



Association of Telehealth Reimbursement Parity With Contraceptive Visits During the COVID-19 Pandemic

Jacqueline Ellison, PhD, MPH; Megan B. Cole, PhD, MPH; Terri-Ann Thompson, PhD

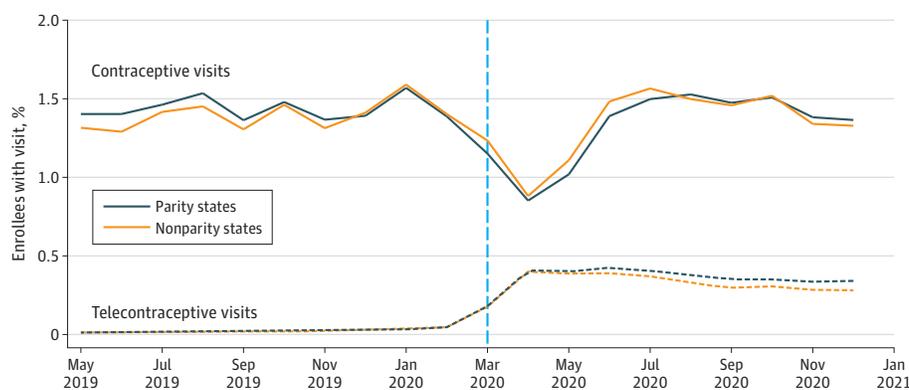
Introduction

The COVID-19 pandemic disrupted access to contraceptive care while increasing contraception need because fewer women planned to become pregnant.^{1,2} Increases in use of telehealth for contraception (telecontraception) during the pandemic present an opportunity to expand access to contraception via telehealth.³ Reimbursement parity mandates implemented by some states in response to COVID-19 required insurers to reimburse for telehealth at the same rate as for in-person services, potentially increasing access to telecontraception. These mandates may remove financial disincentives for offering remote services, but the implication of reimbursement parity for access to care during the pandemic has not been studied. We evaluated the association of state telehealth reimbursement parity mandates with remote and overall contraceptive encounters.

+ Supplemental content

Author affiliations and article information are listed at the end of this article.

Figure. Unadjusted Monthly Patterns in the Percentage of Enrollees With a Contraceptive or Telecontraceptive Visit in States That Mandated vs Did Not Mandate Telehealth Reimbursement Parity



Denominator for both total contraceptive and telecontraceptive visits is the number of female enrollees of reproductive age (14-49 years) in parity and nonparity states. Parity states included Arizona, Alaska, California, Delaware, Illinois, Iowa, Maine, Massachusetts, Montana, New Hampshire, New Jersey, New Mexico, New York, Rhode Island, Texas, Vermont, and Washington. All other states were nonparity states.

Table. Total Contraceptive and Telecontraceptive Visits in States That Mandated vs Did Not Mandate Telehealth Reimbursement Parity Before vs During the COVID-19 Pandemic^a

	Mean monthly visits		Absolute change, No. (%)	Adjusted difference-in-differences, IRR (95% CI)
	Before pandemic (May 2019-February 2020)	During pandemic (March-December 2020)		
Telecontraceptive visits				
Nonparity states	39.35	521.74	482.39 (1225.81)	1.25 (1.01-1.55)
Parity states	65.14	1153.50	1088.36 (1670.83)	
Total contraceptive visits				
Nonparity states	2549.83	2419.27	-130.56 (-5.12)	0.99 (0.93-1.07)
Parity states	4190.03	3776.35	-413.68 (-9.87)	

Abbreviation: IRR, incident rate ratio.

^a Adjusted models included age category (14-17, 18-25, 26-34, or 35-49 years); whether the method used was a long-acting reversible contraception (LARC) method; and 2 interaction terms with an indicator for before vs during the pandemic: (1) whether the state implemented a mandatory stay-at-home order, and (2) whether the state took any other executive action expanding telehealth. State and calendar month fixed effects were also included, and SEs were clustered at the state level.

Open Access. This is an open access article distributed under the terms of the CC-BY License.

Methods

This cross-sectional study used Symphony Health outpatient claims data to analyze a national sample of commercially insured female enrollees aged 14 to 49 years for the 10 months before (May 1, 2019-February 28, 2020) and during (March 1, 2020-December 31, 2020) the pandemic. Outcomes included total number of contraceptive visits (eTable 1 in the [Supplement](#)) and number of telecontraceptive visits (eTable 2 in the [Supplement](#)). Exposure was residency in 1 of 17 parity states (those that mandated commercial payer reimbursement parity for telehealth and in-person services).⁴ State policy data were obtained from the Kaiser Family Foundation and Centers for Disease Control and Prevention (eTable 3 in the [Supplement](#)).^{4,5} This study was approved by the Allendale Investigational Review Board, which waived the requirement for informed consent because only deidentified data were used, and followed the [STROBE](#) reporting guideline.

We used a difference-in-differences approach to estimate the adjusted change in contraceptive visits in parity vs nonparity states (those that did not mandate reimbursement parity) before and during the pandemic. We used negative binomial regression, adjusting for state and month fixed effects, patient age, contraceptive method, and whether the state issued a stay-at-home order or other executive actions to expand telehealth access. SEs were clustered at the state level. The offset was number of contraceptive visits per month-state for the telecontraceptive model and number of female enrollees of reproductive age in each state for the total contraceptive model. Analyses were conducted using Stata 15.1, with 2-tailed significance set at $\alpha = .05$. Additional details are included in the eMethods in the [Supplement](#).

Results

The sample included 9 279 294 contraceptive claims among 34 109 287 enrollees. The **Figure** illustrates a steep decrease and increase in the proportion of enrollees with contraceptive and telecontraceptive visits, respectively, in the months after the pandemic began. There were no significant differences in prepandemic patterns.

Telehealth accounted for 1.5% of contraceptive visits in all states before the pandemic and for 30.5% in parity states and 21.6% in nonparity states during the pandemic. In adjusted difference-in-differences models, telecontraceptive visits increased 25% in parity states (incidence rate ratio [IRR], 1.25; 95% CI, 1.01-1.55; $P = .04$) vs nonparity states (**Table**). There was no significant difference in total contraceptive visits between parity and nonparity states (IRR, 0.99; 95% CI, 0.93-1.07; $P = .98$).

Discussion

Findings demonstrated an increase in telecontraceptive visits in states that mandated reimbursement parity vs states that did not. This increase did not correspond to an increase in total contraceptive encounters, suggesting that, although reimbursement parity may have expanded access to telehealth options, it did not improve access to contraception overall.

One limitation is that we could not capture changes in the number of enrollees with commercial coverage over the study period, which, as with other COVID-related shifts in contraceptive supply or demand, could bias results if differentially associated with service use in parity and nonparity states. Insurers in nonparity states may have implemented parity anyway, in which case our estimates are conservative. Ultimately, the findings highlighted how telehealth reimbursement parity policies alone were insufficient in addressing unmet need for contraceptive care.

ARTICLE INFORMATION

Accepted for Publication: February 22, 2022.

Published: April 11, 2022. doi:[10.1001/jamanetworkopen.2022.6732](https://doi.org/10.1001/jamanetworkopen.2022.6732)

Open Access: This is an open access article distributed under the terms of the [CC-BY License](https://creativecommons.org/licenses/by/4.0/). © 2022 Ellison J et al. *JAMA Network Open*.

Corresponding Author: Jacqueline Ellison, PhD, MPH, Department of Health Services, Policy, and Practice, Brown University School of Public Health, 121 S Main St, Providence, RI 02903 (jacqueline_ellison@brown.edu).

Author Affiliations: Department of Health Services, Policy, and Practice, Brown University School of Public Health, Providence, Rhode Island (Ellison); Department of Health Law, Policy, and Management, Boston University School of Public Health, Boston, Massachusetts (Cole); Ibis Reproductive Health, Cambridge, Massachusetts (Thompson).

Author Contributions: Dr Ellison had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: All authors.

Acquisition, analysis, or interpretation of data: Ellison, Cole.

Drafting of the manuscript: Ellison.

Critical revision of the manuscript for important intellectual content: All authors.

Statistical analysis: Ellison, Cole.

Obtained funding: Ellison, Thompson.

Administrative, technical, or material support: Ellison, Thompson.

Supervision: Cole, Thompson.

Conflict of Interest Disclosures: None reported.

Funding/Support: This study was funded by grant SFPRF14-CSD2 from the Society of Family Planning Research Fund (Drs Ellison and Thompson). Dr Ellison was supported by National Research Service Award 5T32 HS000011 from the Agency for Healthcare Research and Quality.

Role of the Funder/Sponsor: The funder had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Additional Information: The data, technology, and services used in generating the findings were supplied pro bono by the COVID-19 Research Database partners (see <https://covid19researchdatabase.org>).

REFERENCES

1. Diamond-Smith N, Logan R, Marshall C, et al. COVID-19's impact on contraception experiences: exacerbation of structural inequities in women's health. *Contraception*. 2021;104(6):600-605. doi:[10.1016/j.contraception.2021.08.011](https://doi.org/10.1016/j.contraception.2021.08.011)
2. Lindberg LD, VandeVusse A, Mueller J, Kirstein M. Early impacts of the COVID-19 pandemic: findings from the 2020 Guttmacher survey of reproductive health experiences. Guttmacher Institute. June 2020. Accessed February 15, 2022. <https://www.guttmacher.org/report/early-impacts-covid-19-pandemic-findings-2020-guttmacher-survey-reproductive-health>
3. Steenland MW, Geiger CK, Chen L, et al. Declines in contraceptive visits in the United States during the COVID-19 pandemic. *Contraception*. 2021;104(6):593-599. doi:[10.1016/j.contraception.2021.08.003](https://doi.org/10.1016/j.contraception.2021.08.003)
4. Kaiser Family Foundation. State COVID-19 data and policy actions. February 10, 2022. Accessed September 26, 2021. <https://www.kff.org/report-section/state-covid-19-data-and-policy-actions-policy-actions/>
5. Moreland A, Herlihy C, Tynan MA, et al; CDC Public Health Law Program; CDC COVID-19 Response Team, Mitigation Policy Analysis Unit. Timing of state and territorial COVID-19 stay-at-home orders and changes in population movement—United States, March 1–May 31, 2020. *MMWR Morb Mortal Wkly Rep*. 2020;69(35):1198-1203. doi:[10.15585/mmwr.mm6935a2](https://doi.org/10.15585/mmwr.mm6935a2)

SUPPLEMENT.

eTable 1. Diagnostic Codes Used to Identify Contraceptive Encounters

eTable 2. Billing Codes Used to Identify Telehealth Encounters

eTable 3. State Policy Actions Implemented in Response to COVID-19

eMethods.