

Disparities in Colonoscopy Utilization After the COVID-19 Pandemic

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Background

- There was a stark decline in colonoscopy volume during the height of the COVID-19 pandemic as hospitals limited routine elective procedures.
- There is concern that despite returning to pre-pandemic colonoscopy rates in the recovery period, the pandemic has worsened preexisting disparities in access to endoscopy.
- We aim to examine disparities in colonoscopy utilization in the post COVID-19 era as compared to the pre-pandemic period.

Methods

- All adult patients who underwent outpatient colonoscopy at our institution were included in the following time periods:
 - (1) “pre-COVID” – July 1, 2017 to March 15, 2020
 - (2) “post-COVID” – March 16, 2020 to November 30, 2021
- Age, gender, race, language preference, insurance type and income quartile by zip code were abstracted from the electronic medical record.
- Multivariable logistic regression analysis was performed to assess the association between subject characteristics and colonoscopy exposure in the post-COVID era

Results

Colonoscopy Volume by Month

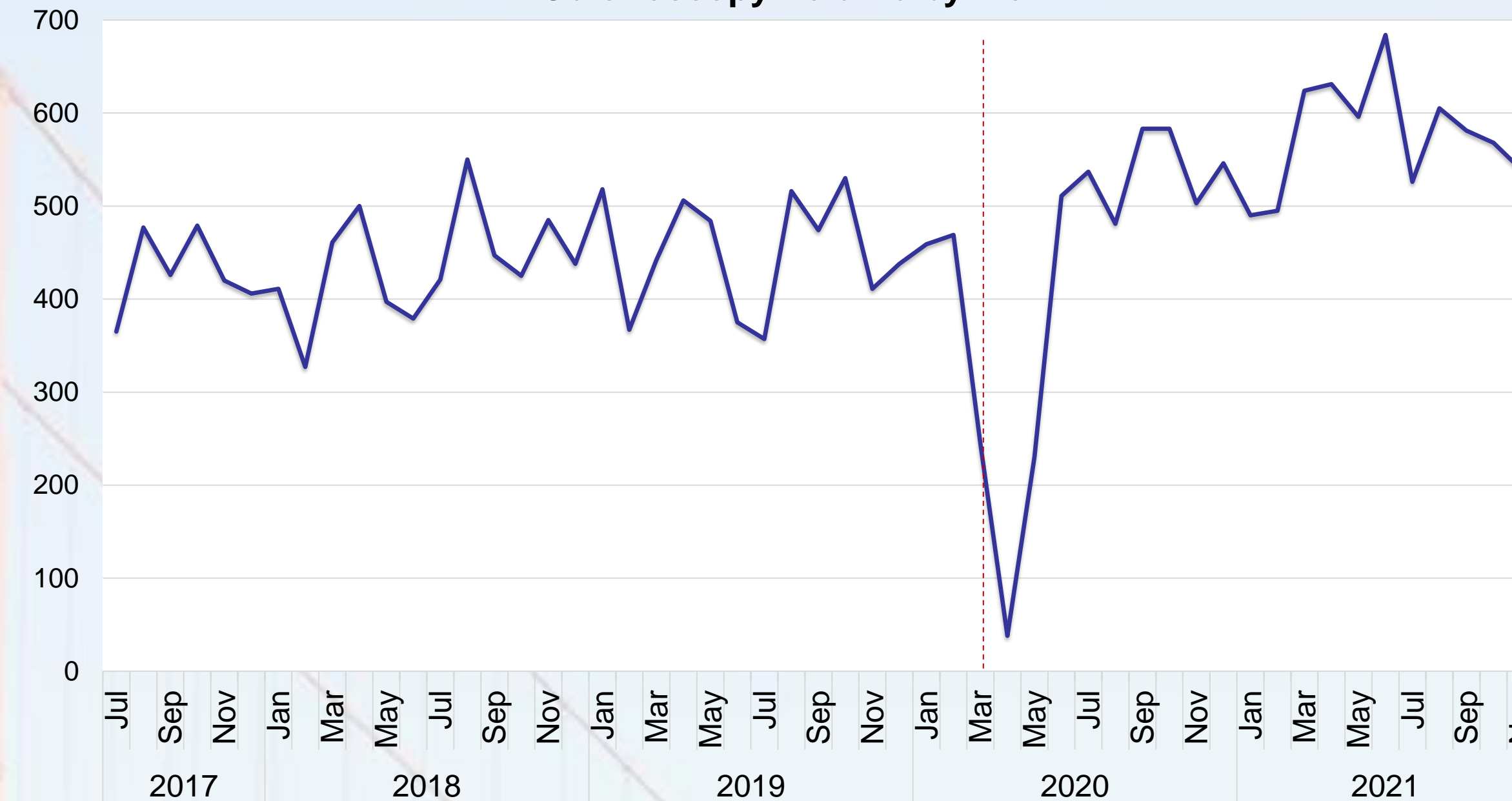


Table 1. Multivariable Logistic Regression of Attributes Associated with Colonoscopy Utilization in the post-COVID era (March 16, 2020 - November 30, 2021) compared to pre-COVID (July 1, 2017 - March 15, 2020)

	Odds Ratio	95% CI	P-value
Age			
<45	1.05	0.98-1.12	0.21
45-59	1.0	-	-
60-69	0.92	0.86-0.99	0.03
70-79	1.03	0.93-1.14	0.58
>80	1.22	1.01-1.47	0.04
Female			
	1.05	1.00-1.11	0.05
Race			
White	1.0	-	-
Black	1.11	0.99-1.25	0.07
Asian	1.01	0.94-1.09	0.77
Latinx	1.14	1.03-1.26	<0.01
Other	1.004	0.90-1.12	0.95
Language			
English	1.0	-	-
Spanish	0.70	0.44-1.12	0.14
Russian	0.59	0.38-0.93	0.02
Chinese Dialects	0.55	0.36-0.84	<0.01
Other	0.66	0.43-1.01	0.054
English v. All Others	1.63	1.09-2.42	0.02
Insurance			
Private	1.0	-	-
Medicare	0.87	0.81-0.95	<0.01
Medical/Covered CA	0.95	0.87-1.02	0.16
Income			
Highest Quartile	1	-	-
2 nd Quartile	0.88	0.39-1.97	0.76
3 rd Quartile	0.83	0.37-1.85	0.65
4 th Quartile	0.80	0.36-1.80	0.59
High Risk			
	0.95	0.90-1.00	0.05

Results

- There were 14,381 and 10,376 colonoscopies included in the pre and post-COVID periods respectively
- English-speaking patients comprised 92.8% of the pre-COVID cohort which increased to 94.2% in the post-COVID era (p <.001). This difference was statistically significant on multivariable analysis (OR 1.63, 95% CI 1.09-2.42)
- There was also a statistically significant increase in colonoscopies of patients who identify as LatinX as compared to white race (OR 1.14, 95% CI 1.03-1.26). However, the magnitude of this change was small – 8.3% in the pre-COVID cohort versus 9.2% in the post-COVID cohort
- There was an inverse association between the post-COVID era and Medicare insurance status as compared to private insurance (OR 0.87, 95% CI 0.81-0.95).

Discussion

- At our institution after colonoscopy volume had returned to pre-pandemic levels, there was a reduction in colonoscopy utilization by non-English speakers as well as patients with Medicare insurance.
- The well-established pre-existing racial gap in colonoscopy access was not seemingly worsened by the COVID-19 pandemic in our population.
- Socioeconomic disparity as measured by colonoscopy use by income quartile also did not appear to worsen post pandemic.
- There is a need to improve access to and outreach for colonoscopy for non-English-speakers in the aftermath of the COVID 19 pandemic.