



AI-Driven Efficiency and Patient Engagement in Express Colonoscopy Pre-Screening

A Clinical Case Study from Salem Gastroenterology Consultants Using the LEO AI Platform

Lit. No. LG-2025-001 | 942025

Sep 2025

Abstract

In June 2025, **Salem Gastroenterology Consultants (Salem Gastro)** deployed the LEO AI Screening and Triage platform to optimize pre-procedure assessments for patients requiring a screening colonoscopy. LEO AI replaced manual staff phone interviews, engaging patients directly via secure conversational AI.

Over ten weeks, LEO AI screened **402 patients**, with **379 (94.27%) successfully** completing their pre-colonoscopy assessments. The average screening time was reduced to **11 minutes and 34 seconds**, compared to traditional staff-led calls of **30-40 minutes**.

Additionally, **252 staff hours** were saved during this period. Notably, **17.67% of patients engaged** the platform after hours or on weekends, increasing accessibility, and improving patient convenience.

This case study demonstrates that AI-powered screening can significantly improve patient engagement, clinical workflow efficiency, and operational outcomes in high-volume gastroenterology practices.





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Introduction

Salem Gastroenterology Consultants is a leading digestive health practice in Oregon, specializing in advanced endoscopic procedures and gastrointestinal care. Their services include diagnostic and therapeutic colonoscopy, esophageal testing, liver disease management, and colorectal cancer screening initiatives.



Like many GI practices, Salem Gastro faced operational bottlenecks related to pre-procedure assessments:

- Long lists of patients awaiting a screening colonoscopy
- Low patient response rates to staff phone calls
- Excessive staff time spent collecting repetitive medical history
- Growing demand for weekend and after-hours patient engagement

To address these challenges, Salem Gastro partnered with Lyons Global to implement the LEO AI Screening and Triage platform, a conversational AI system designed to capture comprehensive patient histories and generate structured clinical summaries without human staff intervention.

Results

Patient Engagement



- Unique users who started the screening: **402**
- Completed screenings: **379 (94.27% completion rate)**

Efficiency Gains



- Average screening length: **11 minutes 34 seconds**
- Traditional calls: **30-40 minutes**
- Time reduction: **approximately 22–32 minutes per patient**
- Total staff time saved in three months: **252 hours**
- Labor cost savings calculated separately by the practice



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After-Hours Utilization



- Patients screened before 8 AM/after 5 PM: **67**
- Patients screened on weekends: **23**

This demonstrated that LEO AI facilitated patient engagement during periods when the clinic was traditionally closed, improving accessibility for patients with diverse schedules.

Patient Satisfaction



- **80.7%** of patients recommended LEO AI
- **86.7%** patient satisfaction rate
- Common patient comment:

"This was real nice. I give this a 10 Star." (F/ 68 years old)

"LEO language was easy to understand." (M/ 64 years old)

Device Usage



- Mobile users: **85.9%**
- Desktop users: **13.4%**
- Tablet users: **0.7%**
- Most patients accessed LEO AI via **iOS** or **Android** smartphones.

Age Range



- 18 – 44 years old: **4.5%**
- 45 – 49 years old: **34%**
- 50 – 59 years old: **33.2%**
- 60 -69 years old: **22%**
- 70 – 75 years old: **6.3%**



Discussion

LEO AI transformed Salem Gastro's colonoscopy pre-screening from a labor-intensive manual process into a rapid, digital solution. Key clinical and operational benefits included:

- ✓ Reduced time burden on staff
- ✓ Increased patient completion rates
- ✓ After-hours patient engagement
- ✓ High patient satisfaction and mobile usability
- ✓ Operational efficiency gains in clinical workflows

The results demonstrate a scalable model for other gastroenterology clinics that want to improve operational efficiency and patient-centered care via AI-driven solutions.



Conclusion

LEO AI significantly improved operational efficiency and patient engagement during the pilot implementation at Salem Gastro. The platform achieved high patient completion rates, substantial time savings for staff, and enabled screening access outside normal business hours.

Salem Gastro's experience offers a compelling example for adopting AI-driven screening tools across GI practices and other procedural specialties seeking to enhance workflow efficiency and patient convenience.



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Strategic Value for GI Practices:

- Faster pre-procedure screening
- Increased capacity without additional staffing
- Enhances patient trust and digital engagement

Acknowledgement:

- Salem Gastroenterology Consultants' Clinical Staff
- Lyons Global Team
- LEO AI Product Development Team

Authors:

- Salem Gastroenterology Consultants, Salem, OR, USA
- Lyons Global, Granite Bay, CA, USA

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