



# Virtual Visits for Initial Evaluation of Constipation Are Associated With Reduced Outpatient Order Compliance



*Priya Sasankan, MD, MBA<sup>1</sup>, John McMichael PhD<sup>2</sup>, Ruishen Lyu MS<sup>3</sup>, Carol Roupael MD<sup>2</sup>, Brian Baggott MD<sup>2</sup>, John Vargo MD<sup>2</sup>, Ari Garber MD, EdD<sup>2</sup>*

**Departments of Internal Medicine<sup>1</sup>, Gastroenterology and Hepatology<sup>2</sup> and Quantitative Health Sciences<sup>3</sup>  
Cleveland Clinic, Ohio**

## BACKGROUND/AIMS

- Telemedicine is defined as the use of telecommunication modalities, such as telephone and real-time video, to connect patients with clinicians for the purpose of providing health care.
- The onset of the SARS-CoV-2 pandemic forced rapid changes and adjustments on the entire healthcare system, pushing a large portion of care to the virtual setting.
- In this retrospective analysis, we sought to compare provider ordering practices and patient order compliance in the virtual versus in-person setting, during the COVID-19 pandemic, in the initial evaluation of constipation.

## METHODS

- Using natural language processing, we identified outpatient gastroenterology visits (virtual and in-person) for constipation from March 2020 through December 2021.
- Only adult patients with a primary Ohio zip code and those evaluated by a primary Cleveland Clinic gastroenterologist were included in the study.
- We assessed the number of orders placed for patients during these encounters and determined compliance based off order completion.
- A generalized linear mixed effects model with fixed effects for visit type, and random intercepts for intra-patient correlation was used.
- A multivariable model was built controlling for age, socioeconomic status, BMI, ASA class, dementia, stroke and congestive heart failure.

## RESULTS

**Table 1: Number of Visits and Visit Type**

Total Patients (N = 4,930)	
In-Person Visits	3,515 (46.7%)
Virtual Visits	1,415 (0.01%)

**Table 2: Order Compliance Among Patients with Virtual vs. In-Person Visits.**

Factors	Odds Ratio	95% CI	P-value
Total Orders	0.339	[0.263,0.436]	<.001
Imaging	0.103	[0.040,0.267]	<.001
Procedures	0.219	[0.313,0.365]	<.001
Labs	0.047	[0.024,0.092]	<.001

- Those seen virtually during the pandemic were 66% less likely to complete orders in comparison to patients seen in-person, 90% less likely to complete imaging orders, 78% less likely to complete procedure orders, and 95% less likely to complete lab orders.
- Increase lab order compliance was associated with the highest socioeconomic status (75K-200K), with patients eight times more likely to complete orders (p=0.049) and three times more likely to complete orders overall (p=0.021).

## CONCLUSIONS

- Compared with in-person visits, patients seen virtually for their first presentation of constipation were less likely to complete labs, imaging and endoscopic evaluation.
- These findings highlight that virtual visits for constipation, despite their convenience, may be detrimental to care coordination and compliance.

## REFERANCES

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