the likelihood of testing that did not differ significantly between specialties included patient history of travel to a high-risk area (75% Peds, 71% FP, 72% GIM), immunocompromised patient (Peds 67%, FP 60%, GIM 69%), and clinical suspicion of a pathogen that can be treated with antibiotics or antiparasitics (Peds 63%, FP 56%, GIM 65%). Factors with significant differences between specialties that were most often reported as greatly increasing likelihood of testing included presence of blood in stool (Peds 76%, FP 58%, GIM 48%, $P < 0.0001$), history of recent antibiotic use (Peds 31%, FP 66%, GIM 72%, $P < 0.0001$), history of recent hospitalization (Peds 29%, FP 61%, GIM 64%, $P < 0.0001$), consideration of inpatient admission (Peds 36%, FP 57%, GIM 56%, $P < 0.0001$), and fever ≥38.5 C (Peds 13%, FP 27%, GIM 40%, $P < 0.0001$). Factors most often reported as greatly decreasing the likelihood of testing included presence of vomiting without diarrhea (Peds 49%, FP 43%, GIM 50%) and presence of vomiting and diarrhea together (Peds 12%, FP 7%, GIM 9%).

Conclusion. Physicians rely on a variety of factors when considering diagnostic testing for stool pathogens in AGE, with recent travel, caring for an immunocompromised patient, and antibiotic/antiparasitic treatment decisions often reported as increasing the likelihood of testing. Consideration of the clinical presentation and most common AGE pathogens by age group may be driving some of the differences between specialties.

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1110. A multicenter Evaluation of Outcomes Associated With Oral Vancomycin Dose in Patients With *Clostridium difficile* Infection

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Background. *Clostridium difficile* infection (CDI) is a significant cause of morbidity and mortality. IDSA guidelines recommend oral vancomycin (VAN) for the treatment of CDI, although doses used in practice vary substantially. The purpose of this study was to determine differences in outcomes between patients treated with high dose (HD; ≥250 mg four times daily [QID]) vs. standard dose (SD; 125 mg QID) VAN for CDI.

Methods. This multicenter study evaluated patients at two hospitals in Albany, NY diagnosed with CDI and treated with oral VAN between January 2013 and August 2017. Hospitalized patients were included if: age ≥18 years, positive *C. difficile* toxin polymerase chain reaction (PCR), symptomatic infection (e.g., new onset or increased frequency of loose stools), and received ≥48 hours of VAN QID. Patients were excluded if: received ≥48 hours of metronidazole prior to VAN initiation, VAN per rectum, required surgical intervention ≤48 hours from PCR, had a history of fecal microbiota transplant, received ≥1 dose of fidaxomicin or tigecycline prior to or within 48 hours from PCR, or died ≤48 hours from PCR. The primary outcome was 90-day CDI recurrence; secondary outcomes included 30-day all-cause mortality and 90-day readmission. Variables with a *P*-value <0.2 in univariate analysis were evaluated in multivariate (MV) analyses.

Results. Four hundred fifty-eight patients were included (site 1: 270; site 2: 188). Two hundred twenty-four patients received SD VAN (48.9%); 234 received HD VAN [250 mg QID: 199 (43.5%); 500 mg QID: 35 (7.6%)]. Baseline demographics were similar between groups. Patients treated with HD were more likely to present with colitis (19.2 vs. 29.5%, $P = 0.01$) and have higher infection severity based on IDSA ($P < 0.01$), Zar ($P < 0.01$), and American College of Gastroenterology ($P < 0.02$) criteria. Modified APACHE II scores were similar between SD and HD groups (median: 12.2 vs. 12.9, $P = 0.17$). MV analysis identified no difference in 90-day recurrence with HD (OR 1.65, $P = 0.13$) after controlling for solid tumor cancers, immunosuppression, and IDSA severity. Similarly, no significant differences between SD and HD were observed for 30-day mortality and 90-day readmission.

Conclusion. No differences in recurrence, mortality, or readmission were identified between SD and HD oral VAN for the treatment of CDI, though HD VAN patients primarily received 250 mg QID.

Disclosures. **All authors:** No reported disclosures.

This abstract has been withdrawn at the author's request.

1112. Detection of Enteric Viruses in Children With Acute Gastroenteritis

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Background. Acute gastroenteritis (AGE) is a major cause of morbidity in children. Viral pathogens are the most common infectious agents. Differences in illness characteristics of AGE with and without virus detection are poorly defined. We compared AGE illness characteristics between children with and without any-virus detected, and with single vs. multiple viruses detected.

Methods. Children between 15 days and 17 years with AGE defined as diarrhea (>3 loose stools/24 hours) or any vomiting within 10 days duration were enrolled in Vanderbilt Children's Hospital inpatient, ED, and outpatient settings from December 2012 to November 2015. Stool specimens were tested by RT-qPCR for norovirus, sapovirus, and astrovirus and by ELISA (VP6 antigen [Rotaclone®]) for rotavirus.

Results. Of 3,705 children enrolled, 2,892 (78%) specimens were collected. A single virus was detected in 1,109 (38%) stools [51% norovirus, 20% rotavirus, 21% sapovirus, and 8% astrovirus], viral co-detections were found in 115 (4%) stools, and 1,665 (58%) had no detected viruses. Table 1 compares children with and without any-virus detected. Children with a single-virus detected were older than those with >1 virus detected (1.8 vs. 1.5 years [$P < 0.05$]) with no other significant differences.

Table 1.

	No-Virus Detected (n = 1665)	Any-Virus Detected (n = 1224)	*P*-value
Age (years)	2.0 (0.79–5.65)[a]	1.8 (0.96–4.00)[a]	0.21
Diarrhea	1102 (66.2%)	891 (72.8%)	<0.01
Max no. of diarrheal stools/24 hours	5 (3–7)[a]	5 (3–7)[a]	0.30
Vomiting	1298 (78.1%)	1101 (89.9%)	<0.01
Max no. vomiting episodes/24 hours	3 (2–5)[a]	4 (3–7)[a]	<0.01
Fever	1112 (66.8%)	690 (56.4%)	<0.01
Max temperature	102 (101–103)[a]	101 (100–103)[a]	<0.01
Sick contact	447 (26.9%)	429 (35.1%)	<0.01
Modified Vesikari Score (MVS)	6 (4–8)[a]	7 (5–9)[a]	<0.01
Days of illness	2 (2–4)[a]	2 (1–4)[a]	0.01

Data are in *n* (%).

[a]Median (IQR).

*Pearson's χ^2/Wilcoxon rank-sum tests.

Conclusion. Children with any-virus detected had more severe symptoms, higher MVS, and more frequently reported sick contacts compared with no-virus detected. Children with no-virus detected were more likely to present with fever and higher

temperatures, which may be due to bacterial organisms. These data highlight the importance of infection-prevention precautions in the community and the need for additional testing to define the etiologic spectrum of AGE in children.

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1113. Real-Time Evolution of Extensively Drug-Resistant *Vibrio cholerae*

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Background. *Bay of Bengal* is known as the *epicenter* of a number of distinct waves of global transmission of *cholera. Vibrio cholerae*, the etiological agent of acute diarrhoeal disease cholera, has extraordinary competency to acquire exogenous DNA by horizontal gene transfer (HGT) and acclimatize them into their genome for structuring metabolic process, developing drug resistance and disease. Antimicrobial resistance (AMR) in *V. cholerae* is a global concern. However, little is known about the identity, source, acquisition process, and stability of the resistance traits in the genome of cholera pathogen.

Methods. Antibiotic susceptibility testing of *V. cholerae* isolated from different parts of India during 2001–2017 was performed using Discs and E-strips. Whole-genome sequencing of resistant (R), multidrug resistant (MDR), extensively drug resistant (XDR), and pandrug (PDR) resistant *V. cholerae* was done by next-generation DNA sequencing. Mobile genetic elements (MGEs) linked with AMR genes were tagged by allelic exchange methods. Whole-cell proteome analysis was done by iTRAQ analysis.

Results. Almost 99% of *V. cholerae* isolates (n = 438) are resistant against ≥2 antibiotics, 17.2% isolates (n = 76) are resistant against ≥10 antibiotics, and 7.5% isolates (n = 33) are resistant against ≥14 antibiotics. Highest resistance was detected against sulfamethaxozole (99.8%, n = 442). In addition, resistance to nalidixic acid (n = 429), trimethoprim (n = 421), and streptomycin (n = 409) are also very high. All the sequenced resistant isolates carrying multiple resistance genes and are linked with MGEs like integrating conjugative elements, transposons etc. Most of the resistance traits are functional and expressed even in the absence of antibiotics.

Conclusion. Our comprehensive analysis of 443 clinical *V. cholerae* isolates show that the cholera pathogen is continuously evolving to counterbalance the antimicrobial effects of antibiotics. Several MGEs linked with AMR genes and other fitness factors potentially propagate to other bacterial species through HGTs. Knowledge of the present study would be useful to understand the evolution of cholera pathogens and management of cholera by helping selection of specific drug regimen against the pathogens.

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1114. Utility of a Bedside Diagnostic Testing Algorithm to Screen for Hospital-Onset *Clostridium difficile* Infection

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Background. Molecular assays have improved *C. difficile* detection in hospitalized patients. However, asymptomatic carriers have been misclassified as hospital onset *C. difficile* infection (HO-CDI), which has implications for management and infection prevention programs. At our facility, we implemented robust antibiotic stewardship policies in 2016 and had an SIR for HO-CDI of 0.73 for the year. In Q1 2017, this increased to 1.88. These cases revealed that nearly all tests, found positive for *C. difficile*, did not meet the standard definition of clinically significant diarrhea (CSD). Moreover, many patients did not have a clinical change in condition that supported a diagnosis of *C. difficile*. We reasoned that an algorithm for appropriate testing for *C. difficile* would significantly reduce our perceived rates of HO-CDI. We also reasoned that this tool could efficiently be used at the bedside during a clinical assessment.

Methods. To determine which patients had CSD, we designed, educated on and implemented an algorithm to screen for appropriate testing. It required three major elements: three or more loose stools in 24 hours, no gastric motility agents 48 hours prior, and a clinical change in condition (e.g., leukocytosis, fever, abdominal cramping). The completed algorithm accompanied the stool specimen and was required for testing. We evaluated each submitted algorithm for method validation. From this, we determined testing appropriateness and algorithm tool selectivity.

Results. One year pre- and post-algorithm periods (PR-A and PO-A, respectively) were defined. Following its introduction, we noted a 57% decline in rates of HO-CDI (23 cases PR-A vs. 10 cases PO-A), and a 44% reduction in tests sent for *C. difficile* (average of 41 tests/month PR-A vs. 23 tests/month PO-A). We only used NAAT testing. We also noted a marked rise in adherence to the algorithm as time elapsed. The PDSA tool was used to refine the algorithm, with improved utilization by providers.

Conclusion. A simple bedside algorithm leads to more appropriate testing of patients for HO-CDI. A significant decline in reported rates of HO-CDI was noted. There is an additional benefit of diagnostic stewardship, as fewer tests are sent. This tool can be used immediately and independent of an electronic health record, is very cost effective, and is applicable to hospitals with low rates of HO-CDI.

Disclosures. **R. V. Nathan**, Merck, Allergan, The Medicines Co.: Speaker's Bureau, Speaker honorarium.

1115. Use of a Fluoroquinolone (FQ) vs. a Non-Fluoroquinolone (Non-FQ)-Based Antibiotic Regimen in the Treatment of Acute, Uncomplicated Diverticulitis

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Background. The management of acute, uncomplicated diverticulitis (DVT) remains based on expert consensus rather than on evidence from randomized clinical trials. The most common antibiotic (AB) regimen used in this patient population is metronidazole plus a fluoroquinolone (FQ). Non-FQ options, including B-lactam and non B-lactam regimens are available. Since there is a lack of clinical data comparing outcomes between these regimens, it remains uncertain whether patients presenting with acute, uncomplicated DVT require a FQ-based regimen. Increasing rates of FQ resistance and awareness of collateral damage have raised concern about whether this class should remain a first-line option.

Methods. This retrospective cohort study was conducted utilizing electronic health records to identify patients 18 years of age or older with acute, uncomplicated DVT, defined by ICD 10 codes. Patients included had CT confirmed DVT and were started on a guideline recommended AB regimen. Data points collected included length of stay, 30-day readmission due to DVT, time to conversion from IV to PO AB, progression to surgery, and discharge AB regimen. The primary objective is to evaluate differences in length of stay and 30 day re-admission rates. The secondary objectives are to evaluate time from intravenous (IV) to oral (PO) AB, progression to surgery, and discharge AB between the two groups.

Results. 136 patients were evaluated, 71 FQ and 65 non-FQ. Length of stay was 4 days (1–18) in the FQ group vs. 5 days (1–19) in the non-FQ group (P = 0.236). 11% of patients in the FQ group vs. 9% of patients in the non-FQ group had a DVT related 30 day readmission (P = 0.451). 22% of patients in the FQ group vs. 23% of patients in the non-FQ group progressed to GI surgery during the admission. Time from IV to PO conversion of AB was 34.2 hours (0–63) in the FQ group vs. 48.4 hours (0–81) hours in the non-FQ group. Lastly, 63 of the 71 patients who were started on a FQ were discharged on an oral FQ vs. Forty patients of the 65 patients started on a non-FQ were discharged on an oral FQ

Conclusion. In the treatment of acute, uncomplicated DVT outcomes including length of stay, 30-day readmission, time from IV to PO AB, and progression to surgery were comparable in patients receiving treatment with a FQ based AB regimen vs. a non-FQ based regimen.

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1116. Comparison of Short-Course vs. Prolonged-Course Antimicrobial Therapy in the Management of Intra-Abdominal Infections

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Background. When managing complicated intra-abdominal infections (IAIs), the current Infectious Diseases Society of America (IDSA) guidelines recommend an antimicrobial treatment duration of 4–7 days. Although recent evidence supports this shorter course of therapy, antimicrobials are still often administered for 10–14 days due to concern for subsequent complications. The purpose of this study was to compare clinical outcomes of short-course (SC) vs. prolonged-course (PC) antimicrobial therapy in the management of IAI at our institution.

Methods. IRB-approved, single-center, retrospective cohort including all patients at the University of Toledo Medical Center who were admitted between January 1, 2012–June 30, 2017 with an IAI, received antimicrobials for ≥48 hours, and had at least one sign of IAI. Patients with concomitant infections at sites other than the abdomen, primary peritonitis or pancreatitis, immunocompromising conditions, or bacteremia were excluded. Primary outcome of clinical cure was compared between SC (≤7 days of antimicrobial treatment) and PC (>7 days) groups. Secondary outcomes included hospital length of stay (LOS), ICU LOS, 28-day all-cause mortality, and 30-day readmission. Multivariable logistic regression was performed to assess for factors associated with clinical cure.

Results. One hundred seventy-five patients were included, 73 SC and 102 PC. Baseline characteristics were similar between groups. Rate of clinical cure for SC vs. PC was 74.0% vs. 67.6% (P = 0.367). Secondary outcomes including hospital LOS (5.5 days vs. 5.8 days, P = 0.372), ICU LOS (3.0 days vs. 5.0 days, P = 0.117), 28-day all-cause mortality (4.1% vs. 2.0%, P = 0.651), and 30-day readmission (19.2% vs. 20.6%, P = 0.818) were also not significantly different. After multivariable logistic regression, the only variable independently associated with clinical cure was diverticulitis (adjusted odds ratio 0.337, 95% CI 0.133 – 0.853).

Conclusion. In patients with IAI, there was no significant difference observed in rates of clinical cure between SC and PC antimicrobial therapy. These results further support the IDSA recommendations for a shorter duration of therapy for patients with IAI.

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