



# Strategies to Facilitate Colonoscopy Completion

10:50 AM – 12:00 PM

# Strategies to Facilitate Colonoscopy Completion



*Moderator*  
**Jocelyn Phillips**  
American Cancer Society



**Erin Peterson**  
Colon Cancer Coalition



**Ashish Atreja, MD, MPH**  
UC Davis Health



**Nathan A. Merriman, MD,  
MDCE**  
Intermountain Health



**Kathryn (Katie) Swenson,  
DMSc, MBA, PAC**  
Intermountain Health



**COLON CANCER  
COALITION**

# **Colonoscopy Hesitancy**

## **Perceptions of the prep and procedure**

**ACS NCCRT, 2025**

# DISCLOSURES

No personal disclosures.

This research was sponsored by an unrestricted grant from Braintree Laboratories, Inc.



# BACKGROUND

Building on “*2021 Patient Perceptions Regarding Colonoscopy*” by Vemulapalli, Lahr, and Rex, which found 71% of patients listed the bowel prep as the worst part of the colonoscopy.

We wanted to:

- Understand the real and perceived barriers to a successful colonoscopy.
- Understand public hesitancy to colonoscopy and bowel prep.

## 2021 Patient Perceptions Regarding Colonoscopy Experience

Krishna C Vemulapalli <sup>1</sup>, Rachel E Lahr, Douglas K Rex

Affiliations

PMID: 35324481 DOI: [10.1097/MCG.0000000000001689](https://doi.org/10.1097/MCG.0000000000001689)

### Abstract

**Goal:** We sought to document patient perceptions in 2021 regarding colonoscopy experience and potential deterrents to repeat colonoscopy.

**Background and aim:** Bowel preparation has been previously considered by patients to be the worst part of a colonoscopy.

**Materials and methods:** We conducted a prospective survey of consecutive patients age 18 years and older who had just completed colonoscopy at 2 outpatient endoscopy centers at a tertiary academic hospital. The short survey was conducted in the recovery area. The main outcome measure was patient perceptions of the worst part of their colonoscopy experience and which factor would most deter them from a future colonoscopy.

**Results:** Four hundred patients completed the survey of 405 approached. Average patient age was 64 years, and 48% were women. Seventy-five percent of patients used low-volume preparations. Bowel preparation was considered the worst part of colonoscopy by 71% of patients. Women were more likely to choose laxatives as the worst part of a colonoscopy. Bowel preparation was chosen most often (55%) as the most likely deterrent to a future colonoscopy. There were minimal differences in responses between those receiving low-volume versus high-volume (4 L) preparations.

**Conclusion:** Bowel preparation remains the worst part of the colonoscopy experience for patients, and the most likely deterrent to future colonoscopy.

Copyright © 2022 Wolters Kluwer Health, Inc. All rights reserved.

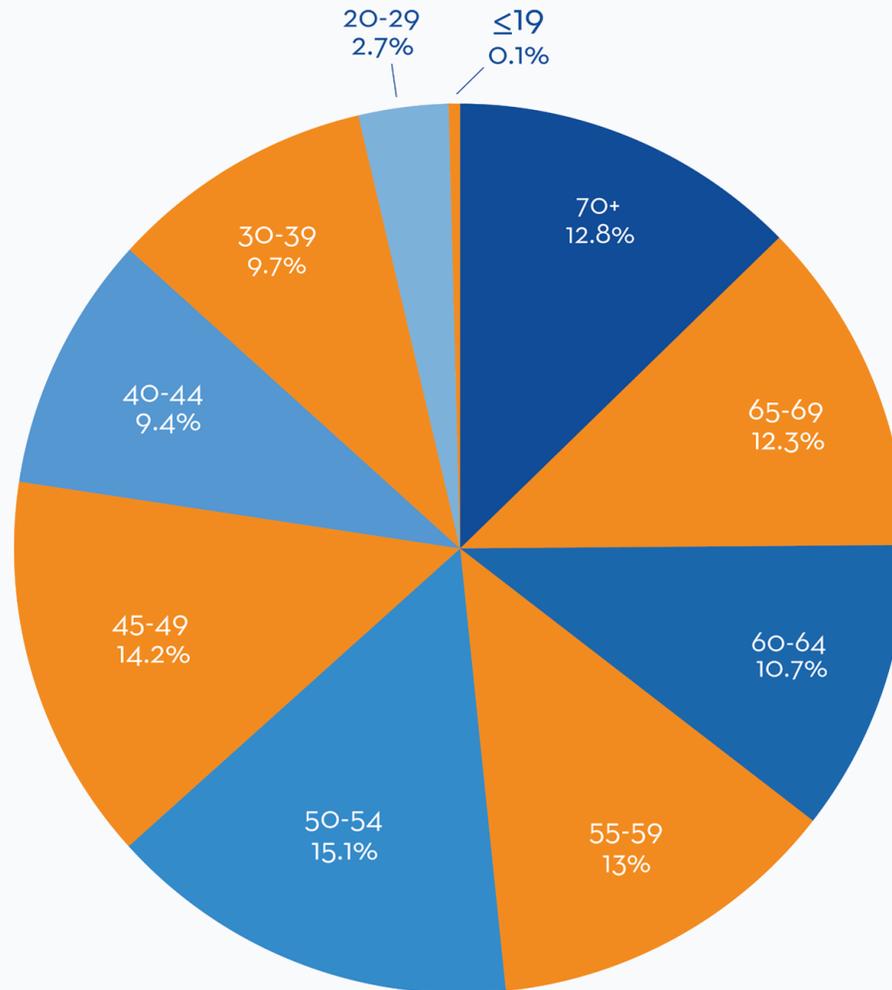


# METHODOLOGY

- An online survey was conducted between December 2023 and March 2024
- **Inclusion Criteria:** All adults (age of majority) living in the United States
- Survey questions were developed through a review of previously published patient surveys and designed to understand the public perception of and the reason behind hesitancy towards colonoscopy screenings
- The survey was face-validated in a smaller cohort of patients and questions were revised before full release
- Convenience sampling was done through Colon Cancer Coalition's social media platforms and emailed to a network of patients, survivors, caregivers, volunteers, and community partners
- A textual analysis was used to analyze the free responses
- Goal: 1000 respondents.

Total Respondents: **1,865**

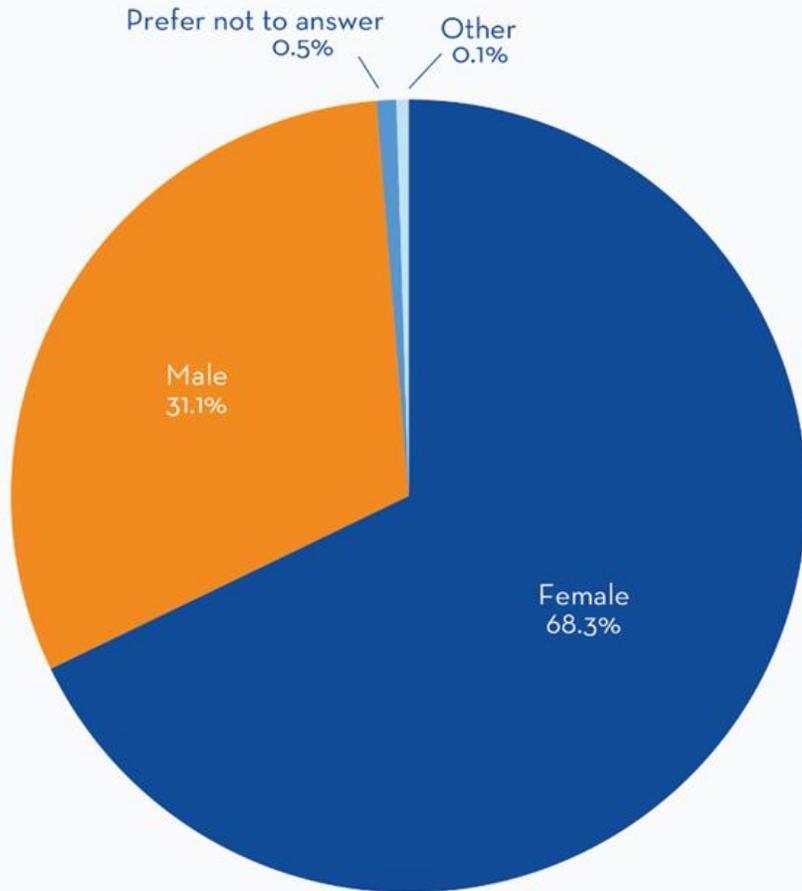
## How old are you?



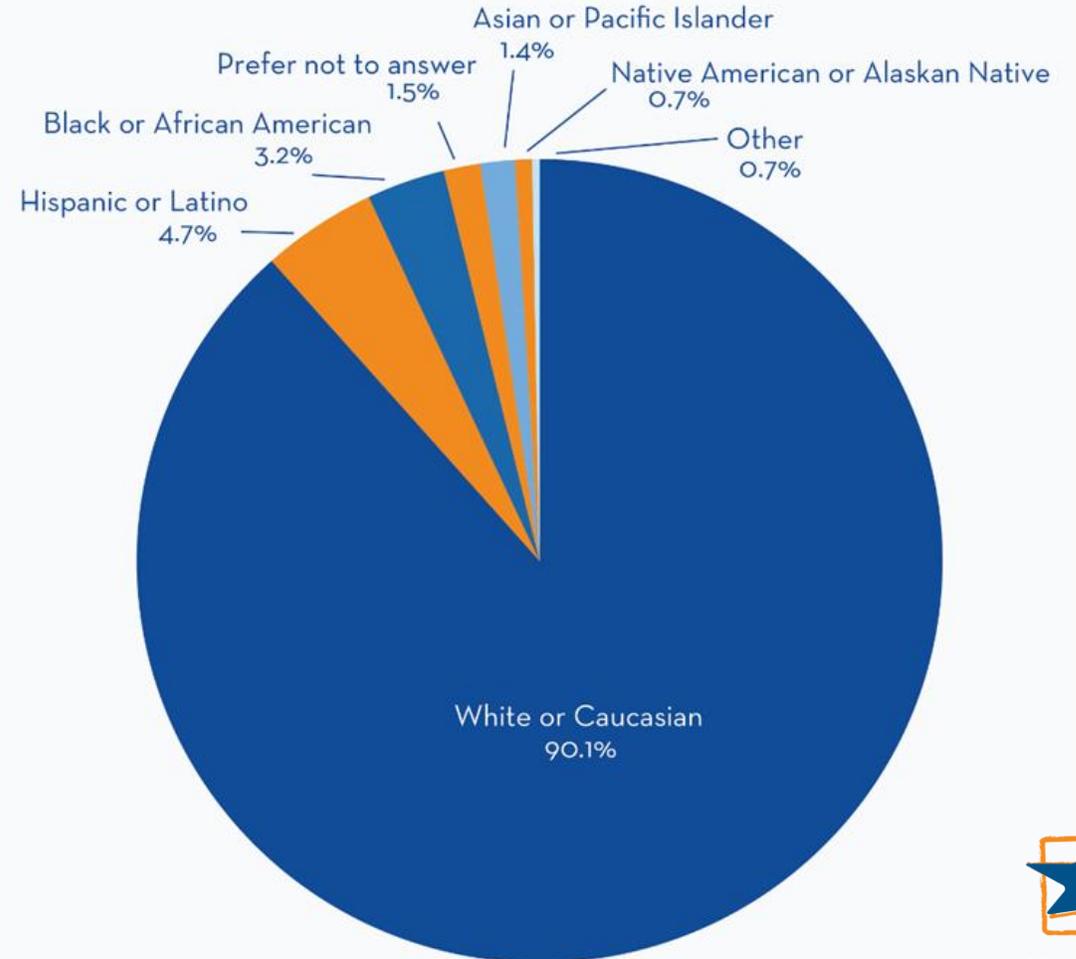
# Demographics

Total Survey Respondents: 1865

## What is your gender?

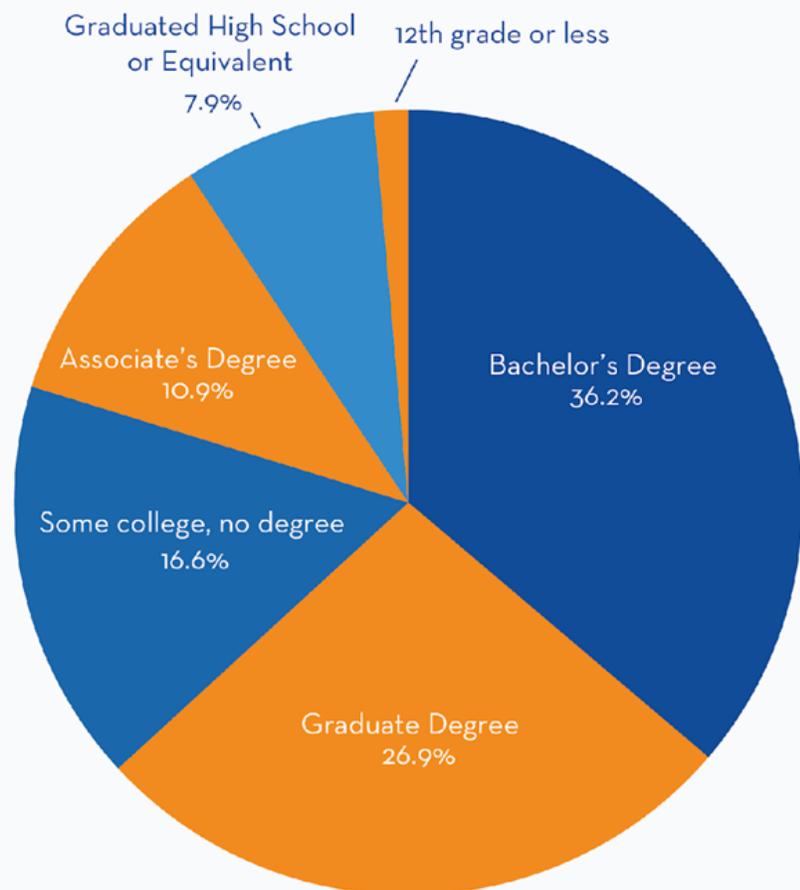


## Which of the following best describes you?

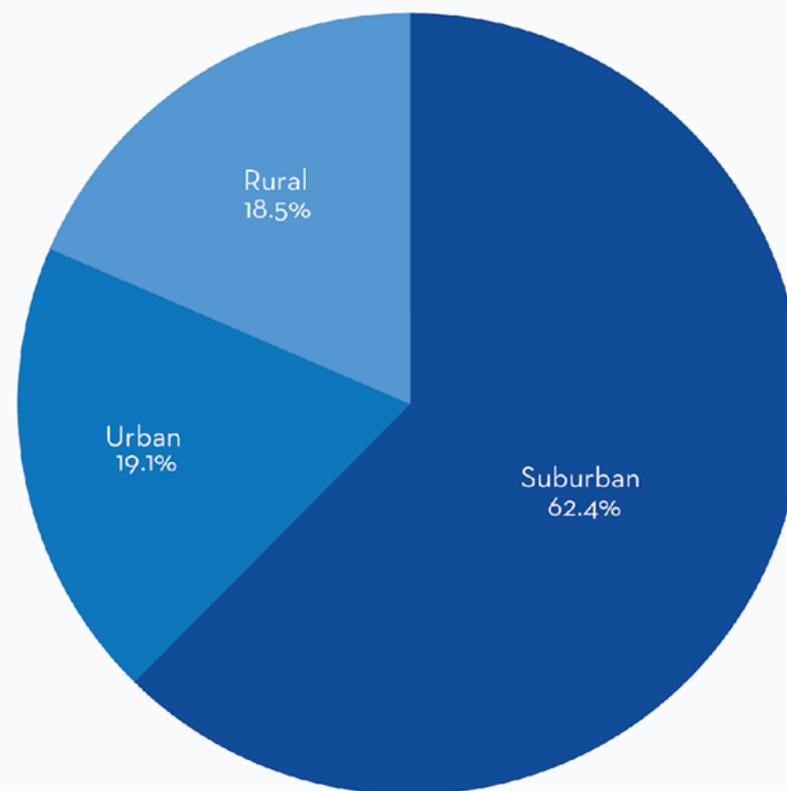


# Demographics | Total Survey Respondents: 1865

## What is your highest level of education?

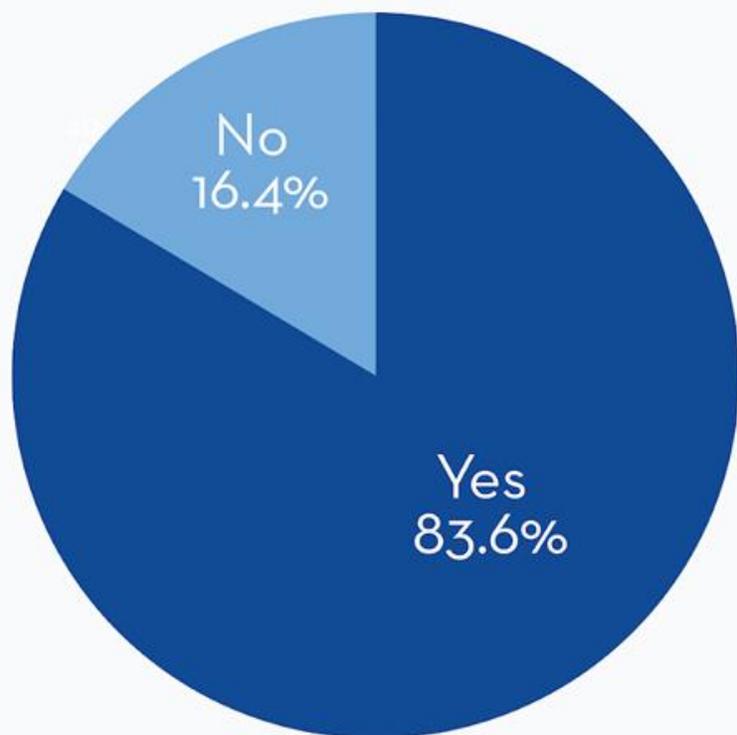


## Which best describes the area where you live?

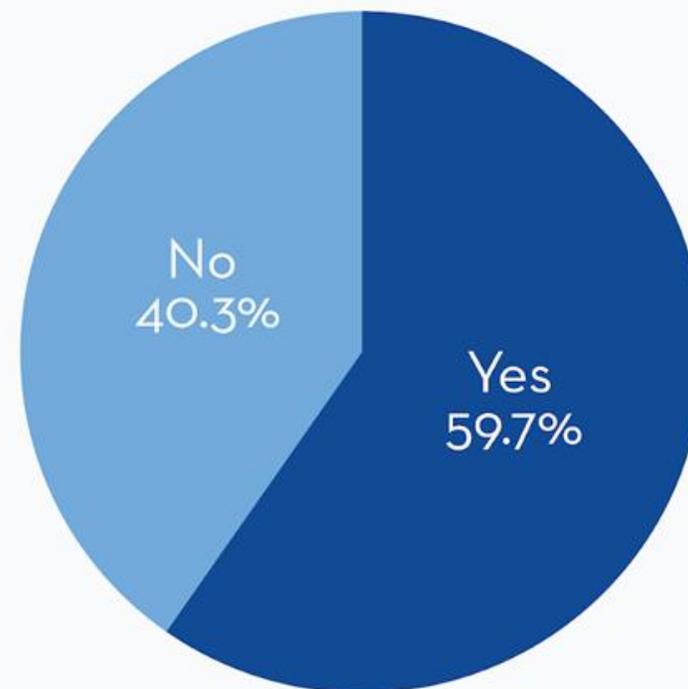


# Do you know anyone with CRC?

Do you know anyone who has been diagnosed with colon or rectal (colorectal) cancer?

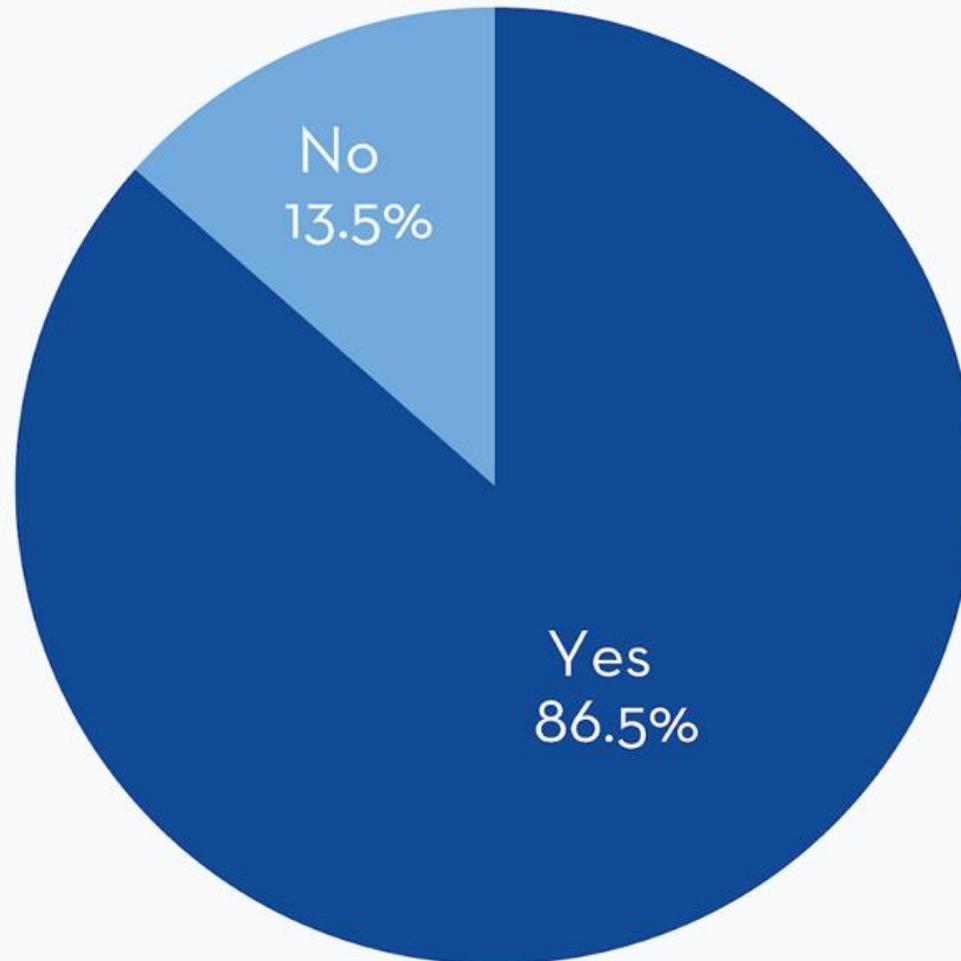


Has anyone in your family been diagnosed with colon or rectal (colorectal) cancer?

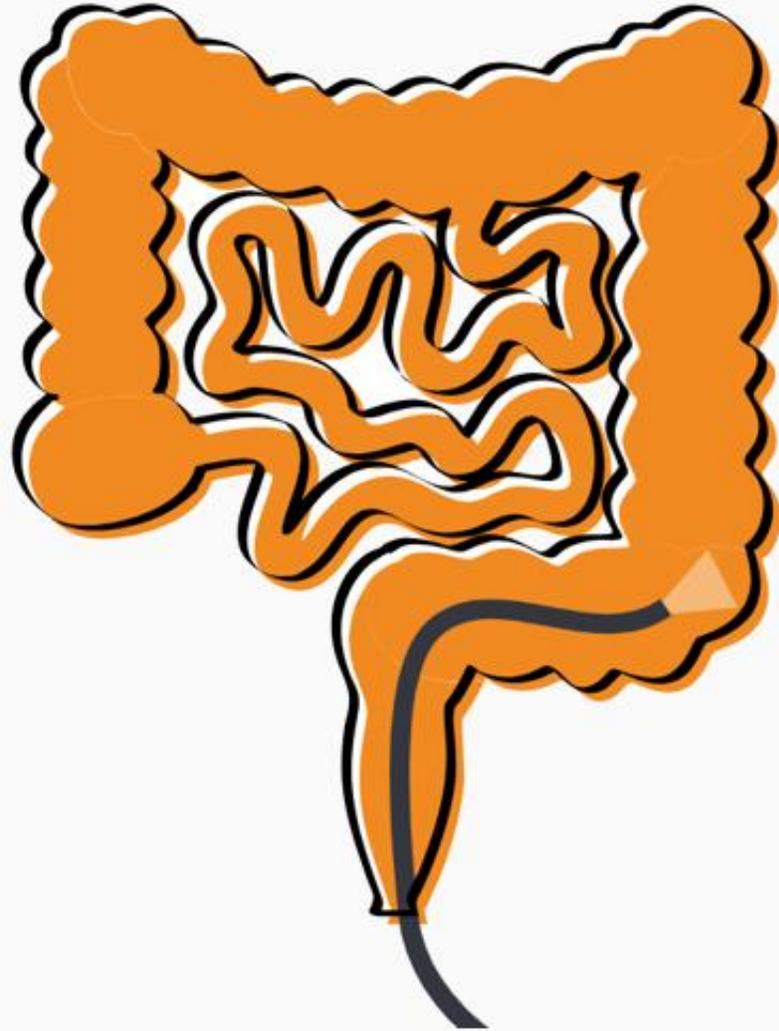


# Have you had a colonoscopy?

Yes = 1613  
No = 252

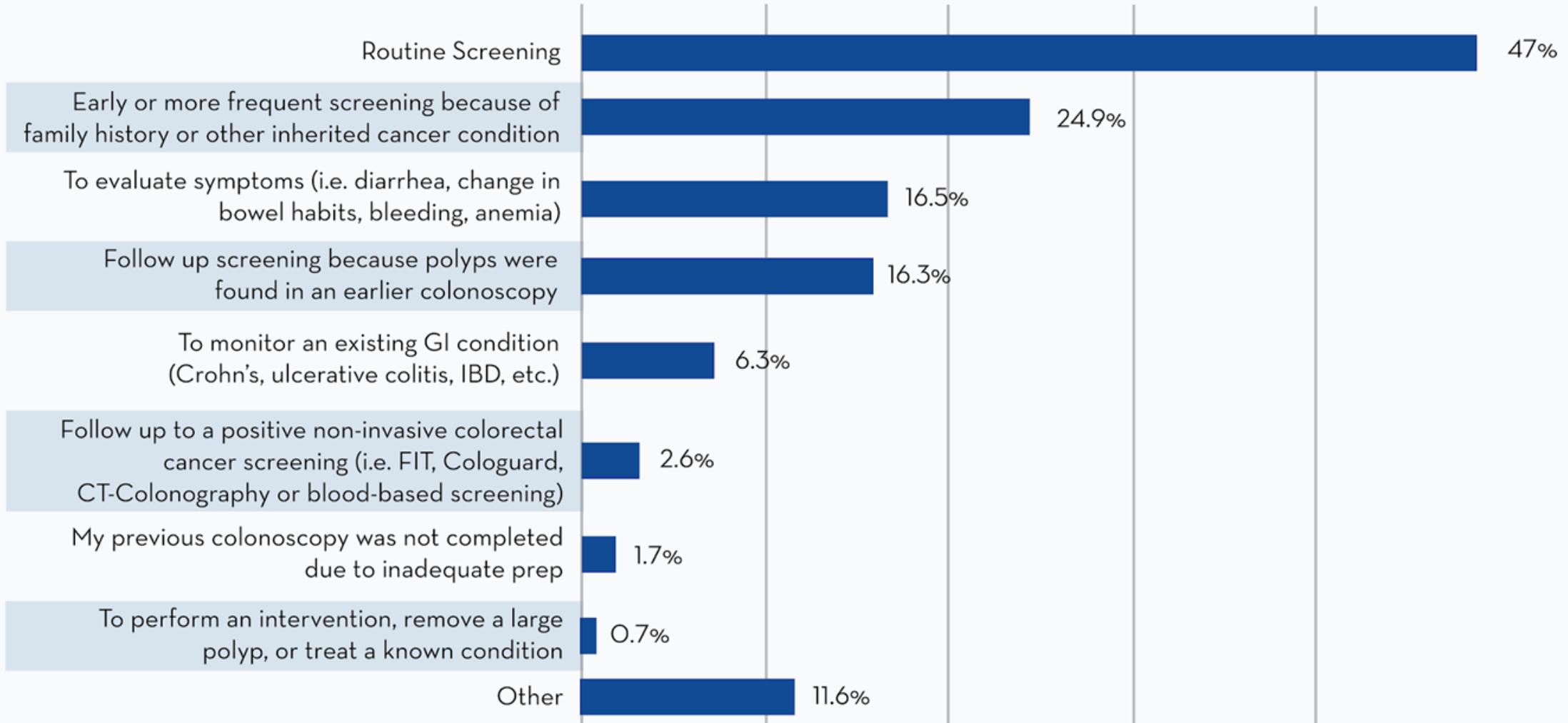


# COLONOSCOPY HESITANCY



# Colonoscopy: YES

## What was the purpose of your last colonoscopy?



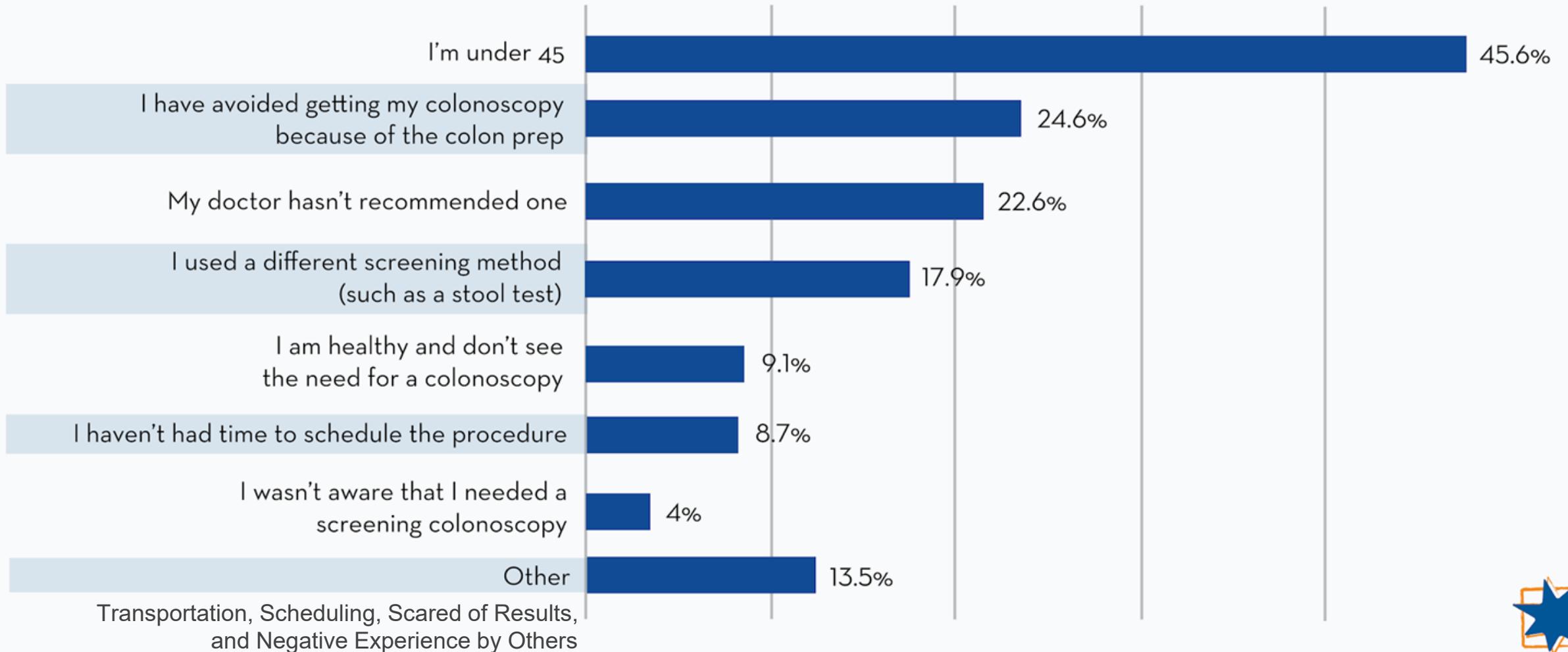
*Option for multiple responses per individual*



COLON CANCER  
COALITION

# Colonoscopy: NO *(all responses)*

## Why haven't you had a colonoscopy?



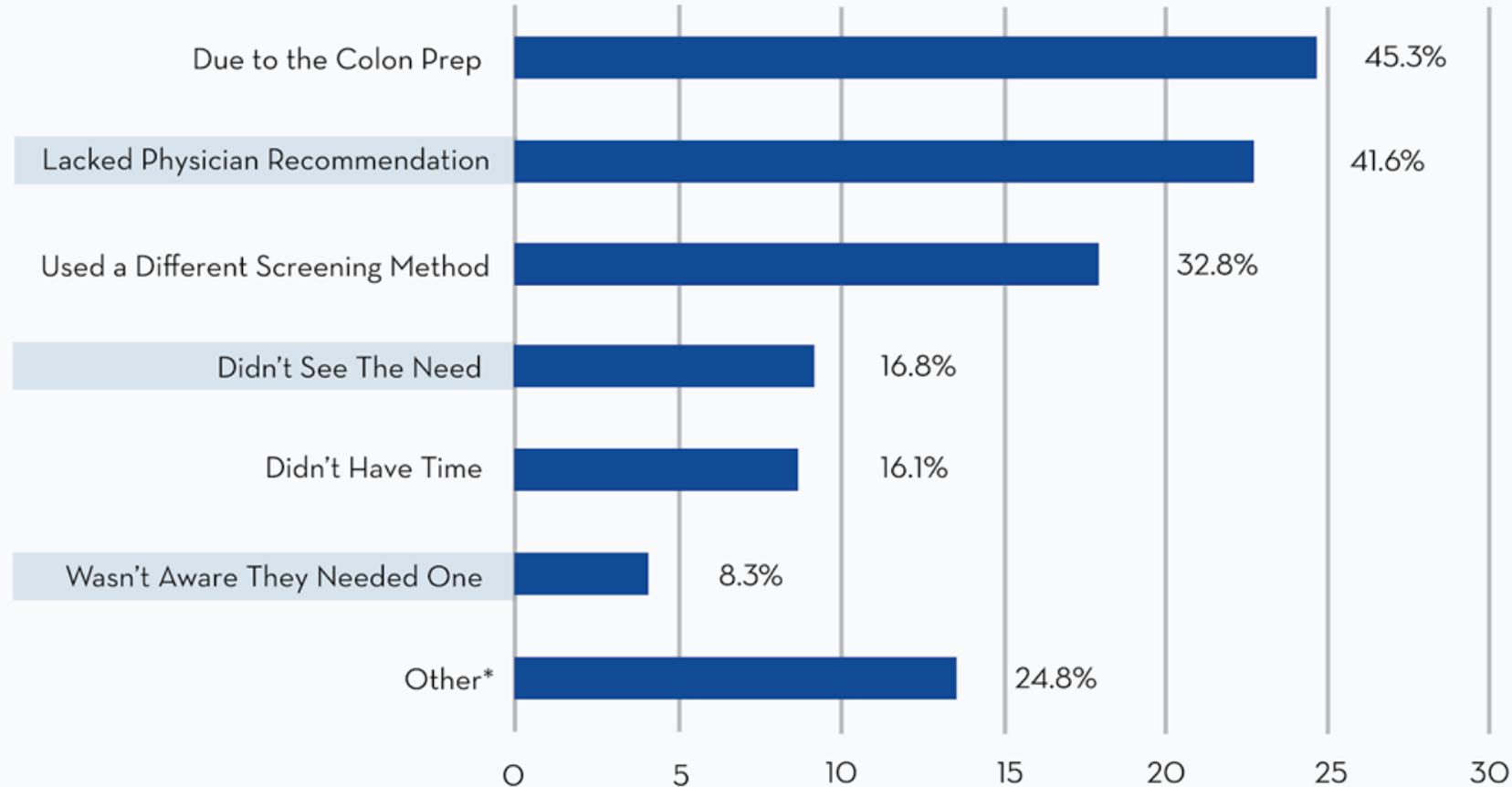
*Option for multiple responses per individual*



# Colonoscopy: **NO** *(only responses over age 45)*

## REASON SUBJECTS OVER 45 HAD NOT GOTTEN A COLONOSCOPY

Option for multiple responses per individual

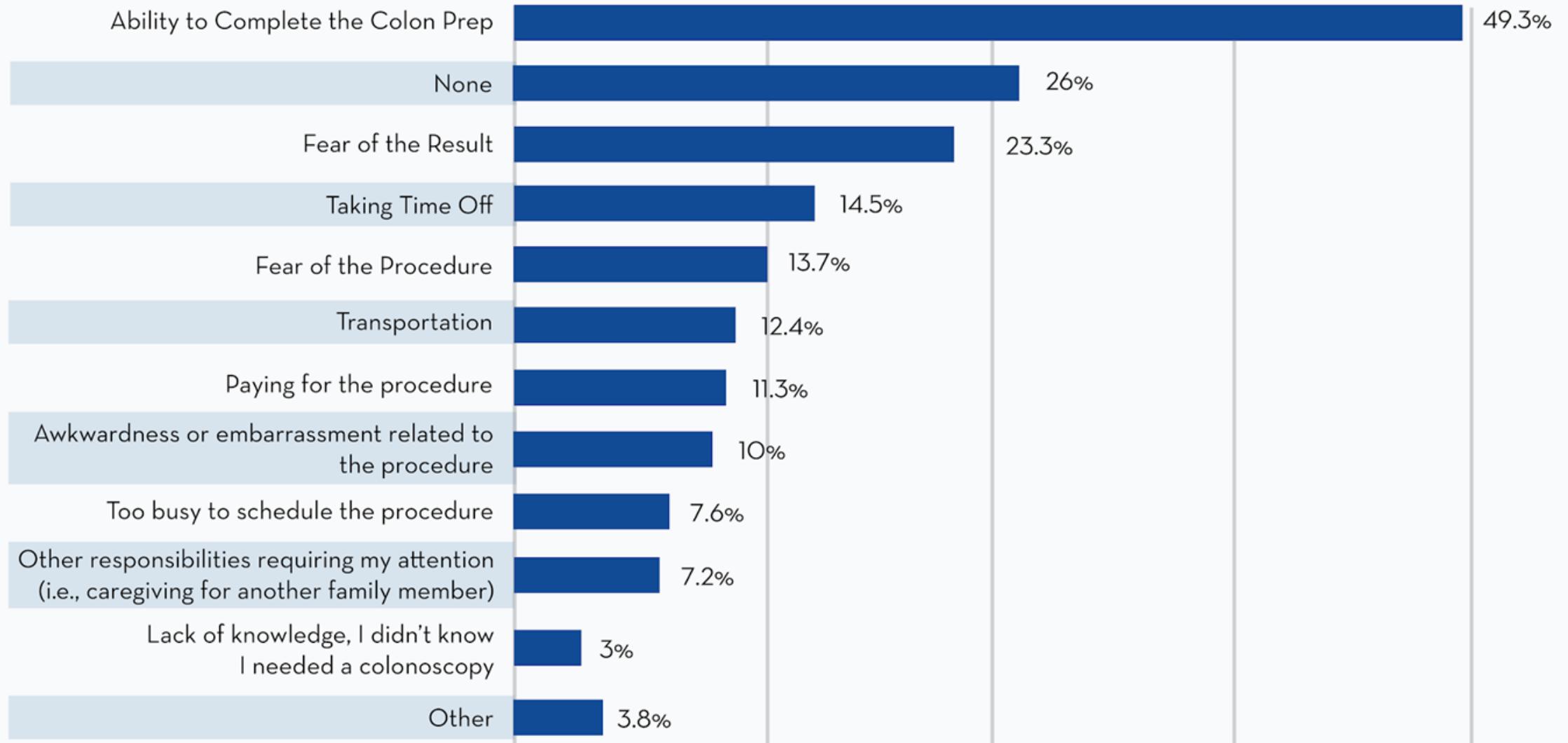


\* Other includes: Transportation, Scheduling, Scared of Results, and Negative Experience by Others



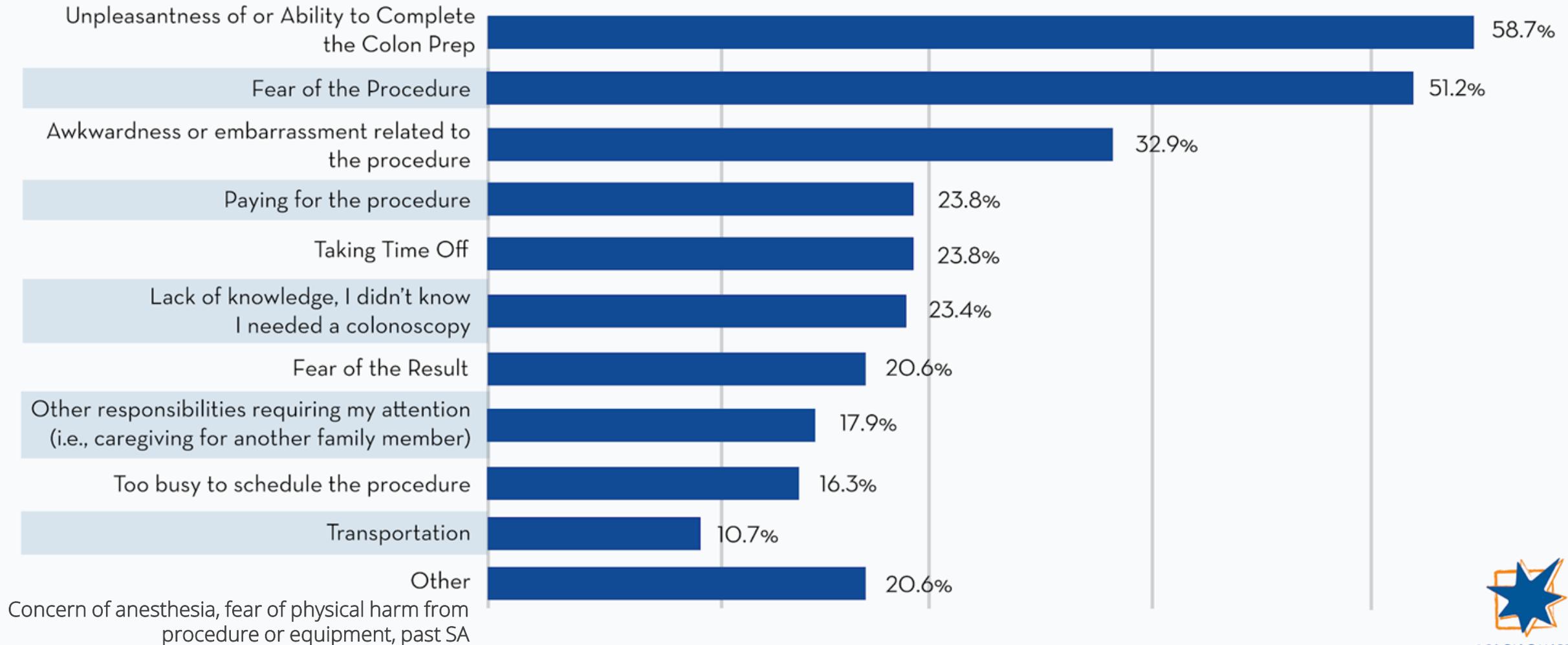
# Colonoscopy: YES

What were the 3 greatest challenges for you to complete your colonoscopy? (Respondents' Top Three Choices Summarized)



# Colonoscopy: NO

Considering your current situation, what are the top three challenges you face in completing a colonoscopy?



Option to choose up to 3



COLON CANCER COALITION

# Colonoscopy: YES

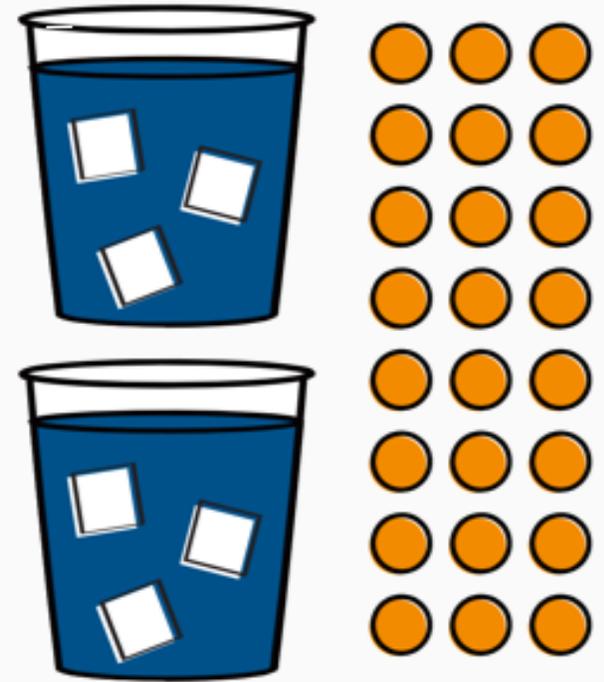
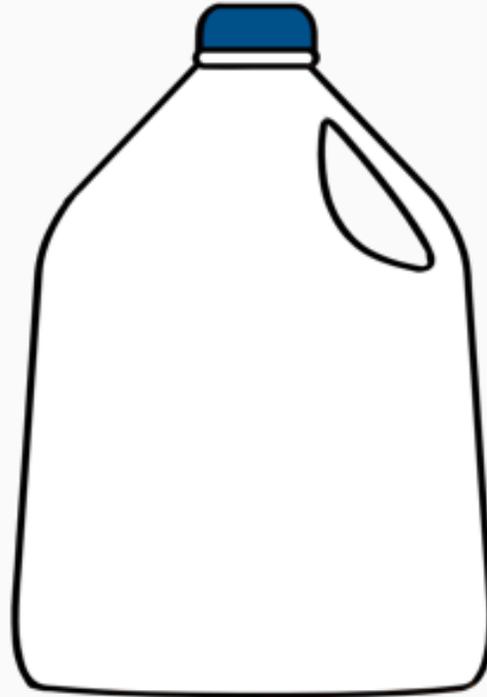
Across demographics, colonoscopy hesitancy is strongly influenced by perceptions related to the tolerability of the colon prep.

## What was the worst part of your colonoscopy experience? (n=2706)

Demographic Variable	Awkwardness of the procedure	Discomfort during prep	Fear of the procedure	Ingesting the prep	Limited Eating	Making Appointment	Pain after colonoscopy	Pain during colonoscopy	Cost	Uncertainty of results	Other	P-Value*
<b>Gender</b>												
- Female	4.0%	14.3%	7.2%	37.6%	11.2%	1.8%	1.4%	1.3%	5.0%	12.2%	4.0%	0.88
- Male	3.5%	10.0%	5.8%	39.6%	12.8%	2.7%	1.8%	1.3%	4.5%	12.5%	5.4%	0.27
<b>Age Group</b>												
- Under 45	4.6%	14.2%	7.9%	28.2%	12.6%	2.5%	1.2%	1.1%	9.1%	15.4%	3.2%	p<.001
- 45-54	3.4%	13.0%	7.6%	36.4%	12.5%	2.5%	1.6%	1.1%	5.1%	12.5%	4.1%	0.96
- 55-64	4.3%	12.5%	6.1%	39.5%	11.1%	1.7%	2.0%	1.8%	3.8%	12.2%	5.2%	0.73
- 65+	3.5%	12.8%	5.6%	47.3%	10.3%	1.8%	1.0%	1.2%	2.1%	9.3%	5.2%	p<.001
<b>Education Level</b>												
- 12th Grade or Less	16.2%	10.8%	13.5%	32.4%	5.4%	5.4%	0.0%	0.0%	2.7%	10.8%	2.7%	0.01
- Associate's Degree	4.6%	13.0%	6.2%	38.4%	11.1%	1.9%	2.5%	0.9%	6.2%	11.8%	3.4%	0.87
- Bachelor's Degree	3.3%	13.8%	6.4%	37.0%	12.3%	2.2%	0.9%	1.0%	6.1%	11.4%	5.4%	0.43
- Graduate Degree or Higher	3.5%	12.8%	7.6%	39.2%	12.4%	2.7%	1.0%	1.4%	3.9%	11.1%	4.2%	0.79
- Graduated High School or Equivalent	3.3%	13.6%	7.0%	38.8%	13.1%	0.5%	3.7%	2.3%	3.3%	12.1%	2.3%	0.10
- Some College, No Degree	4.4%	12.0%	6.1%	38.9%	9.8%	1.7%	1.7%	1.5%	3.8%	16.0%	4.6%	0.37
<b>Residential Area</b>												
- Rural	4.7%	13.6%	5.7%	41.2%	11.9%	1.5%	1.3%	1.9%	4.2%	10.8%	3.2%	0.69
- Suburban	3.3%	13.9%	6.2%	38.6%	12.4%	2.2%	1.7%	1.0%	4.5%	11.7%	4.4%	0.81
- Urban	4.7%	11.4%	9.9%	34.5%	9.9%	1.7%	0.8%	1.5%	5.3%	14.6%	5.7%	0.03
- Unknown	16.7%	20.8%	16.7%	12.5%	8.3%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	0.01
<b>Total (n)</b>	<b>105</b>	<b>354</b>	<b>184</b>	<b>1005</b>	<b>311</b>	<b>53</b>	<b>39</b>	<b>35</b>	<b>122</b>	<b>319</b>	<b>118</b>	

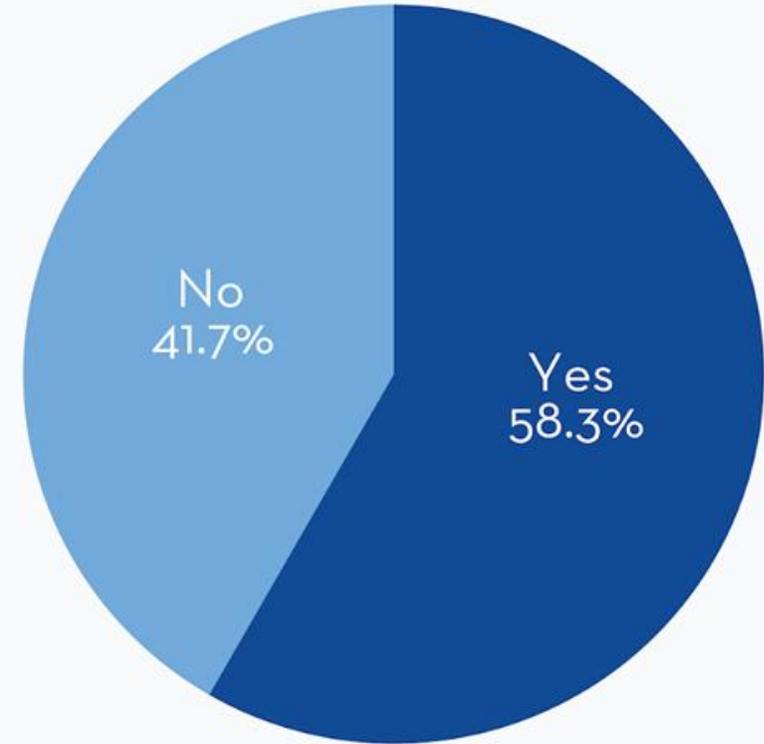
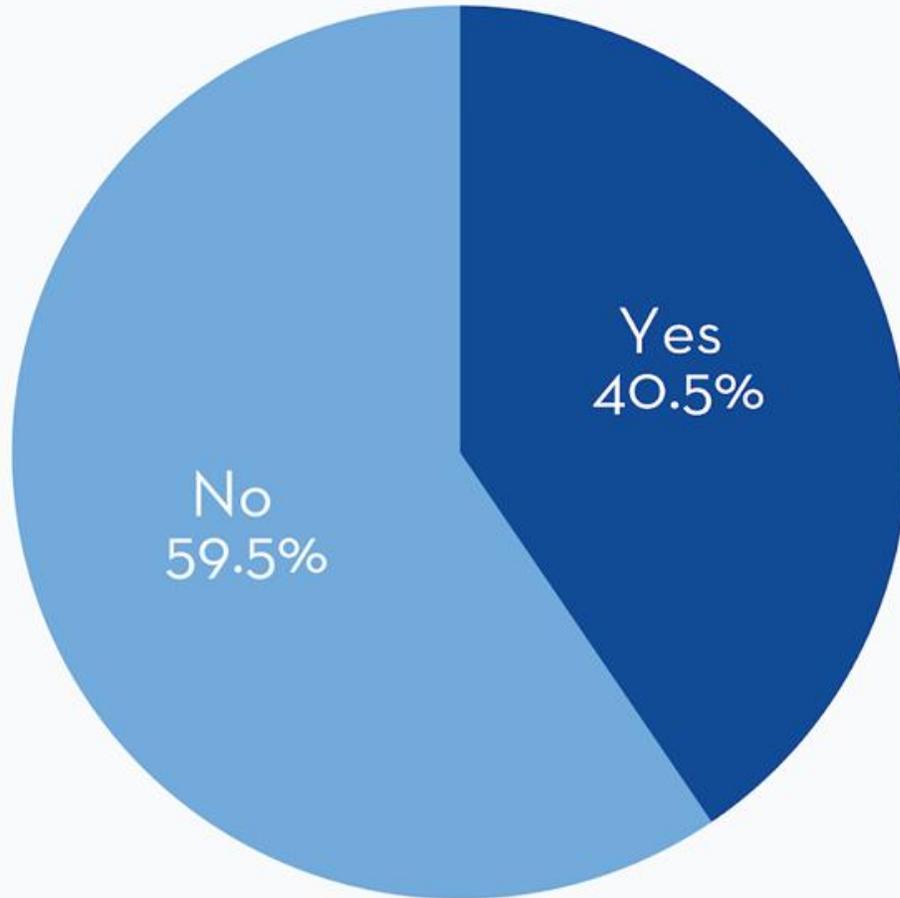
\* Chi-Square Statistic

# THE PREP



# Colonoscopy: **NO**

**Do your feelings about colonoscopy prep affect your decision to have a colonoscopy?**

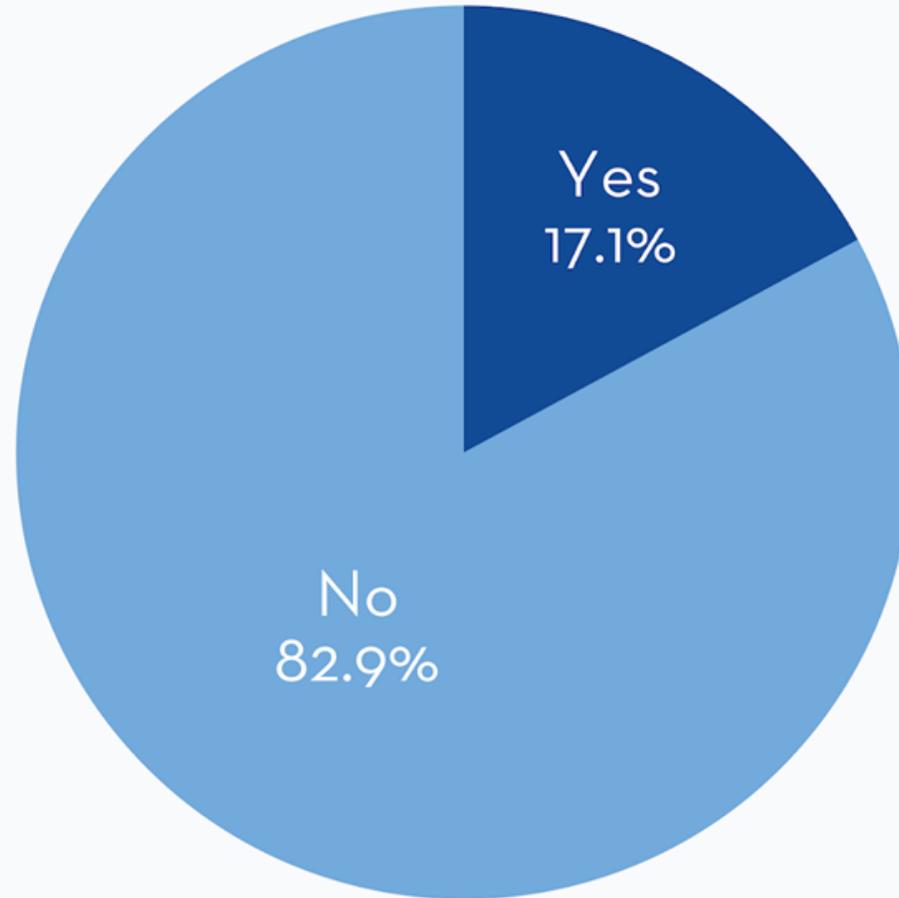


**Do you anticipate that the colon prep process will be a challenge to completing a colonoscopy?**



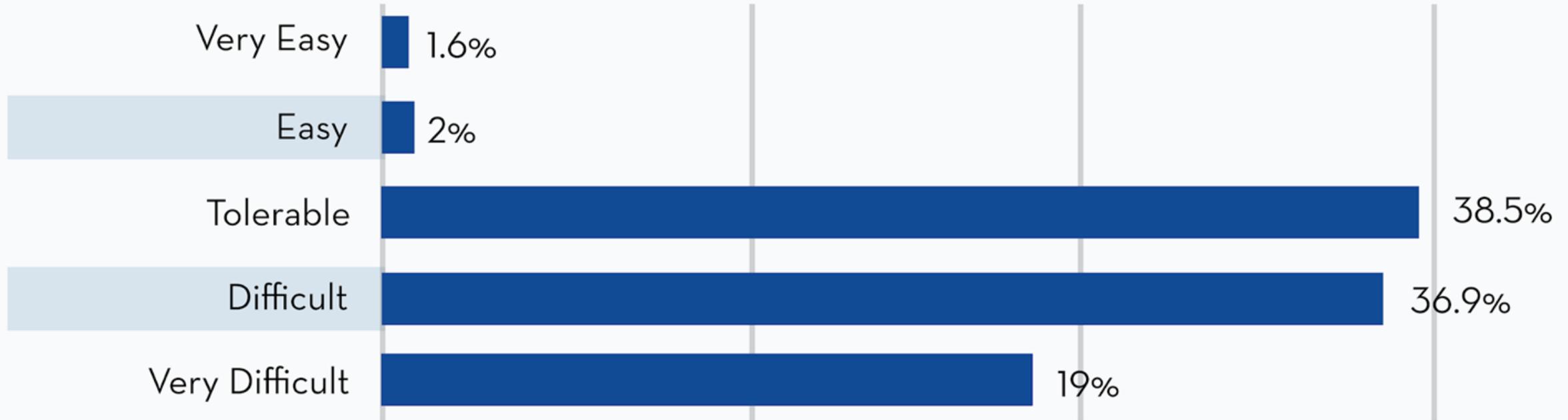
# Colonoscopy: **YES**

Was the colon prep process a barrier to completing your colonoscopy?



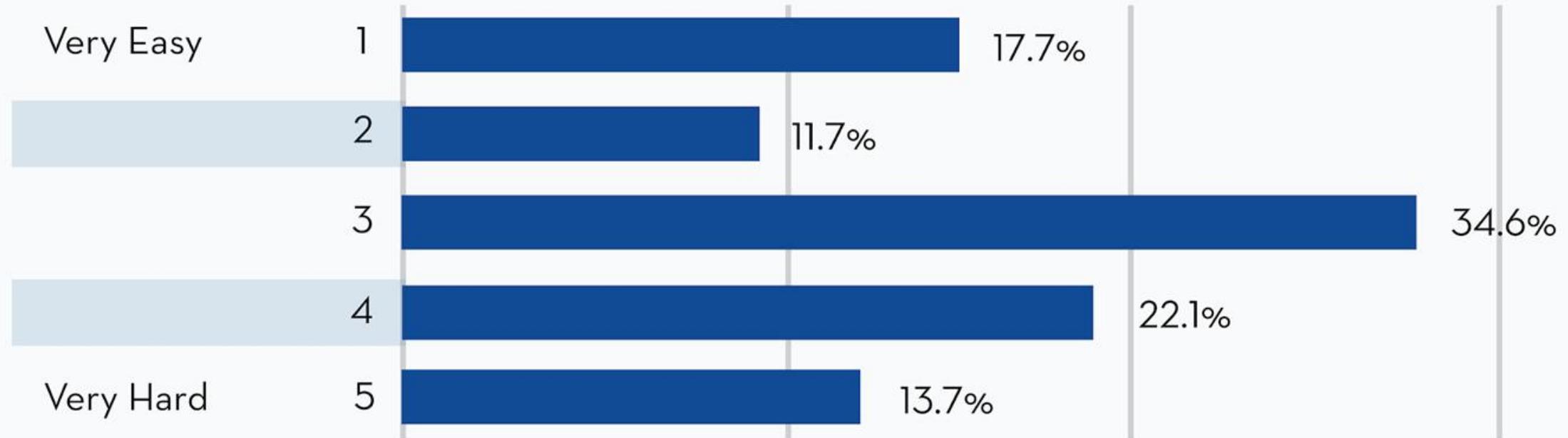
# Colonoscopy: **NO**

What is your perception about the required colonoscopy prep?

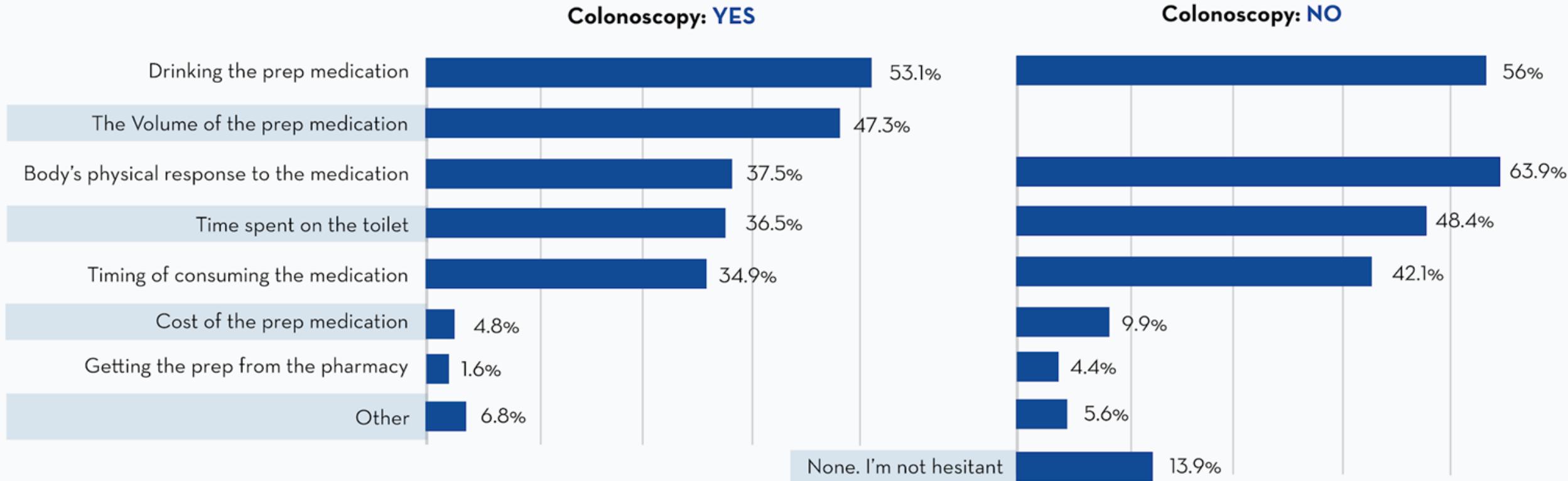


# Colonoscopy: YES

How was your experience completing the colon prep for your most recent colonoscopy?

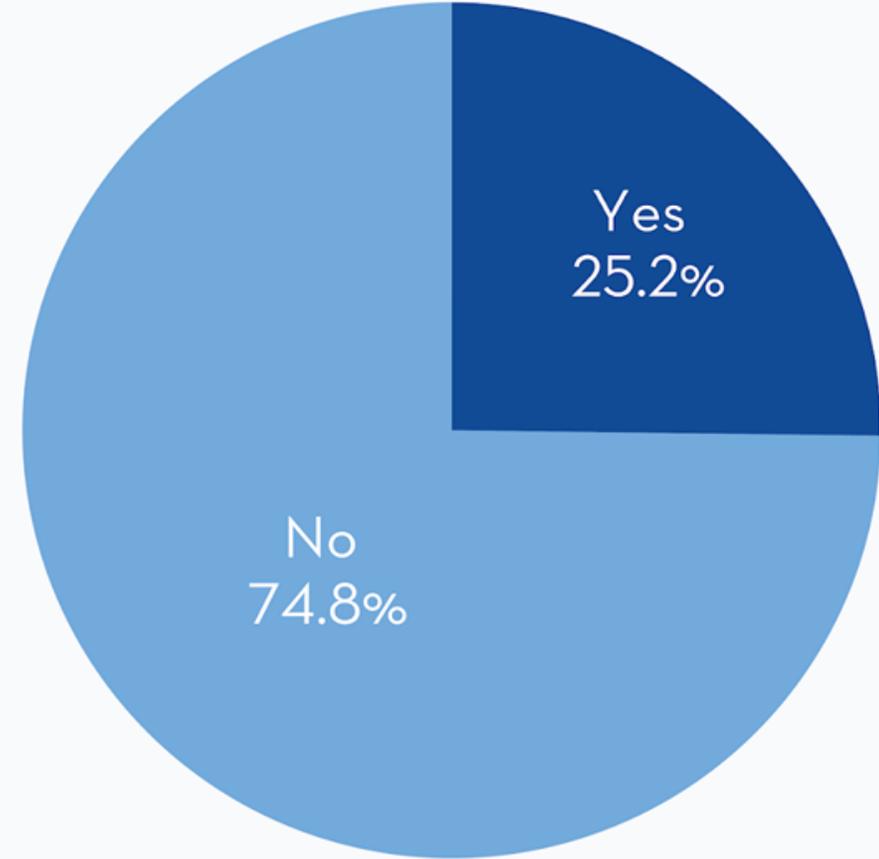
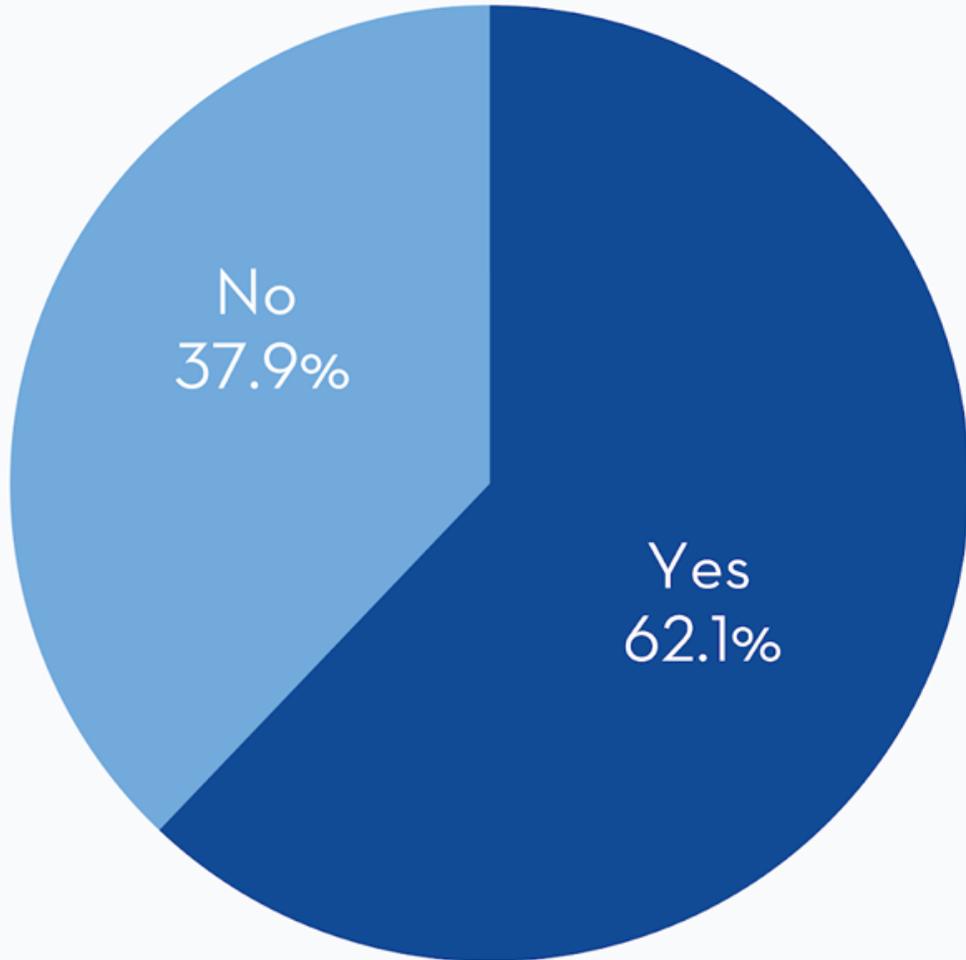


# What about the prep were/are you most hesitant about?



# Colonoscopy: **YES**

Do you know there are many different options for bowel prep medication?



Did you have a choice for your colon prep medication during your last colonoscopy?

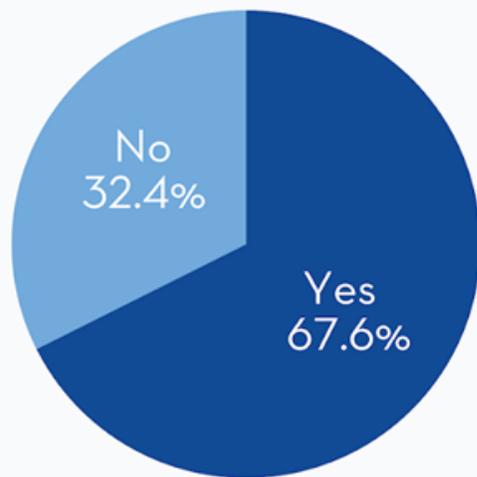


# SCREENING OPTIONS

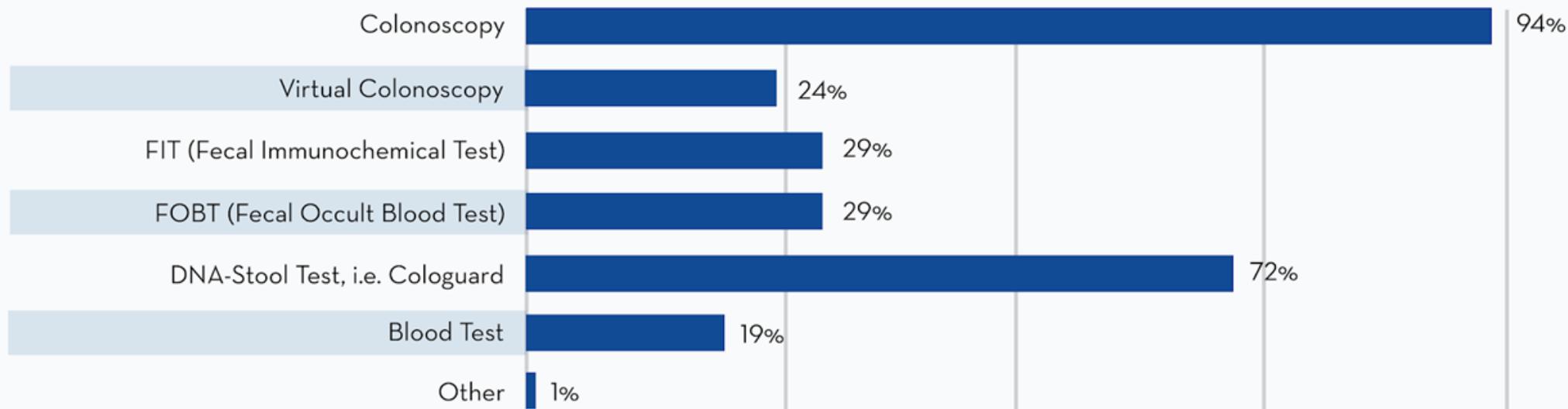


# Colonoscopy: YES

Are you aware that there are many options for colorectal cancer screening?

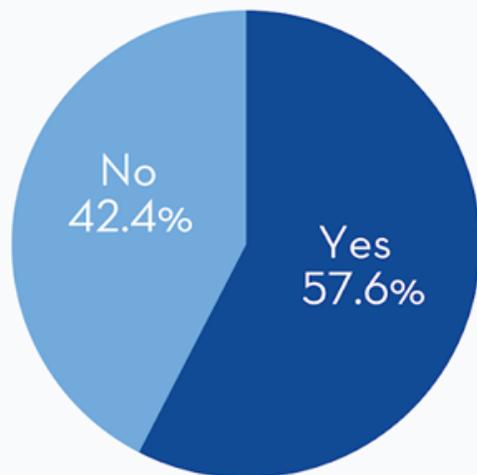


Select any of these that you have heard about.

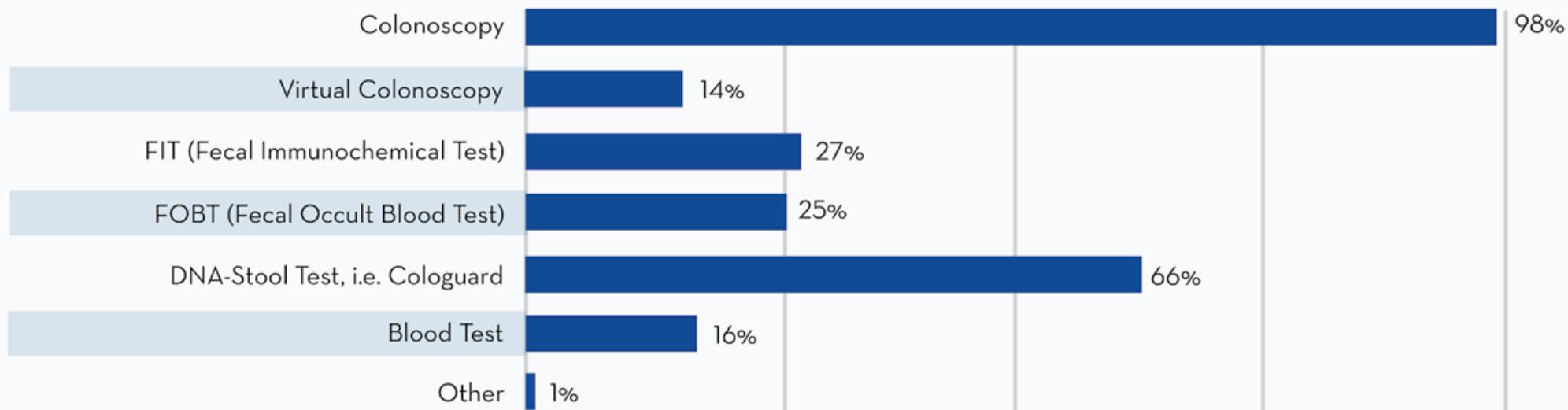


# Colonoscopy: NO

Are you aware that there are many options for colorectal cancer screening?



Select any of these that you have heard about.



Is there anything you would like to share about your experience with colonoscopy?

- Prep is the hardest part due to taste and volume
- Colonoscopies saved my life / saves lives
- Recommended screening age should be lower than 45
- The best part is the nap and food afterwards



# Colonoscopy | Yes | Bowel Prep Themes

**In your own words, describe the bowel prep experience.**

- The prep is too much to drink in a short amount of time
- The prep is unpleasant, but worth it
- Completing the prep is a mental challenge. Creating a comforting space in the restroom helps.



# Colonoscopy | Yes | Bowel Prep Themes

Please share additional thoughts about your colon prep experience.

- There needs to be better options for the prep that taste better and have less volume.
- Doctors should inform the patient about different prep options.
- Cost is a barrier to different prep options
- Participants will opt out of a colonoscopy due to the prep side effects
- The SuTab pills are difficult to swallow after a while.



## Please share additional thoughts about colonoscopy and colon prep.

- Although prep needs to be done, it is daunting due to the stories that people share.
- The recommended screening age should be lower than 45.
- Colonoscopies are a way for the medical system to make more money.
- Cologuard is easy, effective, and less invasive.



# STANDOUT COMMENTS

**“The last one (colonoscopy) I had, I took pills instead (of) the drink in preparation and it was soooooo much better. Made me not hate having the next one.”**

Debbie, late 60s, white female, bachelor's degree.

**“Fear of the unknown was the greatest barrier for scheduling my initial colonoscopy. I was diagnosed with stage 3 colon cancer after having my first routine colonoscopy. I had zero symptoms! I wish I would have scheduled my colonoscopy before age 60!”**

Shelly, early 60s, white female, associate's degree.

**“So far my doctor is satisfied with [stool-based screening], so I'll continue with that unless I develop questionable symptoms. Then I'll do whatever my doctor recommends.”**

Gaile, 70s, white female, has a family history of colorectal cancer.

**“I had no clue there were other prep options. (It) actually makes me mad that my wife didn't know she went through hell for her prep and had no idea there was another way.”**

Chad, late 40s, white male, bachelor's degree. Has avoided a colonoscopy due to the colon prep.



# KEY TAKEAWAYS

- Despite recommended screening guidelines, bowel prep hesitancy and lack of physician recommendation emerged as the two most important barriers to colonoscopy screening.
- Much anxiety around colonoscopy is driven by perceptions around the taste, volume, and/or side effects of the prep medication, regardless of the patient population.
- Most surveyed patients view the bowel prep as the worst part of the colonoscopy experience.
- Other potential barriers such as fear of the procedure, costs incurred, and inconvenience should not be ignored in patient navigation for CRC screening.
- Increasing primary care awareness and education of screening recommendations as well as improving access to additional bowel prep options, may reduce resistance among patients.

# THANK YOU TO THE STUDY TEAM

## **Study Authors:**

Douglas K Rex, MD, Indiana University School of Medicine

Audrey Calderwood, MD, MS, Dartmouth Hitchcock Medical Center

Daniel Halberg, PhD, Sebelo Pharmaceuticals

Chris Evans, Colon Cancer Coalition

Erin Peterson, Colon Cancer Coalition

## **Data Analysis:**

Casey Le, MPH, CHES



# THANK YOU



**COLON CANCER  
COALITION®**

[ColonCancerCoalition.org](https://ColonCancerCoalition.org)

## Erin Peterson

Sr. Director of Mission & Partnerships

[erin@coloncancercoalition.org](mailto:erin@coloncancercoalition.org)



[Facebook.com/ColonCancerCoalition](https://Facebook.com/ColonCancerCoalition)



[ColonCancerCoalition](https://ColonCancerCoalition)



[Colon Cancer Coalition](https://ColonCancerCoalition)



**Thank You**

# A system-wide approach to CRC screening and colonoscopy completion using digital health and AI

**Ashish Atreja, MD, MPH**  
"App Doctor"

President, GenServe.AI  
Former CIO and CDHO, UC  
Davis Health



# Disclosures

- **Consulting:** Astrazeneca, JnJ
- **Stocks:** Commure, Inc., Hippocratic.AI (scientific advisor)
- **Board position:**
  - Chair, NODE. Health, Association of Digital Medicine (unpaid)
  - Chair, GenServe.AI (unpaid)
- **NIH funding (active):**
  - AGA- Fecal Microbiome Transplant Registry
  - Developing and Testing a Digital Toolkit to Improve Colorectal Cancer Screening

# A bit about the shared journey!



Ashish Atreja, MD, MPH

## 5<sup>th</sup> Career Life

1. Medical School and Public Health training
2. GI fellow, Informaticist and clinical research—Cleveland Clinic
3. GI, Chief Innovation Officer-Mount Sinai  
Called as an “**App Doctor**”, Digital Health Intrapreneur
4. CIO and CDHO, UC Davis Health
5. AI Transformation at Scale- **GenServe.AI**

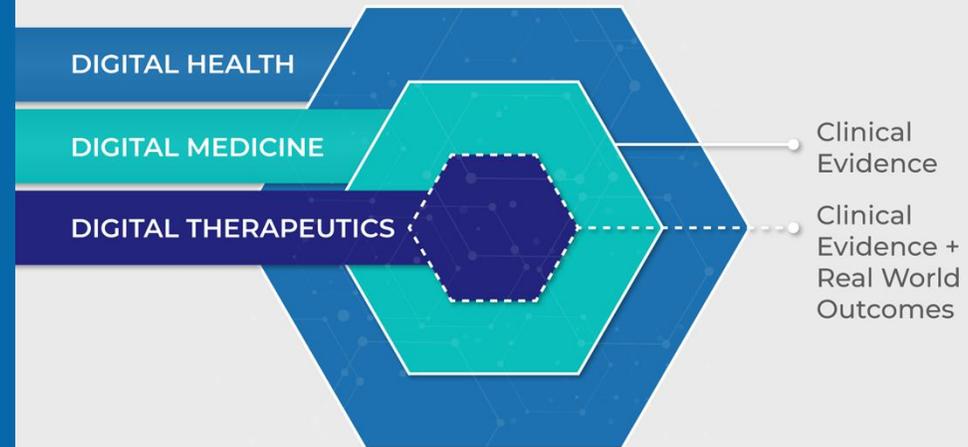
# Our Burning Platform: Safety and Productivity Paradox

Patients are asking for 24/7 on demand always on care

Clinicians are burned out

Care delivery is inefficient and margins are shrinking

## Digital Health Industry Categorization



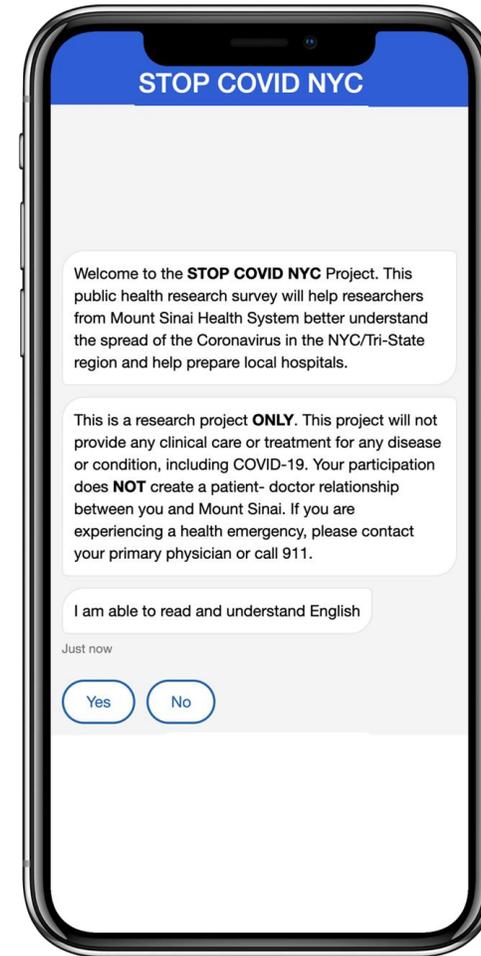
End users, clinicians, and payers should understand the differences between these varied products given their important roles in the prevention, diagnosis, treatment, and management of health and disease.

The **purpose** and **function** of a digital health product determines its categorization, risk level, and requirements for clinical evidence and regulatory oversight.



# Automating Patient Interactions: 1 Million Mount Sinai Patients outreached with BOT, 55,000 patients enrolled (100 personnel x1.5 years)

- EHR- based identification and outreach in year 2020
- 15,000 enrolled in first week, 55,000 in 4 weeks
- Bot for e-consent
- Self-enroll through text to enroll program



<https://www.mountsinai.org/about/newsroom/2020/mount-sinai-launches-covid19-app-to-track-spread-of-virus-across-new-york-city-pr>

# What if we can prescribe “apps” like we prescribe medicine

# What if we can prescribe “apps” like we prescribe medicine

  
US011348668B2

(12) **United States Patent**  
**Atreja et al.**

(30) **Patent No.:** US 11,348,668 B2  
(45) **Date of Patent:** May 31, 2022

(54) **SYSTEMS AND METHODS FOR IDENTIFYING, RANKING, AND PRESCRIBING HEALTH CARE APPLICATIONS**

(71) Applicant: **Icahn School of Medicine at Mount Sinai**, New York, NY (US)

(72) Inventors: **Ashish Atreja**, New York, NY (US); **Jason Rogers**, New York, NY (US)

(73) Assignee: **ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI**, New York, NY (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 95 days.

(21) Appl. No.: **16/078,618**

(22) PCT Filed: **Feb. 17, 2017**

(86) PCT No.: **PCT/US2017/018509**  
§ 371 (c)(1),  
(2) Date: **Aug. 21, 2018**

(87) PCT Pub. No.: **WO2017/051331**  
PCT Pub. Date: **Sep. 8, 2017**

(65) **Prior Publication Data**  
US 2019/0051388 A1 Feb. 14, 2019

**Related U.S. Application Data**

(60) Provisional application No. 62/302,145, filed on Mar. 1, 2016.

(51) **Int. Cl.**  
**G16H 10/60** (2018.01)  
**G16H 20/10** (2018.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **G16H 10/60** (2018.01); **G06F 16/951** (2019.01); **G16H 20/10** (2018.01); **G16H 40/67** (2018.01); **G16H 50/30** (2018.01); **G16H 70/00** (2018.01)

(58) **Field of Classification Search**  
CPC ..... G16H 10/60; G16H 50/30; G06F 16/951; G06F 19/324; G06Q 30/22  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

9,836,545 B2 \* 12/2017 LaVigt ..... G06Q 30/02  
10,152,761 B2 \* 12/2018 Kress ..... G06Q 10/10  
(Continued)

**FOREIGN PATENT DOCUMENTS**

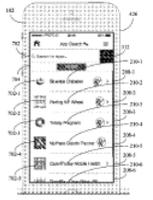
KR 10-2002-0016293 A 2/2002  
KR 10-2015-0075589 A 7/2015

**OTHER PUBLICATIONS**

Boudreau et al., Evaluating and selecting mobile health app strategies for healthcare providers and healthcare organizations, IBM: Practice Look 363-371 (Year: 2014)\*  
(Continued)

**Primary Examiner**—Evangeline Barr  
**Assistant Examiner**—Jordan L. Jackson

(57) **ABSTRACT**  
Systems and methods are provided for identifying one or more health care applications in which a search request is received from a user at a remote client device. The request comprises an alphanumeric query and filtering criteria. A plurality of applications is searched to identify applications that satisfy the filtering criteria and further match the alphanumeric query thereby identifying a set of matching applications. Each respective application in the plurality of applications is (i) for a clinical indication and (ii) includes an evidence score generated by health care providers. The search query response is formatted for display by sorting the  
(Continued)



Patent: Systems and Methods for Identifying, Ranking and Prescribing Health Care Applications

# What if we can prescribe “apps” like we prescribe medicine

  
US011348668B2

(12) **United States Patent**  
**Atreja et al.**

(30) **Patent No.:** US 11,348,668 B2  
(45) **Date of Patent:** May 31, 2022

(54) **SYSTEMS AND METHODS FOR IDENTIFYING, RANKING, AND PRESCRIBING HEALTH CARE APPLICATIONS**

(71) Applicant: **Icahn School of Medicine at Mount Sinai**, New York, NY (US)

(72) Inventors: **Ashish Atreja**, New York, NY (US); **Jason Rogers**, New York, NY (US)

(73) Assignee: **ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI**, New York, NY (US)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 95 days.

(21) Appl. No.: **16/078,618**

(22) PCT Filed: **Feb. 17, 2017**

(86) PCT No.: **PCT/US2017/018509**  
§ 371 (c)(1),  
(2) Date: **Aug. 21, 2018**

(87) PCT Pub. No.: **WO2017/051331**  
PCT Pub. Date: **Sep. 8, 2017**

(65) **Prior Publication Data**  
US 2019/0051388 A1 Feb. 14, 2019

**Related U.S. Application Data**

(60) Provisional application No. 62/302,145, filed on Mar. 1, 2016.

(51) **Int. Cl.**  
**G16H 10/60** (2018.01)  
**G16H 20/10** (2018.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **G16H 10/60** (2018.01); **G06F 16/951** (2019.01); **G16H 20/10** (2018.01); **G16H 40/67** (2018.01); **G16H 50/30** (2018.01); **G16H 70/00** (2018.01)

(58) **Field of Classification Search**  
CPC ..... **G16H 10/60**; **G16H 50/30**; **G06F 16/951**; **G06F 19/324**; **G06Q 30/22**  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

9,836,545 B2 \* 12/2017 LaVigt ..... **G06Q 30/02**  
10,152,761 B2 \* 12/2018 Kress ..... **G06Q 10/10**  
(Continued)

**FOREIGN PATENT DOCUMENTS**

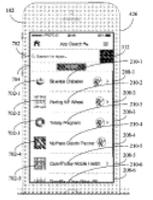
KR 10-2002-0016293 A 2/2002  
KR 10-2005-0075589 A 7/2015

**OTHER PUBLICATIONS**

Boudraou et al., Evaluating and selecting mobile health app strategies for healthcare providers and healthcare organizations, IBM: Practice Look 363-371 (Year: 2014)\*  
(Continued)

*Primary Examiner*—Evangeline Barr  
*Assistant Examiner*—Jordan L. Jackson

(57) **ABSTRACT**  
Systems and methods are provided for identifying one or more health care applications in which a search request is received from a user at a remote client device. The request comprises an alphanumeric query and filtering criteria. A plurality of applications is searched to identify applications that satisfy the filtering criteria and further match the alphanumeric query thereby identifying a set of matching applications. Each respective application in the plurality of applications is (i) for a clinical indication and (ii) includes an evidence score generated by health care providers. The search query response is formatted for display by sorting the  
(Continued)



Patent: Systems and Methods for Identifying, Ranking and Prescribing Health Care Applications

# Leakage in CRC Screening and Colonoscopy Completion

1. Percentage of patients with missed or delayed appointment (~6%, 15%)
2. Percentage of patients with poor preparation (15-25%)
3. Percentage of patients with ER after procedures (2-8%)
4. Patients not coming back at recommended intervals (30-70%)
5. Patients positive for FIT/Cologuard not scheduled colonoscopy
6. Patients ordered colonoscopy but not scheduled
7. Patients not offered any CRC surveillance testing

# Leakage in CRC Screening and Colonoscopy Completion

1. Percentage of patients with missed or delayed appointment (~6%, 15%)
2. Percentage of patients with poor preparation (15-25%)
3. Percentage of patients with ER after procedures (2-8%)
4. Patients not coming back at recommended intervals (30-70%)
5. Patients positive for FIT/Cologuard not scheduled colonoscopy
6. Patients ordered colonoscopy but not scheduled
7. Patients not offered any CRC surveillance testing

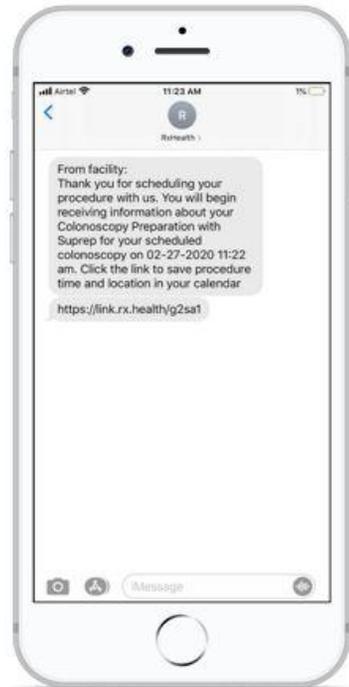
Impacts patient safety, patient outcome and health system revenue

# Current State-Example of Dense Patient Instructions

## Instructions for Patients: Split-dosing PEG Bowel Preparation

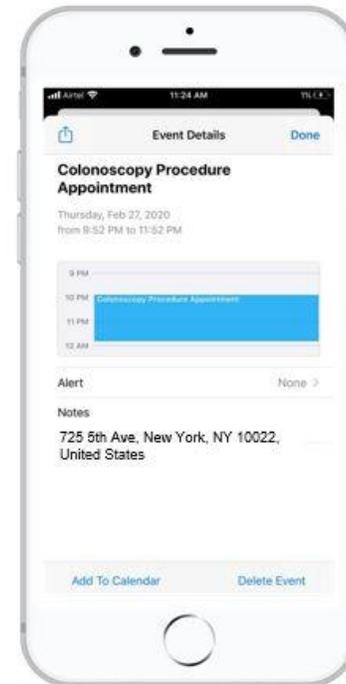
<p><b>2 weeks before colonoscopy</b></p>	<p><b>You must speak with your primary care physician or a specialist if you:</b></p> <ul style="list-style-type: none"> <li>• Are taking blood thinners or antiplatelet agents such as warfarin (Coumadin®), enoxaparin (Lovenox®), fondaparinux (Arixtra®), clopidogrel (Plavix®), prasugrel (Effient®), anagrelide (Agrylin®), cilostazol (Pletal®), pentoxifylline (Trental®), dipyridamole (Persantine®), dipyridamole with aspirin (Aggrenox®), or over-the-counter medications such as aspirin or other anti-inflammatory drugs such as Motrin® (ibuprofen), Advil® (ibuprofen), or Aleve® (naproxen)</li> <li>• Have diabetes and take insulin, you may need to have your insulin adjusted the day before and the day of the procedure; please bring your diabetes medication with you to take after the procedure, if needed</li> <li>• It is important to continue to take all other prescribed drugs</li> </ul>
<p><b>5 days before colonoscopy</b></p>	<ul style="list-style-type: none"> <li>• Do not take bulk-forming agents such as Metamucil™ or Citrucel®</li> <li>• Do not take iron-containing preparations, such as a multivitamin with iron</li> <li>• Arrange for a driver to take you home after the procedure</li> <li>• Purchase your prescription 2-5 days before the procedure. Do not mix the solution until the day before the procedure</li> </ul>
<p><b>The day before colonoscopy</b></p>	<ul style="list-style-type: none"> <li>• Instructions for preparing the solution are provided on the medication bottle. The solution should be mixed no sooner than 48 hours prior to its usage by adding tap water to the gallon level mark and then shaking or stirring the solution until it is well mixed. Do not add sugar or flavorings containing sugar to the solution. Refrigerating the solution, adding lemon juice or Crystal Light, and rapidly drinking 8-oz portions (instead of sipping) help make the solution more palatable</li> <li>• Do not eat solid foods for 24 hours before the colonoscopy appointment</li> <li>• Do not consume red-colored drinks, Jell-O®, or popsicles</li> <li>• It is essential to drink at least 8 oz of clear liquids (1 cup) every hour while awake to avoid dehydration. Clear liquids include apple or white grape juice, broth, coffee or tea (without milk or creamer), clear carbonated beverages such as ginger ale or lemon–lime soda, Gatorade® or other sports drinks (not red), Kool-Aid® or other flavored drinks (not red), plain Jell-O or other gelatins (not red), popsicles (not red), and water</li> <li>• At 6 PM the evening before the procedure, begin drinking 8 oz (240 mL, 1 cup) of the solution every 15 to 20 minutes until half of the solution is ingested. Continue drinking clear liquids until you go to bed</li> </ul>
<p><b>The day of colonoscopy</b></p>	<ul style="list-style-type: none"> <li>• If you have an afternoon appointment, begin drinking the remaining solution at 6 AM on the morning of the procedure, about 8 ounces every 10 minutes until finished, at approximately 8 AM. If your procedure is scheduled in the early morning, you will need to get up in the night to finish the second half of the solution at least 2 or 3 hours before the colonoscopy appointment or complete it all on the evening before the procedure</li> <li>• You should drink at least 8 oz of clear liquids every hour (no solids, alcohol, or red-colored drinks) until 2 hours before the colonoscopy appointment. You may take your morning medications</li> <li>• After the colonoscopy, you are encouraged to drink fluids to prevent dehydration. You can eat your usual diet and can resume most of your medications (unless instructed differently by your doctor) the same day</li> </ul>

## Activation

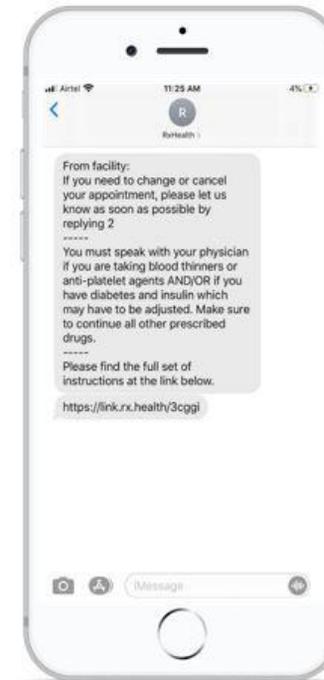


Message sent immediately after the prescription is made with appointment confirmation and calendar link

## Appointment in Smartphone

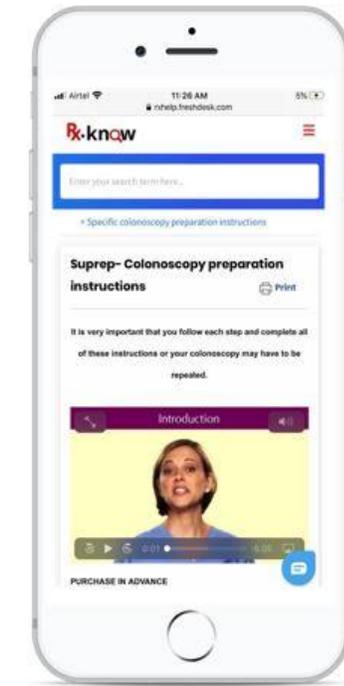


## AGA-Prep Instructions



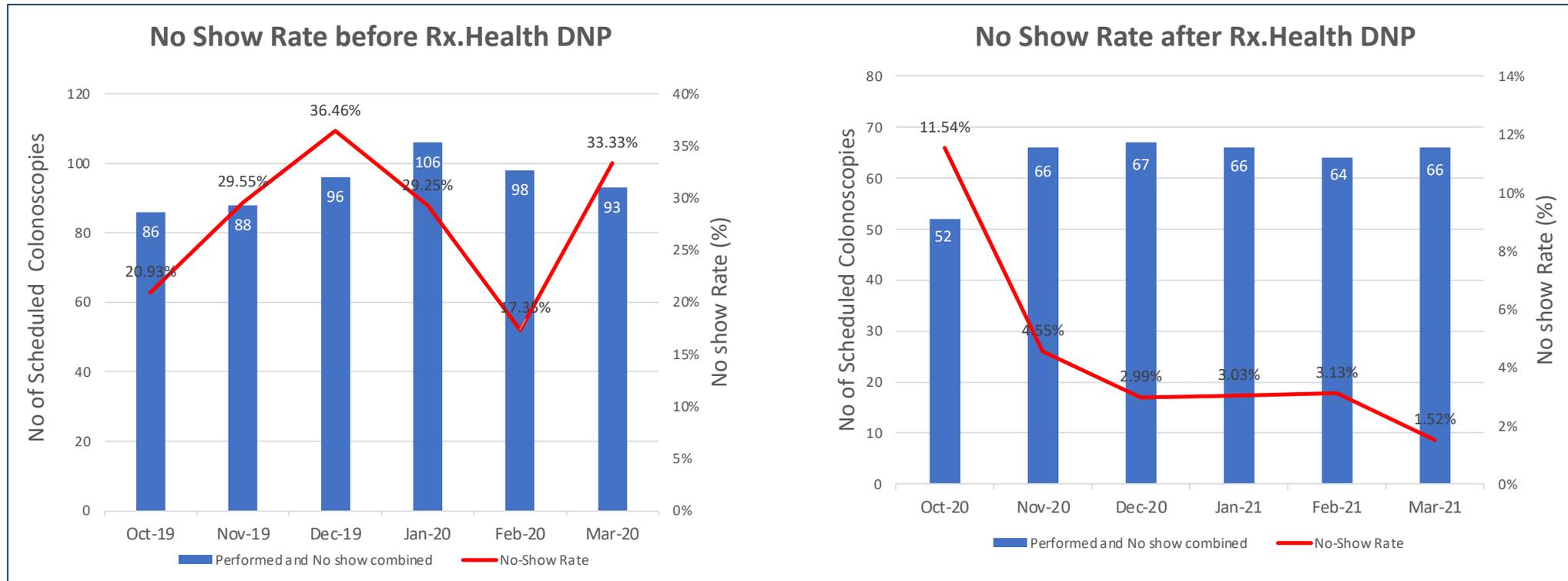
Message sent 1 day later with preparation instructions for colonoscopy procedure

## Microlearning videos



Message with video link to learn how to prepare for colonoscopy procedure

# Pre-Post comparison of No-Show Rates at NYC H+H



Avg No-show rate before AGA Rx.Health (Oct 19-March 20): **27.81%**

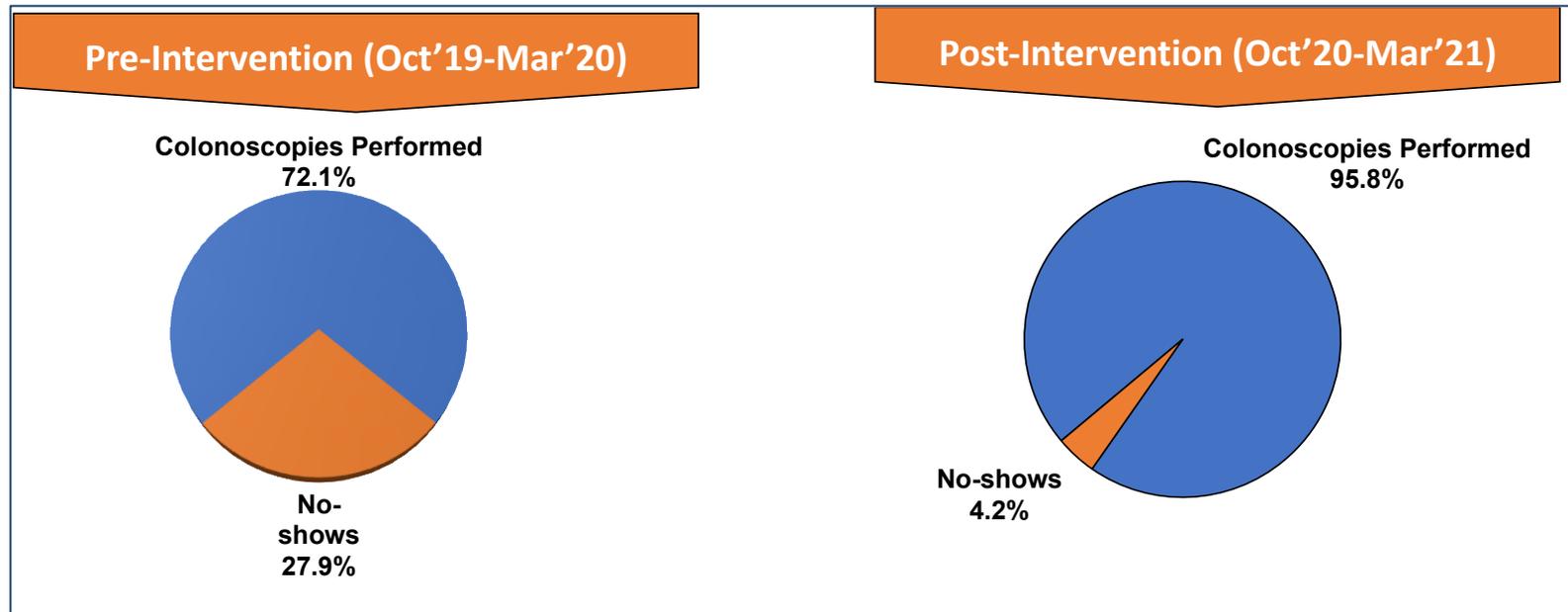
Avg No-show rate after AGA Rx.Health (Oct 20- March 21) : **4.46%**

**% Reduction in no-shows: 83.9%**

## Pre-Post comparison of No-Show Rates at NYC H+H

Avg No-show rate before AGA Rx.Health (Oct 19-March 20): **27.81%**  
Avg No-show rate after AGA Rx.Health (Oct 20- March 21) : **4.46%**  
**% Reduction in no-shows: 83.9%**

## Pre-Post comparison of No-Show Rates at NYC H+H



Avg No-show rate before AGA Rx.Health (Oct 19-March 20): **27.81%**

Avg No-show rate after AGA Rx.Health (Oct 20- March 21) : **4.46%**

**% Reduction in no-shows: 83.9%**

# UCNOW- Cologuard program

Today 9:32 AM

This is UC Davis Health, following up with TEST-Patient\_01/04 Viramontes04 about a 3 question survey regarding an order your doctor has placed.

<https://links.staging.digitaldavis.uc-davis.edu/FDHx>

Text STOP to opt-out. Msg&Data rates may apply.

Delivered

message



UC DAVIS  
HEALTH

Hello, UC Davis Health would like to follow up with you regarding a recent order placed by your doctor.

Can you please verify your birth date?

Date of Birth

mm / dd

CONFIRM

UC DAVIS  
HEALTH

You have previously been ordered a colonoscopy by your doctor to screen for colorectal cancer, but due to lengthy wait times, we are offering an easy alternative.

Cologuard is an FDA approved stool-based test that can detect colorectal polyps and early-stage cancer like colonoscopy can.

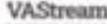


Would you be willing to complete 3 questions to determine your eligibility for this screening method?

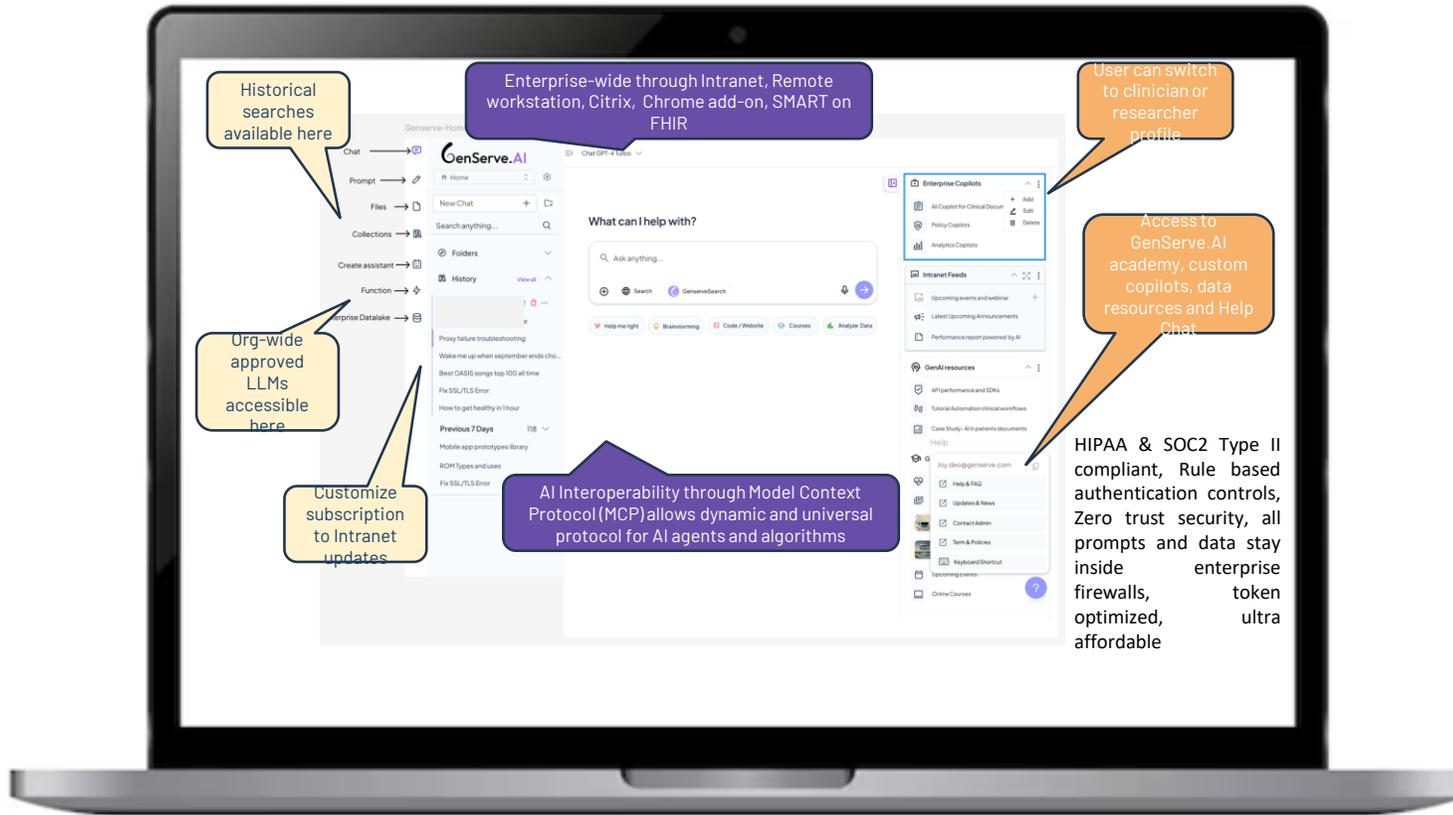


# AI development and validation resources in partnership with NSF Applied AI Center



 <p><b>Raja Gotumukkala, Ph.D.</b></p>  <p><b>UNIVERSITY OF LOUISIANA</b></p> <p>COMPUTING &amp; INFORMATICS</p>  <p>HEALTH SCIENCES</p>  <p>SYSTEMS ENGINEERING</p>  <p>UNIVERSITY RESEARCH CENTERS &amp; INFRASTRUCTURE</p>   	 <p><b>Aron Culotta, Ph.D.</b></p>  <p><b>Tulane University</b></p> <p>COMPUTER SCIENCE</p>  <p>SCHOOL OF MEDICINE</p>  <p>UNIVERSITY RESEARCH CENTERS</p> <ul style="list-style-type: none"> <li>Center for Community-Engaged Artificial Intelligence</li> <li>Institute of Integrated Data &amp; Health Science</li> <li>Health Systems Analytics Research Center</li> </ul>  <p>Tulane University Center for Community-Engaged Artificial Intelligence</p>	 <p><b>Joel Harley, Ph.D.</b></p>  <p><b>UF</b></p> <p>COLLEGE OF MEDICINE</p>  <p>COLLEGE OF ENGINEERING</p>  <p>HEALTH DATA PARTNERS &amp; AI INFRASTRUCTURE</p> <ul style="list-style-type: none"> <li>100+ AI Faculty</li> <li>HyperGator AI 140 DGX A100 &amp; DGX B200 SU</li> <li>The AI<sup>2</sup> Center</li> <li>Nelms Institute for the Connected World</li> </ul>  <p>UF Artificial Intelligence &amp; Informatics Research Institute UNIVERSITY OF FLORIDA</p>	 <p><b>Ghassan AlRegib, Ph.D.</b></p>  <p><b>Georgia Tech</b></p> <p>COLLEGE OF ENGINEERING/COMPUTING</p>  <p>HEALTH DATA PARTNERS &amp; AI INFRASTRUCTURE</p> <ul style="list-style-type: none"> <li>AI Makerspace</li> <li>\$16M+ Cluster for Students</li> <li>AI Discovery Nexus</li> <li>\$20M NSF for Science Discovery Compute Cluster</li> </ul>   <p>Georgia Tech - Parker H. Petit Institute for Bio-engineering and Bioscience</p>
--	--	---	--

# 1. Making AI Visible and Actionable to Employees through “human-in-the loop” workflows for CRC screening



**GenServe**  
AI ASSISTANT

Give me 3 bullet item patient education for a patient who just received cardiac stent in Spanish with reference

- Mantenga una dieta saludable y baja en grasas para ayudar a prevenir la formación de nuevos coágulos alrededor del stent.
- Tome sus medicamentos exactamente como se lo indicó su médico, especialmente los anticoagulantes o antiplaquetarios para evitar obstrucción del stent.
- Evite actividades físicas intensas hasta que su médico le autorice y asista a todas sus citas de seguimiento para monitorear la función del stent.

Referencia: Información general sobre cuidados post-implantación de stents cardíacos, American Heart Association (conocimiento general, sin referencia específica en contexto).

Type your message here...

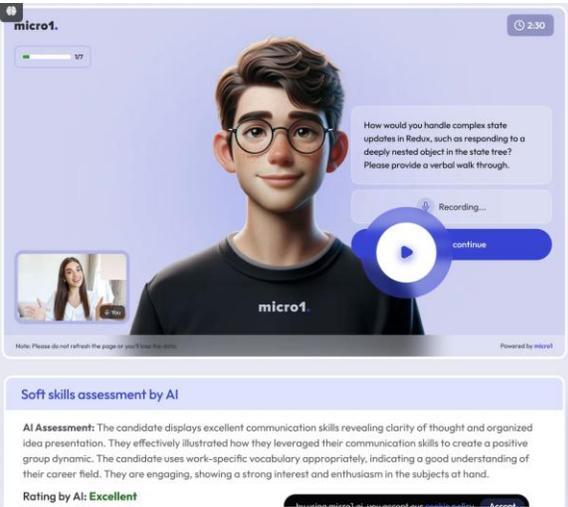
# 2. System-wide Approach towards *CRC Screening with automation*



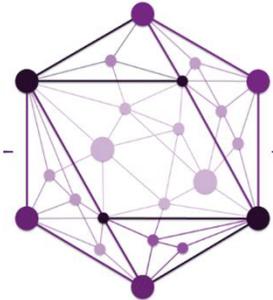
**1. Enable human transformation agents**

**2. Advance to Clinical Agentic Modules with Increased Autonomy**

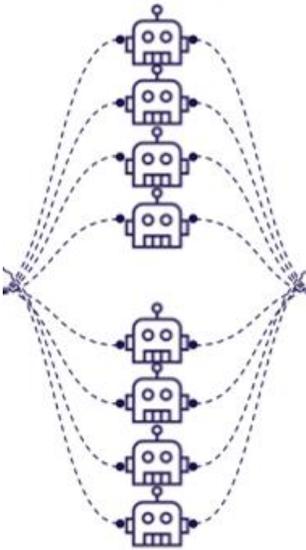
**3. Deliver Enterprise-wide Impact from Top use-cases**



**NeXXT**  
Clinical Graph Engine



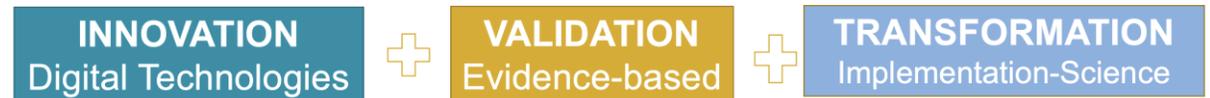
**AGENTS**



- General employee productivity and HIPAA protection
- Internal referral for surgeries, procedures and imaging**
- Decrease revenue leak from contact center and discharges
- Closure of care gaps and value based care

# Humans are the ultimate Transformation Agents

Creating the New Science, Together



**Evidence-Based Digital  
Transformation**

[Atreja@gmail.com](mailto:Atreja@gmail.com)

[Partner@genserve.AI](mailto:Partner@genserve.AI)

How can we collaborate with ACS NCCRT and Partners to bring AI Transformation for CRC Screening?





**Thank You**



# Questions