

# Identifying Screening and Diagnostic Endoscopic Delays Due to Covid-19

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## INTRODUCTION

- In response to the Covid-19 pandemic, many specialties were limited in screening practices and elective procedures due to national mandates.
- Within the field of gastroenterology, this led to a delay in colorectal cancer screening and diagnostic endoscopies.
- Our institution resumed screening and diagnostic endoscopies by conducting pre-procedure Covid testing. Patients were deferred if positive for Covid.

## AIMS

- Primary aim: Investigate the impact of Covid-19 related delays for gastrointestinal diagnostic and screening processes
- Secondary aim: Identify factors associated with endoscopy completion after delay including patient demographics, type of procedure, and institution

## METHODS

- Retrospective study evaluating outpatient endoscopic procedures delayed due to positive Covid-19 testing from March 2020-2022 at an academic center and affiliated community hospital.
- Patients underwent rapid Covid-19 PCR testing (Abbott ID Now, Chicago IL) prior to their scheduled endoscopy. If positive, the procedure was canceled and could not be rescheduled for 21 days. These procedures were identified with a Covid-19 cancellation code.
- Patient and procedural characteristics were identified through a manual chart review.
- Statistical analysis included t-testing, chi-square, and ANOVA.

## RESULTS

	Completed N=91 (46%)	Not Completed N=106 (54%)	p-value
<b>Age</b>			
Median	61	61	0.79
Range	19-84	18-85	
IQR 1-3	50-66	51-68	
<b>Gender, n (%)</b>			0.43
Female	59 (65)	63 (59)	
Male	32 (35)	43 (41)	
<b>Race, n (%)</b>			0.27
White	64 (70)	78 (74)	
African American	13 (14)	11 (10)	
Asian	5 (5)	2 (2)	
Other	9 (10)	15 (14)	
<b>Ethnicity, n (%)</b>			0.35
Hispanic	23 (25)	22 (21)	
Non-Hispanic	68 (75)	84 (79)	

Figure 1. Patient demographics for endoscopies that were completed or not completed after the initial delay due to Covid.

Delayed Procedures, n (%)	
Total	197
Colonoscopy	125 (63)
EGD + Colonoscopy	37 (19)
EGD	35 (18)
Rescheduled Procedures, n (%)	
Total	91 (46)
Colonoscopy	63
EGD + Colonoscopy	20
EGD	8

Figure 2. Delayed and rescheduled procedures by endoscopy type.

Endoscopy Indication					
Colonoscopy	N=122	EGD	N=35	EGD + Colonoscopy	N=36
CRC Screen	94	UGI Symptoms	11	UGI + LGI Symptoms	13
IBD	9	Dysphagia, Odynophagia	6	UGI Symptoms + CRC Screen	11
Bleeding	8	Barrett's Esophagus	5	Bleeding	5
LGI Symptoms	3	Esophagitis or Gastritis	4	IBD	2
Abnormal FIT	2	H-Pylori, PUD, Cancer	4	Weight Loss	2
Other	6	Other	5	Other	3

Figure 3. Indication for delayed endoscopies. (CRC = colorectal cancer; UGI = Upper GI; LGI = Lower GI)

	Total (N=91)	Academic Center (N=58)	Community Hospital (N=33)
<b>Total</b>	<b>140</b> (65-320)	<b>199</b> (68-294)	<b>166</b> (54-186)
Colonoscopy	<b>152</b> (70-334)	<b>221</b> (69-346)	<b>140</b> (52-135)
EGD + Colonoscopy	<b>94</b> (61-238)	<b>159</b> (57-203)	<b>181</b> (65-146)
EGD	<b>153</b> (21-245)	<b>58</b> (47-251)	<b>250</b> (78-386)

Figure 4. Median time to endoscopy completion in days (IQR 1-3).

## RESULTS

- 197 patients were eligible for inclusion. The median age was 61 years. 62% of patients were female. 72% identified as white. (Figure 1).
- Colonoscopies were the most common delayed procedure (63%), followed by EGD with colonoscopy (19%), and EGD alone (18%). (Figure 2).
- Colorectal cancer screening was the most common indication for colonoscopy (77%), upper GI symptoms for EGD (31%), and symptoms including nausea, abdominal pain, or change in stool habits for EGD and colonoscopy (36%). (Figure 3).
- To date, 46% (N=91) of delayed endoscopies were completed. There was no significant difference in demographic factors for endoscopy completion. (Figures 1 and 2).
- The median time to endoscopy completion was 140 days (IQR 65-320) with no significant difference by type of endoscopy (p=0.64) or institution (p=0.48). (Figure 4).

## CONCLUSION

- Endoscopic delays have longstanding implications for colon cancer screening and diagnosis or treatment of gastrointestinal disease.
- In this study, over half of our patients were lost to follow up. The majority who completed endoscopies did so with significant delay.
- As Covid-19 continues to impact our healthcare system, a commitment to improving the processes of completing screening and diagnostic endoscopies in a timely fashion is essential to improve this gap in patient care.