


# Differential Uptake of Telehealth for Prenatal Care in a Large New York City Academic Obstetrical Practice during the COVID-19 Pandemic

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## Abstract

During the coronavirus disease 2019 (COVID-19) pandemic in New York City, telehealth was rapidly implemented for obstetric patients. Though telehealth for prenatal care is safe and effective, significant concerns exist regarding equity in access among low-income populations. We performed a retrospective cohort study evaluating utilization of telehealth for prenatal care in a large academic practice in New York City, comparing women with public and private insurance. We found that patients with public insurance were less likely to have at least one telehealth visit than women with private insurance (60.9 vs. 87.3%,  $p < 0.001$ ). After stratifying by borough, this difference remained significant in Brooklyn, one of the boroughs hardest hit by the pandemic. As COVID-19 continues to spread around the country, obstetric providers must work to ensure that all patients, particularly those with public insurance, have equal access to telehealth.

## Keywords

- ▶ prenatal care
- ▶ COVID-19
- ▶ telehealth
- ▶ telemedicine
- ▶ health care disparities

## Key Points

- Telehealth for prenatal care is frequently utilized during the COVID-19 pandemic.
- Significant concerns exist regarding equity in access among lower-income populations.
- Women with public insurance in New York City were less likely to access telehealth for prenatal care.

In March 2020, widespread community transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes coronavirus disease 2019 (COVID-19), led to implementation of social distancing measures in New York City (NYC). Telehealth visits were recommended by state guidelines,<sup>1</sup> and public and private insurance providers reimbursed for these visits.<sup>2</sup> Telehealth has been shown to be a safe and effective method of delivering prenatal care that is satisfactory to patients.<sup>3,4</sup> A major concern with telehealth, however, is unequal access, especially in low-income populations.<sup>5,6</sup> We sought to evaluate utilization of telehealth for prenatal care by insurance status and location in a diverse population served by a large academic medical center.

## Materials and Methods

After institutional review board approval, we performed a retrospective cohort study of patients who had at least one obstetric visit (in-person or telehealth) at NYU Langone Health (Manhattan) from April 1 to May 29, 2020. In response to the COVID-19 pandemic, a modified prenatal care schedule incorporating telehealth was developed (▶ **Table 1**). Telehealth visits were strongly recommended, but patients were able to select in-person visits if they preferred. Telehealth visits were conducted via a Health Insurance Portability and Accountability Act-compliant smartphone application with audio and video capability (Epic, Verona, WI). All insurance plans reimbursed for

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**Table 1** Prenatal care visit schedule during COVID-19 epidemic

Gestational age	Visit and laboratory schedule
6–10 wk	Telehealth initial prenatal visit
11–14 wk	In-person visit coordinated with nuchal translucency scan
	Physical exam
	Prenatal laboratories and genetic screening
15–19 wk	Telehealth visit
20–22 wk	In-person visit same day as anatomy scan
23–26 wk	Telehealth visit
27–28 wk	In-person visit with laboratory evaluation and any required immunizations
29–35 wk	Telehealth visit every 2 to 3 weeks
36 wk	In-person visit with collection of sample for Group B Strep testing
37–39 wk	Weekly visits (alternate in-person and telehealth with home blood pressure cuff)
40 wk	In-person visit
6–8 wk postpartum	Telehealth visit

telehealth during the study timeframe. Uptake of telehealth, defined as having  $\geq 1$  telehealth visit during the study period, was compared in women with private and public insurance. Public insurance included Medicaid, managed Medicaid plans, and Medicare. All other insurance plans were designated as private. Chi-square, Fisher's exact test, and Student's *t*-test were used to compare groups with  $p < 0.05$  defined as significant.

## Results

Overall, 1,851 patients had  $\geq 1$  visit for obstetric care, and a total of 4,677 visits were performed. The average age of the cohort was 33.3 years, and patients had an average of 2.4 visits during the study period. A total of 305 patients (16.4%) had public insurance and 1,544 patients (83.4%) had private insurance. Due to low numbers ( $n = 2$ ), uninsured patients were excluded from further analysis. Patients from all five NYC boroughs were represented, and there was a statistically significant difference in insurance status by borough. Precisely, 22.9 and 30.1% of women from the Bronx and Brooklyn, respectively, were publicly insured, versus 6.5% of women in Manhattan. Patients with public insurance were less likely to have at least one telehealth visit when compared with women with private insurance (60.9 vs. 87.3%,  $p = 0.0003$ ). After stratification by ZIP code of residence, there was a statistically significant difference in rate of telehealth visit utilization by insurance type only in ZIP codes in Brooklyn (–Table 2).

**Table 2** Number of patients with at least one telehealth visit during the study time period

	Public insurance	Private insurance	<i>p</i> -Value <sup>a</sup>
Bronx ( $n = 70$ )	11 (68.8%)	42 (77.8%)	0.51
Brooklyn ( $n = 711$ )	114 (53.5%)	425 (85.5%)	<0.001
Manhattan ( $n = 523$ )	28 (82.4%)	436 (89.2%)	0.26
Queens ( $n = 259$ )	20 (80%)	207 (88.5%)	0.21
Staten Island ( $n = 26$ )	3 (100%)	21 (91.3%)	1.00
Other ( $n = 260$ )	10 (76.9%)	217 (87.9%)	0.22

<sup>a</sup>Fisher's exact and Chi-square test used for analysis.

## Discussion

The COVID-19 pandemic accelerated the use of telehealth in obstetrics and provides an important opportunity to change the way prenatal care is delivered. A decreased number of in-person visits supplemented by telehealth may be a safe and effective model for prenatal care.<sup>3,7</sup> We show that women with public insurance in a single NYC academic obstetric practice were significantly less likely to utilize telehealth for prenatal care than patients with private insurance. Women with public insurance have been shown to have lower rates of early and adequate prenatal care, often attributed to difficulties enrolling and changes in insurance,<sup>8</sup> and in our population, we also saw lower rates of telehealth utilization. Notably, after stratification by borough, lower uptake of telehealth was only significant in Brooklyn, one of the boroughs hardest hit by COVID-19.<sup>9</sup> This may be due to the higher number of patients with public insurance there or some other undefined aspect of that population. There may have been a difference seen in uptake of telehealth in other boroughs such as Staten Island, but due to the small number of patients from those areas, we were unable to draw any conclusions.

Though we are limited in our ascertainment of reasons that patients did not utilize telehealth, we hypothesize that previously described barriers such as limited access to technology, low digital literacy, and unreliable internet coverage<sup>6</sup> may have contributed to the decreased uptake of telehealth among publicly insured patients. Additionally, patient race/ethnicity, which may be a mediating factor in uptake of telehealth, was not available for the cohort. Although telehealth has proven a vital tool for maintaining access to prenatal care during the COVID-19 pandemic, obstetric providers must work to ensure that all patients, particularly those with public insurance, have equal access.

### Conflict of Interest

None declared.

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