Racial and Ethnic Disparities in Primary Care Use and the COVID-19 Pandemic*

Laurence Baker† Kate Bundorf‡ Maya Rossin-Slater§

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Extended Abstract

An expansive body of research points to large and persistent racial and ethnic disparities in primary health care access and use, with Black and Hispanic patients facing higher barriers to receiving adequate care relative to their non-Hispanic white counterparts (Obermeyer *et al.*, 2019; Parekh *et al.*, 2018; Shi *et al.*, 2014; Flores, 2010; Stevens and Shi, 2003). As timely primary care is shown to be an important determinant of patient health (Shi, 2012; Friedberg *et al.*, 2010; Starfield *et al.*, 2005), this disparity in care likely contributes to well-documented disparities in a wide range of health outcomes.

The COVID-19 pandemic has created unprecedented challenges for the health care system and patients, but, to date, there is little evidence on whether racial and ethnic disparities in primary care use have changed during the pandemic. The onset of the pandemic caused many health care providers to significantly limit or even cease normal operations, while economic disruptions and job losses have impacted access to health insurance for millions of

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†Stanford University School of Medicine & NBER. E-mail: laurence.baker@stanford.edu.
‡Stanford University School of Medicine & NBER. E-mail: bundorf@stanford.edu.
§Stanford University School of Medicine & NBER. E-mail: mrossin@stanford.edu.

Americans. Moreover, public health regulations and individuals' concerns about exposure to the virus have led many people to curtail their activities. A nationally representative survey of non-elderly adults conducted in May 2020 finds that nearly half of adults in families who have lost work-related income reported foregoing health care due to costs or concerns about contracting the virus (Gonzalez *et al.*, 2020). More generally, emerging evidence suggests that the pandemic has led to a reduction in primary care use (Alexander *et al.*, 2020; Chatterji and Li, 2020; Mehrotra *et al.*, 2020; Ziedan *et al.*, 2020; Basu *et al.*, 2020). At the same time, many providers have responded to the pandemic by modifying care delivery in ways that may have improved health care access for some sub-groups of patients (e.g., through an increased use of telehealth medicine, see: Mann *et al.*, 2020; Ziedan *et al.*, 2020).

A crucial question is how the pandemic affected care for vulnerable populations, such as patients from racial and ethnic minority backgrounds. If the pandemic-induced disruptions caused these patients to be disproportionately more likely to postpone or forego primary care, then pre-existing disparities may have widened. Alternatively, if the resulting adaptations of care delivery—such as virtual appointments—made health care more accessible to these groups, then the pandemic may have actually led to more equitable care. While emerging evidence suggests that Black and Hispanic individuals have disproportionately borne the negative health impacts of the COVID-19 virus itself (McLaren, 2020; Benitez *et al.*, 2020; Knittel and Ozaltun, 2020; Webb Hooper *et al.*, 2020; van Dorn *et al.*, 2020; Tai *et al.*, 2020), we know much less about the pandemic's impact on disparities in care utilization for individuals who have not contracted the virus, and particularly in the context of primary care.

In this project, we leverage a novel large-scale "real-time" data resource to analyze the effects of the COVID-19 pandemic on racial and ethnic disparities in primary care use. Our data come from the Prime Registry, a Qualified Clinical Data Registry certified by the Centers for Medicaid and Medicare that contains detailed electronic medical record (EMR) information on health care delivered by more than 1,000 family medicine practices, for more

than five million patients seen in these practices since 2015. In addition to information about the visits, these data contain information on patient race/ethnicity, age, gender, and health insurance. The analysis sample used in this abstract is based on data through week 26 of 2020. We expect to receive updated data on visits through the end of August 2020 before the conference.

Sample Construction and Preliminary Analysis. Our preliminary analysis focuses on two cohorts of patients: (1) those who had at least one visit in 2018, and (2) those who had at least one visit in 2019. We further limit our sample to the set of primary care clinics that report at least one visit in the data in February of 2018, 2019, and 2020. This ensures that we analyze patients in clinics that were consistently reporting data pre-pandemic. These restrictions leave us with 20,871,591 visits. Table 1 reports the number of unique patients in each of our two cohorts, split across five racial and ethnic groups: Hispanic (any race), non-Hispanic Black, non-Hispanic white, non-Hispanic Asian, and non-Hispanic American Indian / Alaska Native.

We then analyze return visits for these patient cohorts that occur in the first 26 weeks of the following year. Comparing changes in return visits between the two cohorts allows us to identify the impacts of the pandemic that are distinct from other seasonal differences in primary care use across different months of any year.

Preliminary Results. Figure 1(a) reveals important pre-pandemic disparities in primary care use across racial and ethnic groups. Among patients who had at least one visit in 2018, non-Hispanic white patients are more likely to have a return visit during each of the first 26 weeks of 2019 than non-Hispanic Black, non-Hispanic Asian, and Hispanic patients. Non-Hispanic American Indian / Alaska Native patients have rates of return visits that are comparable to those of non-Hispanic whites.

Turning to the return visits among patients who had at least one visit in 2019, Figure 1(b) shows that there is a marked drop for all racial and ethnic groups in week 11 of 2020 (i.e.,

the week of March 9, 2020, when states and localities began to issue regulations restricting activity and individuals began constraining activity along many dimensions, see, e.g., Gupta *et al.*, 2020). We do not observe any evidence of a "bounce-back" through week 26 of 2020 (i.e., the week of June 22, 2020). We expect to receive data on primary care visits through the end of August 2020 prior to the conference, and will likely be able to analyze the magnitude of the upturn in visits through that time period.

Interestingly, some racial and ethnic disparities appear to be *smaller* during the pandemic, with non-Hispanic Black patients now being either equally or even more likely to have a return visit than their non-Hispanic white counterparts. Hispanic and non-Hispanic Asian patients continue to see comparably lower rates of return visits. The post-pandemic differences in the share of patients with return visit are plotted separately by race/ethnicity in Figure 2, which further highlights the relatively smaller reduction in visits for non-Hispanic Black patients relative to the other sub-groups.

Figure 3 examines whether the pandemic differentially impacted adult and children patients. It appears that, compared to adults, children had a steeper drop in return visits following the start of the pandemic, and that post-pandemic differences across racial and ethnic groups are nearly non-existent for non-Hispanic whites, Blacks, and Hispanics. Asian children, like their adult counterparts, had lower visits rates after the beginning of the pandemic than children of other races and ethnicities. Racial and ethnic disparities in return visits continue to exist among adults, although, consistent with the other graphs, non-Hispanic Black patients have higher visit rates than their non-Hispanic white and Hispanic counterparts.

In ongoing work, we are quantifying these changes with regression analyses and exploring heterogeneity in the changes to racial and ethnic disparities across practice and local area characteristics. We are also examining various sub-groups of patients, such as those with chronic conditions, and those with mental health diagnoses. Lastly, we intend to update these analyses with more recent data to examine longer-term trends throughout the pandemic.

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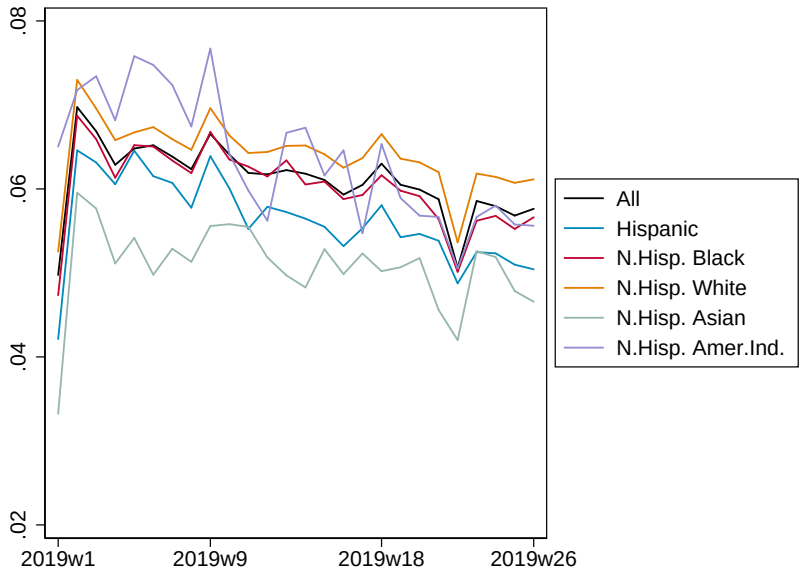
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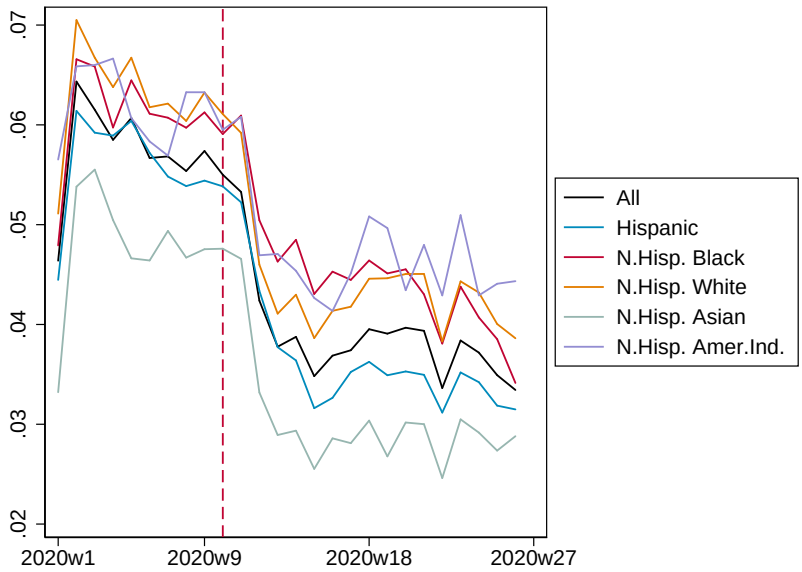
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Figure 1: Share of Patients with a Return Visit in the First 26 Weeks of the Next Year: 2018 vs. 2019 Cohorts

(a) 2018 Cohort, Return Visits in 2019

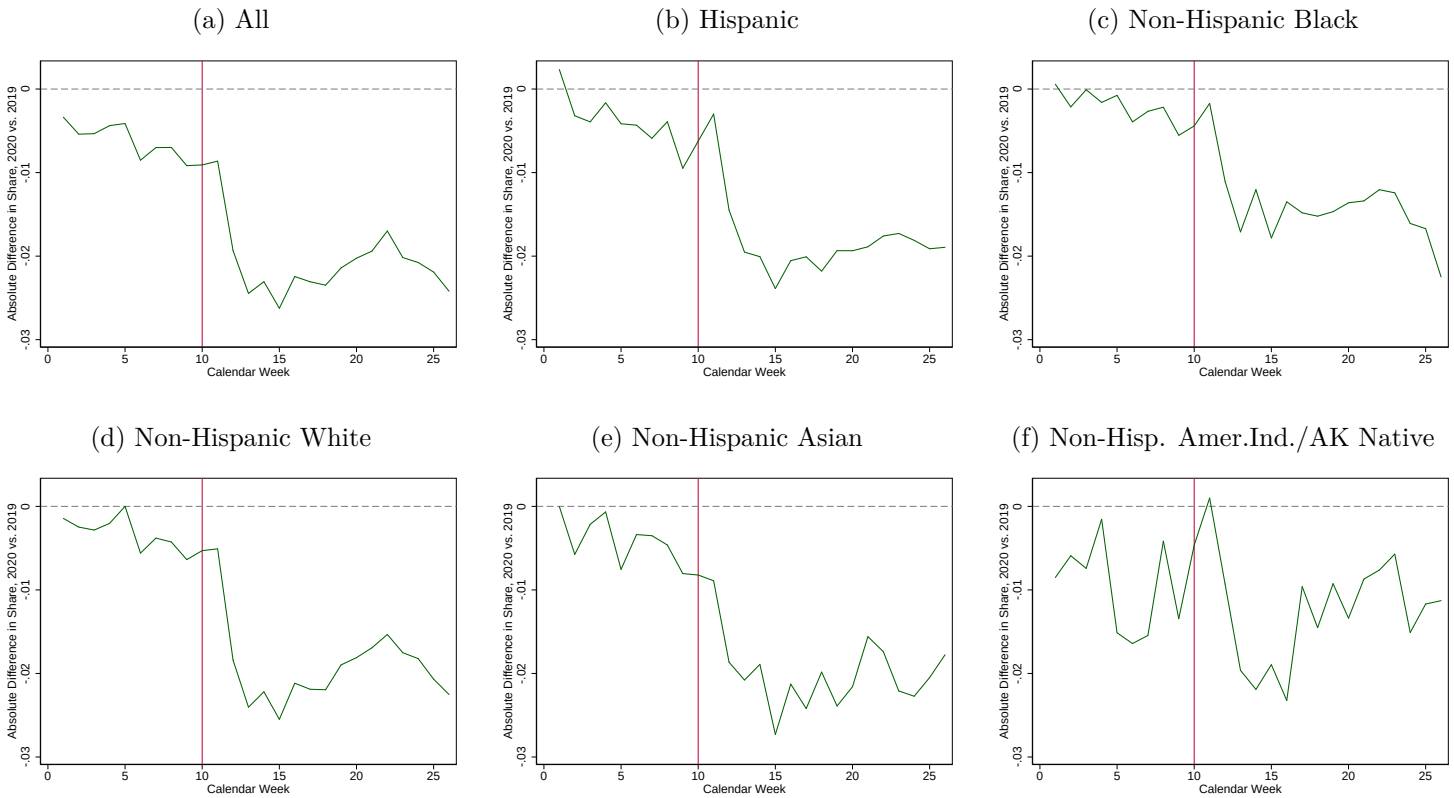


(b) 2019 Cohort, Return Visits in 2020



Note: Sub-figure (a) uses a sample of patients who had at least one visit in 2018 and plots the share with a return visit in each of the first 26 weeks of 2019. Sub-figure (b) uses a sample of patients who had at least one visit in 2019 and plots the share with a return visit in each of the first 26 weeks of 2020. Source: Prime Registry data.

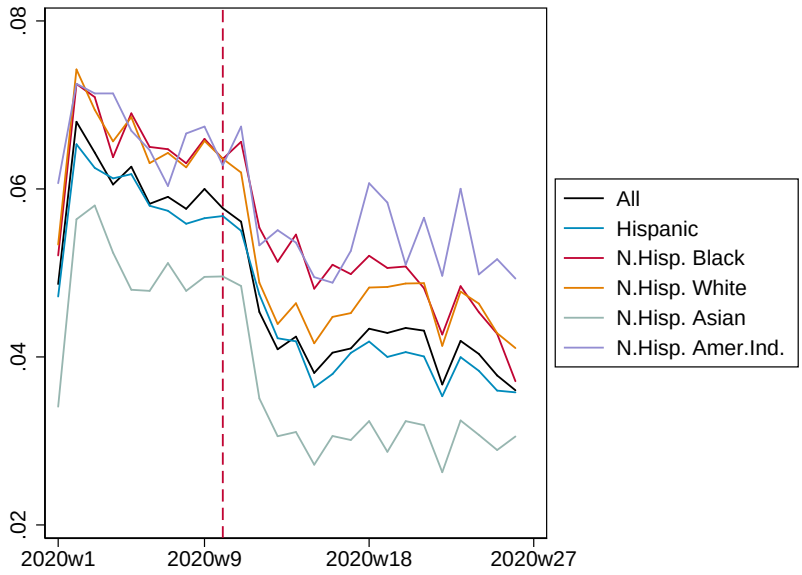
Figure 2: Absolute Change in Share of Patients with a Return Visit by Week, 2019-2020



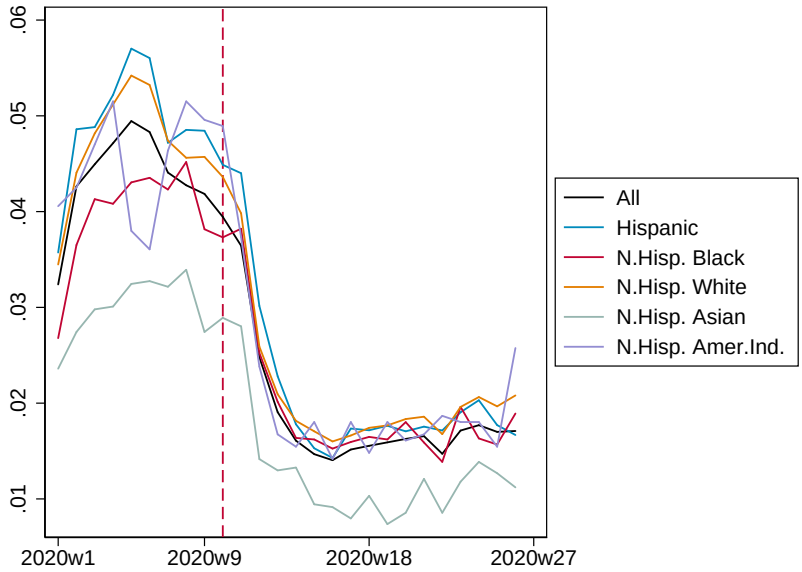
Note: These graphs plot the difference in the share of patients with return visits between 2020 and 2019 by each calendar week, separately by race/ethnicity. Source: Prime Registry data.

Figure 3: Share of Patients with a Return Visit in the First 26 Weeks of 2020: Adults vs. Children

(a) Adults: 2019 Cohort, Return Visits in 2020



(b) Children: 2019 Cohort, Return Visits in 2020



Note: Sub-figure (a) uses a sample of adult patients aged 19+ who had at least one visit in 2019 and plots the share with a return visit in each of the first 26 weeks of 2020. Sub-figure (b) shows the analogous plot for child patients aged 0-18. Source: Prime Registry data.

Table 1: Cohort Sizes by Patient Ethnicity and Race

	Patient in 2018	Patient in 2019
Hispanic	209,677	210,644
Non-Hisp. Black	139,703	135,609
Non-Hisp. White	1,319,293	1,307,947
Non-Hisp. Asian	40,353	41,520
Non-Hisp. American Indian/Alaska Native	6,688	7,713

Notes: This table reports the number of unique patients who had at least one visit in 2018 and 2019, respectively, across different racial/ethnic groups. The sample is further limited to patients at primary clinics that reported at least one visit in February of 2018, 2019, and 2020. Source: Prime Registry data.