Endoscopic Procedures Do Not Increase Risk of COVID-19 Infection

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Introduction

- Endoscopic procedures canceled due to the COVID-19 pandemic depleted hospital revenue and potentially worsened patient outcomes through disease progression
- Despite numerous safeguards to resume elective procedures, patients remain apprehensive of contracting COVID-19 peri-procedurally

Objective:

- Assess the risk of symptomatic COVID-19 transmission in patients undergoing endoscopic procedures during the spring 2020 outbreak

Methods

- Retrospective cohort study
- Included patients that had endoscopic procedures between 3/16/20 and 6/2/20 at Danbury and Norwalk Hospitals of Fairfield County, Connecticut
  - Dates represent the peak COVID-19 period when elective procedures were canceled
- COVID-19 infection assessed through test results or symptoms within two weeks post-discharge

Results

Table 1: COVID-19 infection based on procedure classification versus length of stay and disposition.

	Urgent-elective	Emergent	Total
Length of Stay			
Short (1-2 days)	**0/161 (0.03)**	0/3 (0.94)	**0/164 (0.03)**
Medium (3-5 days)	0/2 (0.96)	0/12 (0.78)	0/14 (0.74)
Long (6+ days)	0/0 (1)	0/14 (0.74)	0/14 (0.74)
Disposition			
Home	**0/163 (0.03)**	0/17 (0.70)	**0/180 (0.02)**
Home with services	0/0 (1)	0/7 (0.86)	0/7 (0.86)
Extended care facilities	0/0 (1)	0/5 (0.90)	0/5 (0.90)
Total	**0/163 (0.03)**	0/29 (0.54)	**0.192 (0.02)**

Note: Infection = (number of patients with post-procedural COVID-19 infection)/(category population) (p value)

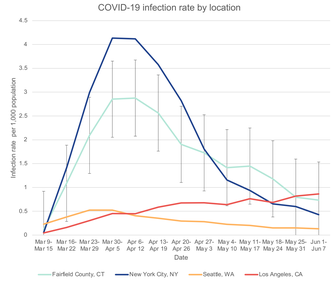


Figure 1: COVID-19 infection rate by location. Infection rate = (total positive tests / county population) x 1,000. Confidence interval = +/-0.8. Fairfield County, CT; population 943,823. New York City, NY; population 8,398,748. Seattle, WA; population 2,226,300. Los Angeles, CA; population 9,645,050.

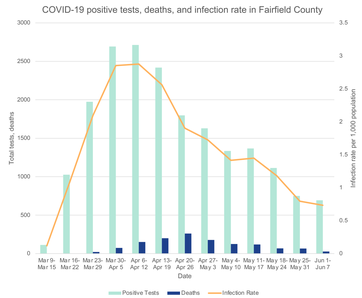


Figure 2: COVID-19 positive tests, deaths, and infection rate in Fairfield County. Infection rate = (total positive tests / county population of 943,823) x 1,000.

COVID-19 infection

- After 163 urgent-elective and 29 emergent procedures, no patients developed COVID-19 infection

All categories had infection rates of 0 in 1,000 population

- Significant for
  - Overall infection (p = 0.02)
  - Urgent-elective procedures (p = 0.03)
  - Ambulatory or overnight procedures (p = 0.03)
  - Discharges home (p = 0.02)

Limitations

- Small sample
- Dual institution
- Low external validity

Methods (continued)

- Variables studied were procedure classification, length of stay, and discharge disposition.
- Post-procedural COVID-19 infection rate was analyzed using binomial tests comparing rates to state-mandated infection data

Conclusions

- Endoscopic procedures do not increase the risk of symptomatic COVID-19 infection during an outbreak
- Elective procedures should continue during further outbreaks

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