rates were multiplied by 100 to correspond to the number tested per 30-day period per 100 incarcerated persons. We calculated

SARS-CoV-2 test positivity percentages by dividing the number of persons who tested positive in the past 30 days by the total persons tested in the past 30 days at the jail, multiplying by 100. We stratified both testing rates and test positivity percentages by state and population size.

To facilitate rough comparison of testing rates and test positivity percentages calculated at the level of individual jails—which were spread broadly across each state—with state-level metrics, we calculated SARS-CoV-2 testing rates and test positivity percentages for each state's general population during the study period. We used publicly available data on state population sizes from the US Census Bureau, along with daily SARS-CoV-2 tests and rolling averages of 7-day test positivity from the CDC COVID Data Tracker.[22] We calculated 30-day testing rates daily by dividing the number of tests reported for the past 30 days by the state's population size, multiplying by 100. We calculated test positivity percentages daily by taking the mean of rolling 7-day test positivity percentages reported by the state for the past 30 days. We conducted all analyses with R version 4.1.1.[23]

RESULTS

The study population comprised 254 jails in Alabama, Georgia, North Carolina, and South Carolina, out of 346 jails total in those states. The number of jails participating and response rates (percentage of all jails) by state were 84 (90%) in North Carolina, 48 (73%) in Alabama, 32 (73%) in South Carolina, and 90 (63%) in Georgia. The median jail population size was 100 to 115 incarcerated persons at the time of the survey, with one quarter reporting 50 persons or fewer. Population size was similar across states, although Alabama and South Carolina jails were somewhat more likely to have more than 200 persons than were jails in Georgia and North Carolina. Approximately half of Alabama and South Carolina respondents reported that the jail's population size exceeded its capacity in the past 30 days (vs 28% in NC and 19% in GA; Table A, available as a supplement to the online version of this article at https://ajph.org).

Mitigation

Some mitigation measures were commonly adopted across jails, regardless of state or population size (Table 1). Respondents at all jails reported screening incarcerated persons for SARS-CoV-2 at intake, with most (97%) reporting use of temperature checks and symptom questionnaires. Overall, 87% of jails reported that screening via temperature checks and symptom questionnaires also occurred during incarceration. For persons reporting symptoms, 97% and 91% of respondents reported that isolation (alone or with other symptomatic persons) and mask use were typically required, respectively. Most jails (87%) instituted screening among staff, generally with daily temperature checks and symptom questionnaires. Other common measures were increasing cleaning (98% of all jails) and availability of soap and hand sanitizer (95%), limiting transport off-site (88%), and making masks available to all incarcerated persons (86%).

Less common mitigation measures, all of which had meaningful variation by jail population size or state, were mask requirements (regardless of symptoms) for both incarcerated persons and staff (separately), use of cohorting, reductions in population size, use of telemedicine, and screening at time of community release (Table 1). Universal mask use by incarcerated persons was more commonly required by larger jails (62% of those with ≥ 201 persons vs 51% and 46% of those with ≤ 50 and 51–200 persons, respectively) and jails in South Carolina (72% vs 48% to 54% in other states). Mask requirements were more common for staff than for incarcerated persons, with slightly less variability for staff versus incarcerated persons by size and state.

Cohorting was more frequently reported by larger jails (74% of jails with ≥ 201 persons vs 53% and 56% of jails with ≤ 50 and 51–200 persons, respectively), and reductions in population size were more likely at jails in Georgia (78%) compared with other states (56%–63%). Telemedicine use varied by state, with 41% to 48% of jails in South Carolina and Alabama reporting increases, as compared with 29% to 32% of jails in Georgia and North Carolina. Although screening at intake and during incarceration was common, screening at release was reported by only 26% of jails, with considerable differences by state (ranging from 7% in GA to 63% in AL) and size (16%, 22%, and 39% in jails with ≤ 50, 51–200, and ≥ 201 persons, respectively).

Testing

Respondents at most jails (94%) reported that SARS-CoV-2 testing typically would be performed for any incarcerated person following report of symptoms. The majority (81%) did not conduct asymptomatic testing, except in circumstances of known contact with a case. If an incarcerated person tested positive for SARS-CoV-2, few jails (5%)

TABLE 1— Prevalence of SARS-CoV-2 Mitigation Measures in Jails: 4 Southeastern US States, October 2020–May 2021

	Overall, No. or %	State, No. or %				Population Size, No. or %		
		AL	GA	NC	SC	≤50	51–200	≥201
No. of jails	254	48	90	84	32	57	120	76
Measures commonly adopted across states and population sizes								
Screening at intake	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Screening during incarceration	87.0	87.5	91.1	79.8	93.8	84.2	83.3	94.7
Staff screening	86.6	93.8	80.0	90.5	84.4	84.2	85.8	90.8
Isolation if symptomatic	96.9	93.8	97.8	98.8	93.8	94.7	97.5	97.4
Mask use if symptomatic	91.3	85.4	86.7	97.6	96.9	91.2	92.5	89.5
More frequent routine cleaning	98.0	95.8	97.8	100.0	96.9	96.5	97.5	100.0
Available soap, hand sanitizer	94.5	95.8	94.4	95.2	90.6	96.5	92.5	96.1
Available masks to all incarcerated persons	85.8	75.0	88.9	90.5	81.3	87.7	84.2	86.8
Limiting transport off-site	87.8	79.2	92.2	86.9	90.6	89.5	89.2	84.2
Measures less common and varying by state or size								
Screening at release	26.0	62.5	6.7	25.0	28.1	15.8	21.7	39.5
Requiring all incarcerated persons wear masks	52.0	54.2	47.8	47.6	71.9	50.9	45.8	61.8
Requiring all staff wear masks	83.1	83.3	74.4	88.1	93.8	80.7	80.0	89.5
Cohorting	60.6	70.8	47.8	67.9	62.5	52.6	55.8	73.7
Reduced jail population	66.9	60.4	77.8	63.1	56.3	71.9	66.7	63.2
More frequent telemedicine	35.0	47.9	32.2	28.6	40.6	29.8	38.3	32.9

Note. SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2. Population size was missing for 1 jail.

reported that all other persons at the facility would be tested.

In the 30 days before the survey, 59% of jails reported testing 1 or more incarcerated person for SARS-CoV-2, with testing rates varying by state and population size (Table 2). Jails in South Carolina and jails with at least 201 incarcerated persons were most likely to have performed any testing and had the highest median numbers of persons tested per facility. Accounting for population size, median testing rates in the 149 jails with any testing were highest for those with 50 or fewer incarcerated persons (median 10 persons tested in past 30 days per 100 incarcerated persons). Median rates were similar for South Carolina and North Carolina (9 persons tested per 100 incarcerated) but lower for Georgia (6 persons tested per 100 incarcerated) and Alabama (2 persons tested per 100 incarcerated). Testing rates across states' jails straddled estimates for the general population over the 7-month study period (Figure 1).

Cases

At the time of survey administration, respondents from 51% of jails reported that there had ever been a SARS-CoV-2 case detected within their incarcerated population. In jails with at least 1 reported case, most (80%) reported medical observation and isolation for persons with a positive SARS-CoV-2 test, in addition to screening (88%) and quarantine (96%) for their contacts. Respondents at 29% of jails reported that early release of persons with a positive SARS-CoV-2 test was typical.

In the 30 days before survey administration, at least 1 incarcerated person tested positive for SARS-CoV-2 at 20% of jails in this study. When restricted to jails with testing in the past 30 days, one third reported at least 1 case overall, with the percentage reporting cases varying by state and population size (Table 2). Cases were most likely to be reported by jails in South Carolina and jails with at least 201 incarcerated persons. As the state with the lowest testing rate, Alabama jails were least likely to report cases.

Although testing at most jails detected few or no SARS-CoV-2 cases, there were notable exceptions in which most tests

TABLE 2— SARS-CoV-2 Testing and Test Positivity in Jails, Stratified by State and Population Size: 4 Southeastern US States, October 2020–May 2021

	Overall, No. (%) or Median (IQR)	State, No. (%) or Median (IQR)				Population Size, No. (%) or Median (IQR)		
		AL	GA	NC	SC	≤50	51–200	≥201
No. of jails	254	48	90	84	32	57	120	76
≥1 test in past 30 d	149 (58.7)	22 (45.8)	51 (56.7)	52 (61.9)	24 (75.0)	23 (40.4)	66 (55.0)	59 (77.6)
Subset of 149 jails with ≥1 SARS-CoV-2 test in past 30 d								
Persons tested per jail	5.8 (2.0–37.0)	2.0 (1.0–8.5)	5.0 (3.0–20.0)	9.0 (2.5–53.8)	12.0 (3.0–114.8)	3.0 (2.0–8.3)	4.5 (1.3–29.0)	15.0 (3.8–77.5)
Testing rate per jail	6.2 (1.6–28.0)	2.0 (0.6–7.4)	6.4 (2.1–17.6)	9.1 (2.3–52.8)	9.0 (1.8–53.2)	10.0 (6.2–32.4)	6.0 (1.7–29.1)	4.4 (1.0–14.9)
≥1 case in past 30 d	50 (33.6)	5 (22.7)	18 (35.3)	17 (32.7)	10 (41.7)	3 (13.0)	15 (22.7)	31 (52.5)
Cases per jail	0.0 (0.0–2.0)	0.0 (0.0–0.0)	0.0 (0.0–3.0)	0.0 (0.0–2.0)	0.0 (0.0–5.5)	0.0 (0.0–0.0)	0.0 (0.0–0.0)	1.0 (0.0–7.0)
Test positivity per jail	0.0 (0.0–6.7)	0.0 (0.0–0.0)	0.0 (0.0–18.3)	0.0 (0.0–2.6)	0.0 (0.0–7.5)	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.6 (0.0–18.8)
Subset of 50 jails with ≥1 case of a positive SARS-CoV-2 test in past 30 d								
Cases per jail	4.0 (2.0–18.8)	2.0 (2.0–6.0)	6.0 (2.5–18.8)	3.0 (2.0–12.0)	7.5 (4.3–40.0)	2.0 (1.5–3.0)	2.0 (1.5–17.0)	7.0 (3.0–23.0)
Test positivity per jail	18.8 (7.5–49.3)	50.0 (31.2–57.1)	46.5 (17.5–65.8)	10.0 (3.0–16.0)	10.0 (5.4–34.4)	10.0 (7.1–55.0)	28.6 (10.0–52.3)	17.5 (7.5–46.5)

Note. IQR = interquartile range; SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2. Testing information was missing for 7 jails; population size was missing for 1 jail. Testing rate per jail is the number of persons tested per 30-day period per 100 incarcerated persons. SARS-CoV-2 test positivity per jail is the percentage of SARS-CoV-2 tests that were positive in the past 30 days.

DISCUSSION

To our knowledge, this is the first study of SARS-CoV-2 mitigation, testing, and cases in jails across the US Southeast. We examined CDC-recommended management strategies in the first year of the COVID-19 pandemic, finding that some measures (e.g., symptom screening, availability of masks, limiting transport off-site) were adopted almost universally, and others (e.g., mask requirements, cohorting, size reductions) varied by state or jail population size. Although screening for COVID-19 signs and symptoms at admission and during incarceration was common, jails were much less likely to report screening at the time of release. SARS-CoV-2 testing practices during incarceration were symptom-driven, with few jails reporting asymptomatic testing outside of known exposures. Notably, more than 40% of jails had not conducted a SARS-CoV-2 test in the past 30 days, with testing less likely in jails with smaller populations. Even among jails reporting tests, testing rates were low (median 6 persons tested in past 30 days per 100 incarcerated). Most jails did not report any SARS-CoV-2 cases in the past 30 days (median test positivity 0% among all jails with any testing). In the 20% of jails reporting at least 1 case, median test positivity was lowest for jails in North Carolina and South Carolina and those with 50 or fewer persons (10% of tests were positive in each stratum). In that same subset of 50 jails, median test positivity was higher for jails in Alabama (50% positive, although based on only 5 jails with cases), in Georgia (47% positive), and with 51 to 200 incarcerated persons (29% positive). Among all jails with testing, test positivity again straddled state-level estimates (Figure 2).

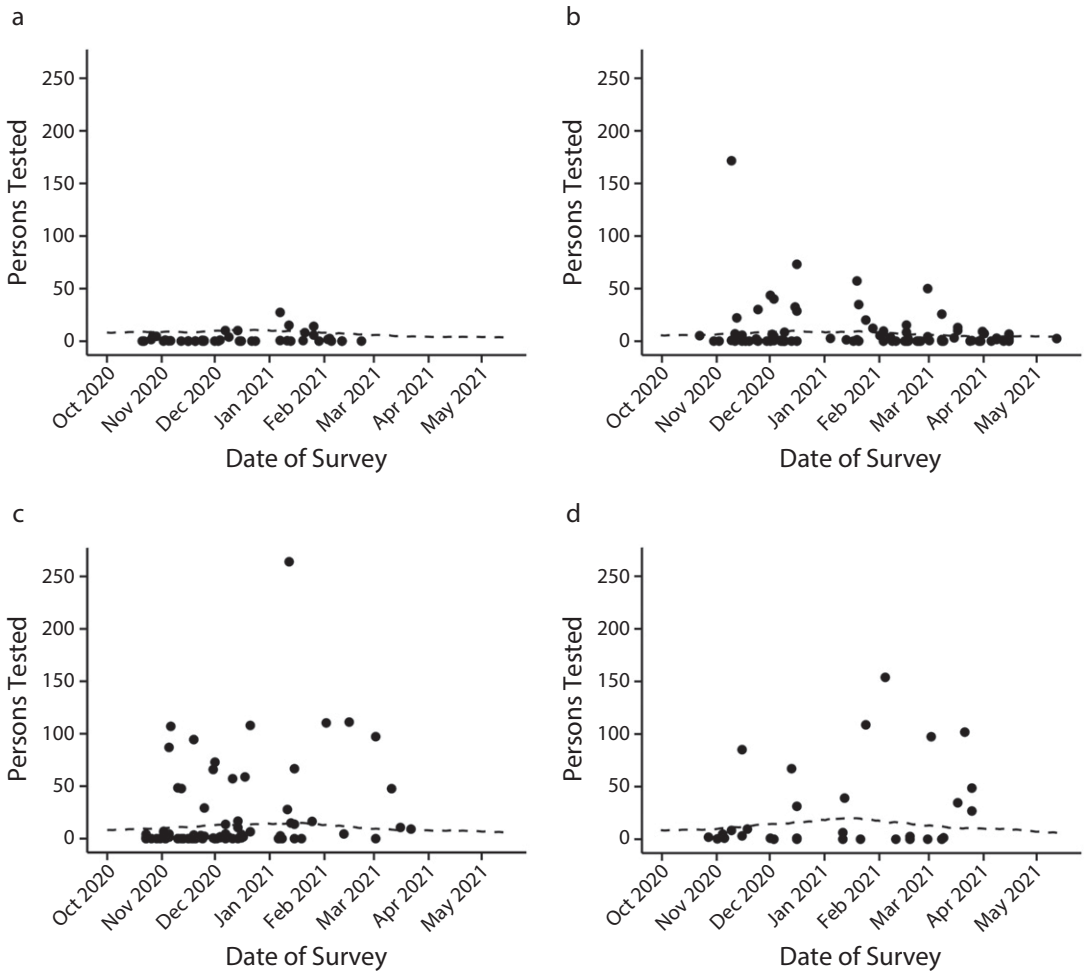

FIGURE 1— Incarcerated Persons Tested for SARS-CoV-2 in the Past 30 Days per 100 Population Among Jails in (a) Alabama, (b) Georgia, (c) North Carolina, and (d) South Carolina: October 2020–May 2021

Note. SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2. There were 246 jails with nonmissing data on population size and testing. Each point corresponds to 1 jail at the time of survey administration (with estimates corresponding to the past 30 days), and dashed lines correspond to the tests in the past 30 days per 100 persons in each state's general population.

least 1 SARS-CoV-2 case, test positivity was lowest for jails in North Carolina and South Carolina and those with 50 or fewer persons.

Our findings are consistent with previous research documenting SARS-CoV-2 mitigation approaches and testing, and COVID-19 disease burden in jails in other parts of the United States[6,17] and in prisons.[19] Previous work in Louisiana jails found that some CDC recommendations (e.g., providing hygiene supplies, instituting screening) were readily implemented, but uptake of others (e.g., use of isolation, quarantine, and cohorting) varied, with space constraints cited as the key barrier.[17] Although assessed during an earlier stage of the pandemic (April–July 2020), similar testing rates (approximately 8 tests per 100 persons per 30-day period) were estimated among Massachusetts jails that reported any testing.[6] In a study of SARS-CoV-2 testing in prisons,[19] the overall rate across Alabama prisons (2 per 100 persons incarcerated) matched our median estimate for Alabama jails with any testing, while the overall rate across North Carolina prisons (27 per 100 persons incarcerated) was higher than our median estimate for North Carolina jails.

Routine testing to detect asymptomatic SARS-CoV-2 infections was lacking in the jails we surveyed in this study. Given the short lengths of stay and constant population churn that are typical in jails,[24–27] the limited asymptomatic testing and lack of symptom screening at release reported by survey respondents could facilitate spillover of infection between jails and surrounding

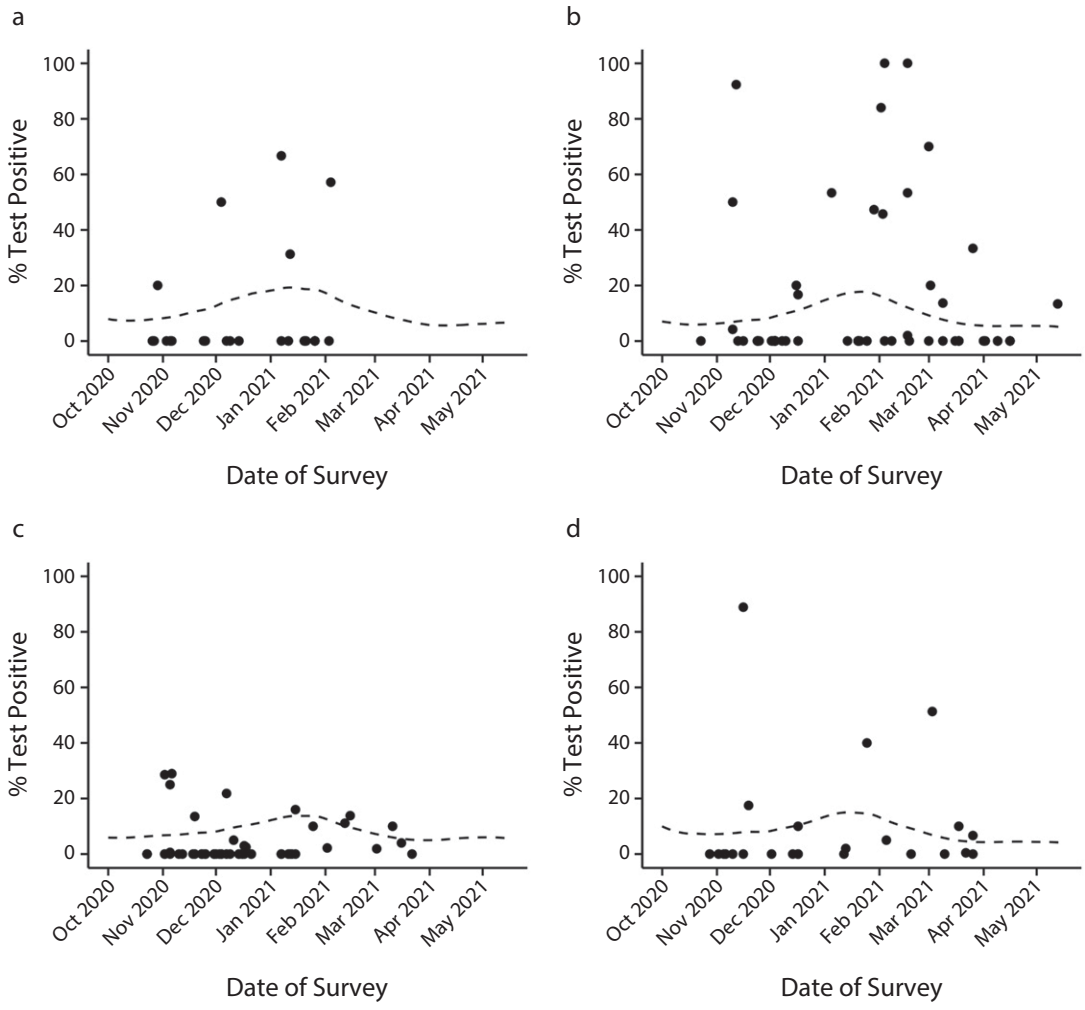

FIGURE 2— SARS-CoV-2 Test Positivity Percentages in the Past 30 Days, Among Jails in (a) Alabama, (b) Georgia, (c) North Carolina, and (d) South Carolina: October 2020–May 2021

Note. SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2. There were 149 jails reporting ≥ 1 SARS-CoV-2 test. Each point corresponds to 1 jail at the time of survey administration (with estimates corresponding to the past 30 days), and dashed lines correspond to the mean test positivity in the past 30 days reported for each state's general population.

communities. Opt-out mass testing was conducted early in the pandemic in jails in New York City[18] and Cook County, Illinois.[16] In New York City, test positivity was 23% among asymptomatic persons tested in March through April 2020; in that same period, Cook County jail reported 10% positivity in asymptomatic persons, with 24% of all cases at the jail being asymptomatic. In our study, many jails had both low testing rates and low test positivity; in others, no tests were conducted. It is unclear if jails with few or no reported cases represent environments in which little SARS-CoV-2 infection was present, symptoms were ignored, or cases were asymptomatic. Our study did not collect data on barriers to testing, which could have included lack of test kits and personnel, differences in state-level policies or federal funding allocations, limited awareness of testing protocols, and concerns over positive test results extending short jail stays. Nonetheless, our findings highlight an unmet need for greater testing in incarcerated populations and the importance of dedicating federal, state, and county resources to this effort.

Since the start of the pandemic, SARS-CoV-2 cases in prisons across the United States have been reported by each state's department of corrections and compiled and analyzed by the COVID Prison Project.[28] In contrast, because jails are independently operated at the county level and lack a centralized reporting system, it is difficult to aggregate COVID-19 data across jails

and provide coordinated guidance on mitigation measures. Improving the dissemination of public health guidance is important, particularly as available interventions and our understanding of their effectiveness evolves.

For example, since the initial release of CDC guidance for COVID-19 management in jails, key changes to the prevention landscape have included widespread availability of vaccines, a strengthened evidence base for mask use, increased use of broad-based testing, and shorter durations of recommended quarantine and isolation periods.[15] Greater information sharing across jails could facilitate uptake of interventions and improve the safety of these settings. Increasing the availability of jails' data on COVID-19 outcomes (e.g., hospitalizations and deaths) would enable a fuller assessment of disease burden. Given that Black, Latinx, and other persons of color are disproportionately incarcerated, it is also crucial for future work to identify and address racial disparities in COVID-19 outcomes arising from jail settings.

Because our study began before the availability of COVID-19 vaccines, we did not assess jail vaccination practices or attitudes toward vaccination among incarcerated persons and staff. Now that safe and effective vaccines against COVID-19 are widely available,[29–31] future studies should examine vaccination access and uptake in jail populations. Most prisons routinely report vaccination uptake among incarcerated persons and staff[28]; without comparable reporting among jails, little is known about vaccine uptake in their populations. In addition, although studies have explored vaccine willingness and delivery strategies in jail populations,[10,11,13] research is needed on the implementation and effectiveness of efforts to increase COVID-19 vaccination for incarcerated persons and staff.

Limitations

To enable a comprehensive assessment of COVID-19 burden and control measures in Southeastern US jails, our study recruited nearly three quarters of all county jails across a 4-state region. The survey underwent extensive pilot testing, and telephone administration allowed for clarification of responses and nuances in how information was shared. However, a limitation was that jails with ongoing COVID-19 outbreaks may have been less likely to respond; 71 of 92 nonresponding jails were in Georgia and Alabama, where high test positivity in surveyed jails with cases may indicate ongoing transmission in similar facilities. Furthermore, the timing of survey administration varied somewhat by state, such that differences across states may partially be a function of the pandemic stages in which surveys were conducted and rapid evolution in the resources available for prevention and treatment.

When interpreting study findings, it is important to note that jails' policies do not necessarily equate to control measures' implementation. Because the survey was conducted at the jail level, there were no individual-level data available on compliance with policies among incarcerated persons and staff or any differences by their individual characteristics. Furthermore, because of the study's cross-sectional design, we were unable to draw inferences about the effects of jail policies and characteristics on SARS-CoV-2 testing and cases of positive tests. In addition, social desirability bias could have led to underestimates of SARS-CoV-2 cases occurring at the jail or overestimates of testing or CDC-recommended mitigation measures. This bias could be differential by the type of respondent; for example, compared with health care personnel, jail administrators may be less likely to reveal (or be aware of) cases or noncompliance with CDC recommendations. We also note that our findings may differ from SARS-CoV-2 caseloads, testing practices, and mitigation measures in the current epidemic era and in Southeastern jails outside our study.

Public Health Implications

Our study suggests that there was variable implementation of COVID-19 mitigation strategies and generally low testing coverage across jails in the US Southeast during the first year of the COVID-19 pandemic. Although some control measures were widely adopted, our findings suggest that improvements to testing practices—in particular, increasing the availability of asymptomatic testing to detect ongoing outbreaks within jails and prevent spillover to surrounding communities—would be beneficial. Given that jails and other facilities that incarcerate people may contribute disproportionately to SARS-CoV-2 transmission,[1,9,14,32] the effects of intervening on infection in these settings are likely to be magnified.

As shown for other infectious diseases,[33] slowing transmission in carceral settings will directly protect incarcerated persons and staff and confer indirect benefits to the general population. Because persons of color are overrepresented in jails' populations, strengthening jails' pandemic response will also help to reduce racial disparities in COVID-19 outcomes. Continued surveillance of SARS-CoV-2 infections, testing, and other mitigation measures, including vaccination, in jail populations is critical to improving understanding of and

informing interventions against SARS-CoV-2 spread.

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CONTRIBUTORS

D. L. Rosen conceptualized and supervised the study. E. DiRosa, J. Carda-Auten, and D. L. Rosen designed the survey. E. DiRosa, J. Carda-Auten, M. E. Brown, S. Bradley-Bull, and C. Blue implemented data collection. S. N. Levintow conceptualized and conducted the analyses. K. A. Powers assisted with study design and interpretation of data. S. N. Levintow drafted the article, and all authors revised it critically for important intellectual content. All authors gave final approval of the version to be submitted to the current journal and agree to be accountable for all aspects of the work.

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CONFLICTS OF INTEREST

The authors have declared that no conflicts of interest exist.

HUMAN PARTICIPANT PROTECTION

This study was approved by the institutional review board at the University of North Carolina at Chapel Hill. Verbal informed consent was obtained from participants.

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