this study was conducted with an objective to determine an association of duration of hospital stay of patients diagnosed with AGE with their chief complaints, 'on admission' vital signs and lab values.
Methods: It was a cross-sectional study conducted with a calculated sample size of 87 based on the prevalence of 6%. The participants included in the study were adult patients (>18 years) with diagnosis of AGE. Patients were grouped according to their length of hospital stay: Group A (1-2 days, n = 45), Group B (3-4 days, n = 45), and Group C (5 or more days, n = 15). Data related to their sociodemographic factors, chief complaints, 'on admission' vital signs and lab values were collected. Later, chi-square tests were performed to determine the association of duration of hospital stay of patients with their chief complaints, 'on admission' vital signs and lab values.
Results: The study reported a total of 105 patients with diagnosis of AGE, out of which majority of them were females (66; 63%), falling in the age group of above >60 years (33; 31.4%), residing in urban areas (64; 61%), and Hindu by religion (81; 77.1%). Most patients were having loose stools for the last 1-3 days (68; 64.8%), afebrile (42; 40%), with no abdominal pain (66; 62.8%), no vomiting (65; 62%). On the basis of statistical analysis, longer duration of hospital stay was significantly associated with male gender ($P < 0.05$) and age group more than 60 years ($P < 0.05$). Considering chief complaints, fever for ≥3 days ($P < 0.01$), vomiting for ≥3 days ($P < 0.05$), and loose stools ≥3 days ($P < 0.05$) were statistically significantly associated with longer hospital stay (≥3 days). Considering 'on admission' vital signs and lab values, patients with hypotension ($P < 0.01$), hyponatremia ($P < 0.01$), and hypokalemia ($P < 0.01$) were found to be statistically significantly associated with longer duration of hospital stay.
Conclusion: This study demonstrates the importance of assessment of chief complaints, 'on admission' vitals signs and lab values in patients diagnosed with AGE during their emergency department arrival which can assist healthcare workers to determine the severity and predict the duration of hospital stay for the illness.

S2140 Presidential Poster Award

Effectiveness of Colonoscopic and Capsule Fecal Microbiota Transplantation for Prevention of Recurrent *Clostridioides difficile* Infection: A Prospective Cohort Study

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Introduction: Fecal microbiota transplant (FMT) is effective for preventing recurrent *Clostridioides difficile* infection (rCDI). Previous comparisons between oral and colonoscopic FMT have been limited by small sample sizes. In an earlier version of our cohort (n = 269), no significant difference in efficacy was observed. This study reassessed outcomes in a larger cohort.
Methods: We analyzed a prospective cohort of patients with recurrent CDI treated with FMT between July 1, 2019 and November 29, 2023 across 6 centers. Patients received liquid or oral capsule FMT formulations at the discretion of treating physicians. Follow-up occurred at 1, 2, 6, and 12 months. Only first CDI relapses were counted as recurrences. Analyses used Fisher exact tests (Rv4.4.3).
Results: A total of 644 individuals received FMT (capsule = 421, colonoscopy = 233). The crude 1-month CDI recurrence rate was higher with capsule compared to colonoscopy FMT (18% vs 7.4%, $P = 0.001$), with no significant differences at later time points. Capsule recipients were older (median age 70 vs 59, $P < 0.001$), while colonoscopic recipients were more often immunocompromised (27% vs 15%, $P < 0.001$); irritable bowel disease status and non-CDI antibiotic use post-FMT were similar across groups. Age ≥65, ≥2 past CDI recurrences, prior CDI hospitalizations, and dialysis were independent predictors of CDI recurrence. After adjusting for confounders, capsule FMT was associated with increased rCDI at 1-month (odds ratio [OR]: 2.83, 95% confidence interval [CI]: 1.45–5.98, $P = 0.004$). Among patients ≥65 years, capsule FMT was associated with a 2.7-fold increased rCDI risk compared to colonoscopy (95% CI: 1.2–6.4, $P = 0.02$), whereas no significant difference was observed in patients <65 years (OR: 1.9, 95% CI: 0.7–5.3, $P = 0.2$).
Conclusion: Capsule FMT was less effective than colonoscopic FMT at preventing rCDI at 1-month, particularly in those aged ≥65. Although recurrence rates equalized beyond 1-month, most relapses occurred within this initial period. Age differences raise the possibility of residual confounding, though differential microbial engraftment by administration route may also contribute; notably, lack of bowel prep in capsule recipients may impair engraftment. Recurrences beyond 30 days may be more influenced by antibiotic exposure than FMT route. In conclusion, FMT efficacy may vary by route, with capsule FMT potentially less effective in older adults.

S2141

Antibiotic Exposure Is a Short- and Long-Term Risk for Recurrent *Clostridioides difficile* Infection Following Fecal Microbiota Transplantation

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Introduction: Fecal microbiota transplant (FMT) is an effective treatment for recurrent *Clostridioides difficile* infection (rCDI) after failure of standard therapies. Antibiotic exposure within 2-months post-FMT is a known risk factor for early recurrence. However, the timeline of antibiotics administration later in the post-FMT period and longer-term recurrence remains poorly studied. This study evaluates the association between antibiotic exposure at various intervals within 12 months post-FMT and rCDI.
Methods: Secondary analysis of a prospective cohort study included patients with history of rCDI treated with FMT between July 1, 2019 and November 29, 2023 across 6 centers. Follow-up occurred at 1, 2, 6, and 12 months, recording non-CDI antibiotic use and rCDI at each interval; exact dates were unavailable. The cohort was analyzed by follow-up time with individuals who had complete data for that interval. Following CDI recurrence, a participant was excluded from future timepoints. CDI recurrence was defined as laboratory positive testing (per local practice) and resumption of antibiotics for CDI.
Results: Of 701 patients in the cohort, 615 met the inclusion criteria, though not all individuals had follow-up at each timepoint. Most patients had 3 or more rCDI episodes prior to FMT. Non-CDI antibiotic administration was associated with CDI recurrence at 1-, 2-, and 12-months, with a trend towards significance at 6-months. Overall, the odds of developing CDI were 3-5 times higher following antibiotic exposure compared to no additional antibiotic exposure. After 1 month, the risk of a spontaneous CDI recurrence (i.e., no additional antibiotic exposures) was <5%. Between 6 and 12 months, all CDI recurrences occurred following 1 or more courses of non-CDI antibiotics.
Conclusion: Antibiotic use post-FMT is a key driver of CDI recurrence. Prior studies have identified non-CDI antibiotic exposure as a risk factor for early recurrence (within 2 months). Our cohort replicates this finding, and also demonstrates that antibiotic exposure continues to be a risk for CDI recurrence for at least 1-year post FMT. Recall bias may be a limitation, as patients with recurrence may more readily remember antibiotic use than those without. Overall, our findings support caution in prescribing non-CDI antibiotics for at least a year following FMT for CDI.

S2142

Explosive Rise in Alpha-Gal Syndrome: A Real-World Analysis

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Introduction: Alpha-gal syndrome (AGS) is an IgE-mediated allergy to galactose-α-1,3-galactose, a carbohydrate found in mammalian meat, with sensitization linked to tick bites—particularly the Lone Star tick in the U.S. AGS is unique due to delayed-onset symptoms and frequent gastrointestinal (GI) manifestations such as abdominal pain, diarrhea, and nausea. Despite rising recognition, population-level demographic and clinical features remain poorly characterized.
Methods: This retrospective observational study used the TriNetX US Collaborative Network to identify adults with alpha-gal specific IgE ≥0.1 kU/L from 2010 to 2025. The study was Institutional Review Board-exempt. Demographics, diagnosis codes, and medication usage prior to or on the date of testing were extracted. Geographic distribution was based on the location of the healthcare organization headquarters. Incidence proportion was defined as the number of patients newly meeting the event definition (positive IgE) in each 2-year window (numerator), divided by patients whose records overlapped the window, had no prior alpha-gal sensitization, and met cohort criteria (denominator). Incidence rates (cases/100 patient-years) were then calculated by dividing incidence proportion by the window duration and multiplying by 100.
Results: Among 3,828 patients tested for alpha-gal IgE, 749 (23%) were positive. Median age was 63 years (interquartile range [IQR] 52–72); 48% were women, 78% White. Most patients were in the Northeast (69%) or South (23%). Median body mass index was 26 (IQR 23–29). Common comorbidities included joint disorders (76%), hyperlipidemia (60%), food allergy (59%), vitamin D deficiency (39%), asthma (27%), and Lyme disease (17%). Frequent medications: albuterol (30%), cetirizine (29%), diphenhydramine (21%), and pantoprazole (22%). Incidence proportion rose from 1.8% (2013–2014) to 14.2% (2019–2020), 38% (2021–2022), and 100% (2023–2024). Corresponding incidence rates increased from 0.95 (2013-2014) to 94.55 cases/100 PY (2023-2024).
Conclusion: This is the largest real-world AGS cohort to date, showing regional clustering and characteristic comorbidity patterns. The 100-fold rise in incidence rates among those who tested positive from 2013 to 2024 reflects increased clinical recognition and testing. AGS should be considered in patients with unexplained abdominal pain or diarrhea, especially in endemic areas. Awareness among gastroenterologists is essential for timely diagnosis and management.

S2143

A Nationwide Analysis of Low-Income Patients Hospitalization Outcomes in *C. difficile* Infection

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Introduction: *Clostridioides difficile* infection (CDI) remains a significant cause of morbidity and healthcare utilization in the U.S. Socioeconomic status is a known determinant of health outcomes, yet the impact of low income on hospitalization outcomes in CDI has not been well characterized on a national scale. This study aims to evaluate differences in inpatient outcomes, including mortality, length of stay, and total hospital charges, among low-income patients hospitalized with CDI using a large, nationally representative database.
Methods: Data were extracted from the National Inpatient Sample (NIS) Database for the years 2015 to 2022. The NIS searched for hospitalizations of adult patients with low income (below $50,000) with documented CDI using the *International Classification of Diseases Tenth Revision* codes. Multivariate logistic was used to adjust for confounders. The primary outcome was inpatient mortality. SPSS software was used for statistical analysis.
Results: This study included 402,061 with CDI, of which 107,195 (27.0%) patients with low income at the time of their hospitalization. The inpatient mortality analysis from the dataset reveals that 6,968 patients with low income and CDI died during hospitalization, accounting for approximately 30% of all inpatient deaths (24,068 total deaths). Multivariate regression showed that patients with low income had higher inpatient mortality (odds ratio [OR] 1.407, confidence interval [CI] 1.369-1.419, $P < 0.001$). Secondary analysis, showed low income patients had higher odds of having cardiogenic shock (OR 1.407, CI 1.380-1.435, $P < 0.001$), vasopressor use (OR 1.342, CI 1.327-1.358, $P < 0.001$), anemia (OR 1.379, CI 1.376-1.383, $P < 0.001$), and acute kidney failure (AKI) (OR 1.375, CI 1.370-1.379, $P < 0.001$), Metabolic dysfunction-associated steatotic liver disease (MASLD) (OR 1.366, CI 1.348-1.383, $P < 0.001$), and diabetes (OR 1.427, CI 1.401-1.454, $P < 0.001$).
Conclusion: This demonstrates low-income patients hospitalized with CDI face significantly worse clinical outcomes compared to higher-income counterparts. They experienced higher inpatient mortality and increased odds of complications including cardiogenic shock, vasopressor use, anemia, and AKI. Additionally, comorbid conditions such as MASLD and diabetes were more prevalent. These findings highlight the disproportionate burden of CDI on socioeconomically disadvantaged patients and need for targeted public health interventions, improved access to care, and enhanced inpatient management strategies in this vulnerable group.