

# IMPROVING UNDERSTANDING AND ADDRESSING CONSTIPATION DILEMMAS WITH 'AN ANIMATED PATIENT'S GUIDE' FOR OPTIMAL HEALTH OUTCOMES

Satish Munigala MD, MPH<sup>1</sup>, Jeanetta W. Frye MD<sup>2</sup>, Ceciel T. Rooker<sup>3</sup>, Emily Taylor<sup>3</sup>, Stephanie Searle<sup>4</sup>, and Satish S. C. Rao MD, PhD, FRCP<sup>5</sup>

<sup>1</sup>Saint Louis University Center for Outcomes Research, St. Louis, Missouri, United States; <sup>2</sup>University of Virginia Health System, Charlottesville, Virginia, United States;

<sup>3</sup>International Foundation for Gastrointestinal Disorders, Mount Pleasant, South Carolina, United States; <sup>4</sup>Mechanisms in Medicine, Toronto, Canada;

<sup>5</sup>Medical College of Georgia, Augusta University, Augusta, Georgia, United States

## BACKGROUND

- About 4 million Americans experience frequent constipation, which accounts for significant physical disability, morbidity, and cost.
- Barriers to health literacy, poor understanding of constipation, and paucity of evidence-based online education are some of the challenges lay persons with constipation face.
- The purpose of this study was to assess patient understanding with *An Animated Patient's Guide to Constipation* as an effective patient education resource, based on visual formats of learning to address patient needs and concerns, clarify complex digestive disorders, reduce health literacy barriers, and inform patients for shared decisions for improved outcomes with their health providers.

## METHODS

### Study Design and Participation

- Providing visual formats for patient education (animations, videos, slide shows) we monitored *An Animated Patient's Guide to Constipation* website and YouTube audience data from December 2019 to January 2022.
- *An Animated Patient's Guide to Constipation* [www.YouAndConstipation.org](http://www.YouAndConstipation.org) provided comprehensive educational content for learning activities with additional hosting of resources on YouTube, with complementary social media promotion.

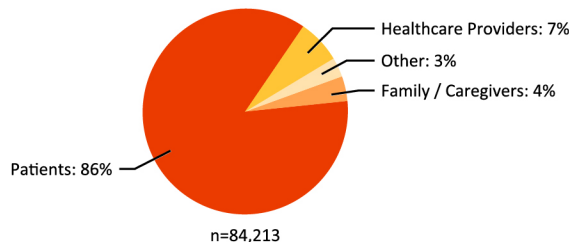
### Methodology

- We evaluated audience reach, demographics, geographics, newly adopted interventions reported by patients, families and caregivers who indicated learning new information, implementing new behaviors, and who provided feedback on commitment to implement change.
- We determined metrics for top views according to media type (animation, expert video, patient video, slide show) and top retention videos on the website and on YouTube. We also monitored intent to discuss information acquired by patients with their health provider.
- We correlated learner feedback to determine efficacy of our educational resource to achieve improved health outcomes and opportunities to address future learning needs and knowledge gaps.

## RESULTS

- 226,152 views from 135,828 unique visitors (62% from the U.S., n=84,213).

Figure 1 – U.S. Visitor Demographics



- Most popular topics viewed among the animations was "Understanding IBS with constipation" (n=34,519); most common expert video viewed was "What is dyssynergic defecation and what causes it?" (n=49,020).

**You and Constipation**  
An Animated Patient's Guide to Constipation

Home Learning Modules Patient Stories Resources Authors About Sign In Donate

**WHAT IS IBS WITH CONSTIPATION?**  
Learn about irritable bowel syndrome with constipation (IBS-C) and its symptoms, causes, diagnosis and treatment.

**Learning Modules**

- Irritable Bowel Syndrome with Constipation (IBS-C) [LEARN MORE]
- Chronic Constipation (CC) [LEARN MORE]
- Opioid-Induced Constipation (OIC) [LEARN MORE]
- Dyssynergic Defecation (DD) [LEARN MORE]

**Visual Learning Resources**

- Animations [WATCH NOW]
- Slide Shows [VIEW SLIDES]
- Expert Videos [WATCH NOW]
- Patient Videos [WATCH NOW]

**Learner Response Interventions**

- Register [REGISTER NOW]
- What Do You Know About Constipation? [TAKE QUIZ NOW]
- Take Our Survey [TAKE SURVEY NOW]
- Animated Patient Community [JOIN US]

**Animation: Understanding IBS with Constipation (IBS-C)**

**Animation: Managing and Treating IBS with Constipation (IBS-C)**

**Animation: Diagnosing Chronic Constipation (CC)**

## RESULTS

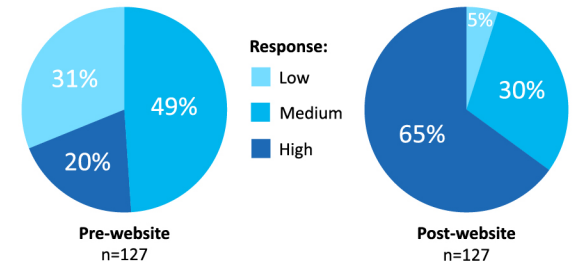
- Table 1 indicates respondents reporting improved outcomes.

Table 1 – Patients Reporting Improved Outcomes

Respondents Reporting Improved Outcomes	Total Responses (N)	Commitment to Change N (%)
Will use new information to better self-manage their constipation	495	460 (92.9)
Will discuss information learned with their doctor	510	477 (93.5)
Will discuss treatment options with their doctor	360	328 (91.1)
Will discuss causes of constipation with their doctor	335	291 (86.9)

- Among the participants who completed the online feedback survey, significant improvement in the knowledge level was noted after completing the online modules. (Figure 2).

Figure 2 – Patients Reporting Knowledge Change



## CONCLUSION

- Utilizing a visual format of learning, *An Animated Patient's Guide to Constipation* education initiative had a wide U.S and global reach. Participants who completed the online feedback survey reported improved knowledge gains and commitments to change.
- Multimedia education, utilizing visual 'animated' learning formats tailored to patients needs has potential to improve patient understanding, address unmet needs, inform, and promote shared decision-making.
- Ongoing monitoring and further analysis of this educational resource for constipation patients will be necessary to understand how tailored education provided via this format of learning impacts and benefits patient health outcomes.

**Animation: Managing and Treating Chronic Constipation (CC)**

**Animation: Understanding Opioid-Induced Constipation (OIC)**

**Animation: Managing and Treating Opioid-Induced Constipation (OIC)**