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Background. As diarrheal stool samples are the recommended specimen for testing in acute gastroenteritis (AGE), etiological investigations are rarely performed in children presenting with isolated vomiting. This study identifies enteropathogens in children with AGE presenting with isolated vomiting.

Methods. Children <18 years old with ≥3 episodes of vomiting/diarrhea in 24 hours and <7 days of symptoms were recruited in 2 pediatric emergency departments, a public health clinic and via Health Link, a provincial nurse advice phone line. Rectal swabs and stool samples were collected and tested using the Luminex xTAG GPP, an in-house 5-virus RT-qPCR panel and enteric bacterial culture. Vomiting and diarrhea data were collected at enrollment (day 0) and at day 14.

Results. Between Dec 9, 2014 and Apr 14, 2016, 2,184 children were enrolled and tested: 784 (36%) presented with isolated vomiting, 250 (11%) with isolated diarrhea (ID), 1,138 (52%) with both vomiting and diarrhea (V&D), 12 had missing data. The detection of enteropathogens was 56% when presenting with isolated vomiting, 55% with ID and 83% with V&D. Of the 784 children with isolated vomiting, 54% (n = 424) had one or more viruses: the most common was norovirus (NoV) (n = 244, 50%), followed by adenovirus (Adv) (91, 19%), rotavirus (Rota) (57, 12%), sapovirus (84, 17%) and astrovirus (10, 2%). Fifty-eight cases had >1 virus; co-infection with NoV and Adv was the most common (n = 23). Ten of these 424 patients also had enteric bacteria (2 *Aeromonas*, 2 ETEC, 2 *Salmonella*, 2 *Yersinia*, 1 *Campylobacter*, 1 *E coli* O157) and 8/9 (89%) of these patients reported development of diarrhea at day 14. In comparison, 212/383 (55%) of patients with virus only reported diarrhea at follow up. Enteric bacteria with no virus was detected in 11 patients (3 *Aeromonas*, 3 *Salmonella*, 3 STEC, 1 *Campylobacter*, 1 *E coli* O157) and 3/10 of these patients reported diarrhea.

Conclusion. Over 50% of AGE presented with isolated vomiting had enteric virus identified in stool or rectal swabs, representing a significant pathogen-based disease burden not previously included in healthcare planning (e.g., Rota vaccine). NoV was the predominant agent followed by Adv and Rota. Finding enteric bacteria in these cases is novel and requires further study.

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

1181. Enteropathogen Identification by Multiplex PCR in Guatemalan Children with Acute, Non-bloody Diarrhea

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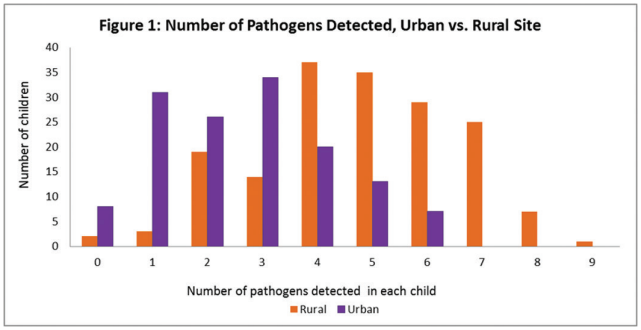
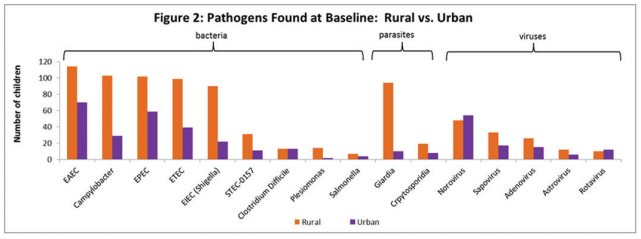
Background. Diarrhea is a leading cause of morbidity and mortality in children in low and middle income countries (LMICs). Assessing diarrhea etiology in LMICs is of great importance in order to better develop both therapeutic and public health strategies, but is hampered by the complexity of potential diarrheal pathogens, and diverse methodology needed for pathogen identification

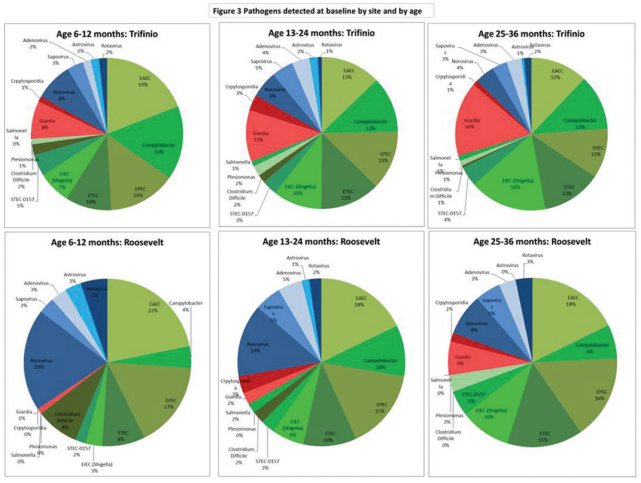
Methods. Subjects 6 to 35 months old with acute, moderate severity, non-bloody diarrhea were enrolled in a diarrheal treatment trial, conducted at one rural (N = 172) and two urban sites (N = 144) in Guatemala. Diarrheal pathogens were determined in stool by multiplex PCR (FilmArray GI® Biofire) which allows simultaneous identification of 23 bacterial, viral, parasitic pathogens. Descriptive statistics on demographics, pathogen load, and differences in pathogen occurrence by site were performed; differences were assessed with t-test and chi^2 test

Results. Nearly all (96.8%) subjects had pathogens identified, and most had multiple potential pathogens identified (mean pathogen count: 2.7 urban and 4.8 rural; $P <$ 0.001 (Figure 1). Notable pathogen differences were observed between rural and urban populations. Bacteria (particularly *E.coli* pathotypes and Campylobacter) and protozoa (particularly giardia) were more common in the rural population (Figure2). Viral pathogens were either similar or more common (norovirus; $P = 0.04$) in the urban population; rotavirus was uncommon in both sites (10 rural and 12 urban cases). A similar pattern of pathogen evolution with patient age was noted in both settings, with a decrease in the relative number of viral and increase in parasitic pathogens (Figure 3). Important demographic and socioeconomic differences between rural and urban were noted: rural subjects had poorer nutritional status, underdeveloped water and sanitation facilities and more domestic animal exposure

Conclusion. Acute diarrheal episodes in Guatemalan children were associated with a complex spectrum of pathogens when determined by multiplex PCR, with distinct patterns in rural and urban populations. Future studies to precisely determine diarrheal etiologies in LMICs will need to incorporate controls to sort causative organisms from those colonizing the intestine.







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

1182. Appropriateness of a Rapid Multiplex Gastrointestinal Panel in the Investigation of Suspected Infectious Diarrhea After Implementation at an Academic Medical Center

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Background. The BioFire FilmArray™ Gastrointestinal (GI) Panel is a 1 hour multiplex real-time PCR test that can detect the presence of 22 GI pathogens (viral, bacterial, and parasitic) known to cause infectious diarrhea. Our tertiary-care academic medical center implemented the GI Panel for all cases of suspected infectious diarrhea replacing the previous conventional testing once utilized to detect GI pathogens. Since its implementation we have not had any criteria for ordering this test to aid healthcare providers.

Methods. The aim of this IRB approved, retrospective investigation was to determine the appropriateness of ordering the GI panel at our academic institution. Cases were randomly selected, stratified by age group and result (specific pathogens or negative result) from May 2015 through April 2016 in the post-implementation period (n = 400 of 1117 total tests). We developed appropriateness criteria for ordering the GI panel which included: passage of at least 3 unformed stools in 24 hours plus one