

Trends in Prescription Contraceptive Use among US Commercially Insured Women, 2017–2021

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+ OBJECTIVE

To examine trends in prescription contraceptive use from 2017 through 2021 among US women of childbearing age (16 to 49) before and during the COVID-19 pandemic

Study cohort:

Continuously eligible commercially insured female members aged 16–49 who filled any prescription contraceptive were included. Medical and pharmacy claims data was obtained from a large national pharmacy benefits manager for January 1, 2017, to December 31, 2021.

+ METHODOLOGY

Monthly prevalence of prescription contraceptive use was generated from January 2017 to December 2021. An interrupted time series (ITS) model was used to assess changes in the prevalence of use (per 100,000 women) pre-pandemic (January 2017 to March 2020) and during the pandemic (April 2020 to December 2021) for prescribed contraceptives. Analyses included orals, non-orals, and intrauterine devices (IUDs). Non-orals included prescription gels, patches, rings, injections, and implants. Secondary ITS models adjusted for member characteristics (age and race/ethnicity) and Evernorth’s social determinants of health index (ESDI). The ESDI is a composite community-level score of several known social determinants designed to help understand how education, health, infrastructure, economic factors, and access to essential services may impact the health of people living in that community. Patients were assigned an ESDI score based on their current residential census tract.

+ RESULTS

Compared to the pre-period, there was a decline during the pandemic among women who used oral contraceptives (Figure 1). Results from the ITS models show the decline was significant (coefficient: -199.0, p-value: 0.006) (Table 1). Additionally, there was a significant and immediate decline also for non-orals (coefficient: -41.08, p-value: 0.033) and IUDs (coefficient: -66.15, p-value: 0.004). During the pandemic, there was a declining trend in the prevalence of women using orals (coefficient: -45.60, p-value: <0.0001) and non-orals (coefficient: -3.26, p-value: 0.017). In contrast, there was an increasing trend in the prevalence of women using IUDs (coefficient: 2.29, p-value: 0.142). In our secondary models, results for oral and non-oral were no longer significant for the immediate level change. The immediate level change of IUDs (coefficient: -78.99, p-value: 0.002) remained statistically significant. During the pandemic, the declining trend for oral contraceptives (coefficient: -41.36, p-value: 0.008) remained statistically significant (Table 2).

Figure 1: Trend in Prevalence of Prescribed Contraceptives Utilization by Month, 2017 to 2021

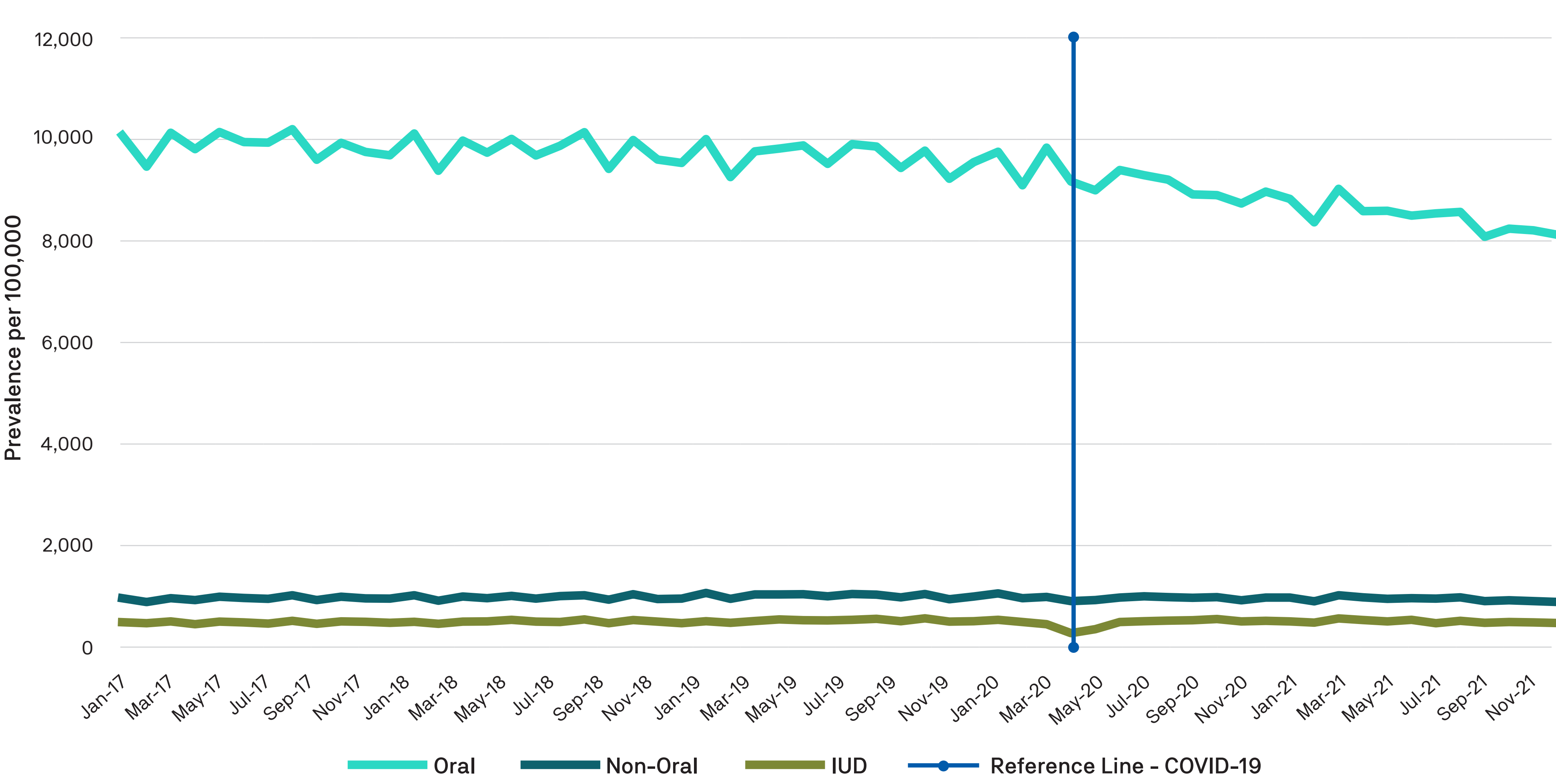


Table 1: Interrupted Time Series Model 1 Results – Unadjusted Model

Contraceptive Type	Estimate	Standard Error	P-value
Immediate Change in Prevalence at Beginning of Pandemic			
Oral	-199.00	69.05	0.006
Non-oral	-41.08	18.80	0.033
IUD	-66.15	21.87	0.004
Post-trend Change			
Oral	-45.60	4.73	<0.0001
Non-oral	-3.26	1.32	0.017
IUD	2.29	1.54	0.142

Interpretation: There was a statistically significant decline in the prevalence of oral prescriptions by 199.00 per 100,000 members following the start of the pandemic. During the pandemic, there was a statistically significant decline in the prevalence of oral contraceptives by 45.60 per 100,000 members per month.

+ IMPLICATIONS FOR POLICY OR PRACTICE

Our study raises questions and concerns about the availability of prescribed contraceptives and women delaying sexual and reproductive health care visits. Contraceptive use may provide benefits besides pregnancy prevention, including a reduction in the risk of certain reproductive cancers.

+ CONCLUSIONS

A decline in oral and non-oral contraceptive use could be partly due to women shifting to over-the-counter methods, IUDs, or sterilization. A decline in IUD use could be attributed to office closures and patients avoiding potential exposure to COVID-19 at doctor offices.* Furthermore, a decline in use across all contraceptive methods could signal an increase in intended pregnancy: The US birth and fertility rate increased significantly in 2021.** Our internal analyses also showed that pregnancy prevalence increased from 2017 to 2021.

Table 2: Interrupted Time Series Model 2 Results – Adjusted Model

Contraceptive Type	Estimate	Standard Error	P-value
Immediate Change in Prevalence at Beginning of Pandemic			
Oral	-173.65	153.48	0.263
Non-oral	-25.83	21.90	0.243
IUD	-78.99	24.57	0.002
Post-trend Change			
Oral	-41.36	14.98	0.008
Non-oral	-1.74	1.83	0.347
IUD	2.65	1.50	0.082

Interpretation: There was a decline in the prevalence of oral prescriptions by 173.65 per 100,000 members following the start of the pandemic. During the pandemic, there was a statistically significant decline in the prevalence of oral contraceptives by 41.36 per 100,000 members per month.

References:
*Frederiksen B, Rangi U, Salganicoff A, and Long M. "Women's Experiences with Health Care During the COVID-19 Pandemic: Findings from the KFF Women's Health Survey." KFF. March 22, 2021. <https://www.kff.org/womens-health-policy/issue-brief/womens-experiences-with-health-care-during-the-covid-19-pandemic-findings-from-the-kff-womens-health-survey/>
**Centers for Disease Control and Prevention. "Births Rise for the First Time in Seven Years in 2021." [Press Release]. May 24, 2022. https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/20220524.html#