to childhood vaccination recommendations and targeted vaccination of recommended at-risk groups can prevent future hepatitis A outbreaks of any transmission pattern.

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

LB11. Rapid Rise in Decreased Susceptibility to Azithromycin among *Shigella* Isolates in the United States: A Look at National Surveillance Data, 2011–2017

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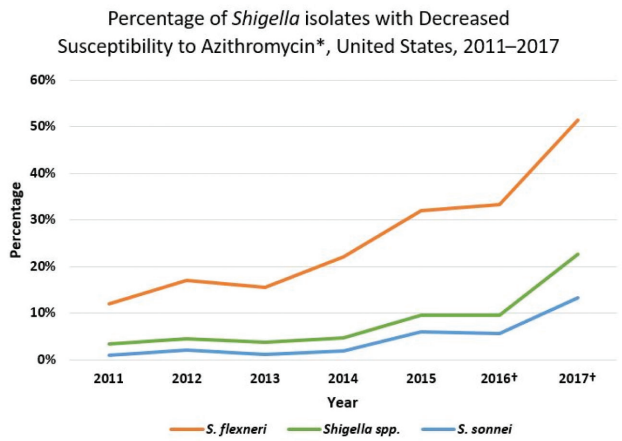
Background. *Shigella* spp. cause ~500,000 illnesses in the United States annually. Antibiotics are recommended for immunocompromised patients and shorten the duration of illness, thus limiting spread. First-line treatments include ciprofloxacin (CIP) and azithromycin (AZM). CIP resistance is a growing problem in the United States; decreased susceptibility to AZM (DSA) has been reported globally, particularly among men who have sex with men (MSM). We reviewed National Antimicrobial Resistance Monitoring System (NARMS) data to determine DSA trends among *Shigella* isolates in the United States.

Methods. Health departments nationwide forward every 20th *Shigella* isolate to CDC NARMS for antimicrobial susceptibility testing using broth microdilution. We defined CIP resistance using CLSI clinical breakpoints and DSA using epidemiological cutoff values where available. We performed whole genome sequencing on isolates from 2016 and screened the sequences for resistance determinants using ResFinder 3.0.

Results. To date, we have tested 3,044 *Shigella* isolates collected during 2011–2017. Overall, 264 isolates (9%) had DSA, increasing from 3% in 2011 to 23% in 2017; 41 (16%) were also CIP resistant. The odds of DSA increased by 1.5 (95% confidence interval [CI] 1.4–1.6) annually. DSA was more common among adult males (OR 21.2, CI 14.9–30.3), in isolates from the West census region (OR 2.4, CI 1.8–3.2), and in *S. flexneri* (OR 8.2, CI 6.3–10.7). Of 543 sequenced isolates, 52 (10%) had DSA; of these, 31 (60%) contained both *mph(A)* and *erm(B)* genes, 17 (33%) contained *mph(A)* only, and 4 (8%) had no identified macrolide-resistance mechanism.

Conclusions. In 2017, nearly 1 in 4 *Shigella* isolates tested had DSA, a 7-fold increase since 2011. This rapid rise in DSA parallels that seen in other countries, where resistance to other clinically relevant drugs is high and macrolides are no longer useful as empiric treatment. The increased risk of DSA in adult males is consistent with previous reports of DSA *Shigella* in MSM. The resistance genes observed are typically plasmid-mediated and can be transferred to other bacteria. Public health strategies to mitigate the spread of resistant *Shigella* should include antibiotic stewardship and novel approaches for sexually transmitted infection prevention in MSM.



*Criteria for decreased susceptibility to azithromycin (DSA) were based on the non-wild-type epidemiological cutoff values set by CLSI for *Shigella sonnei* (MIC ≥32 µg/mL) and *Shigella flexneri* (MIC ≥16 µg/mL). For remaining *Shigella* species, we defined DSA using the NARMS-established breakpoint of MIC ≥32 µg/mL.
† Preliminary data

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

LB12. Safety and Efficacy of Fidaxomicin and Vancomycin in Pediatric Patients with *Clostridium difficile* Infection: Phase III, Multicenter, Investigator-blind, Randomized, Parallel Group (SUNSHINE) Study

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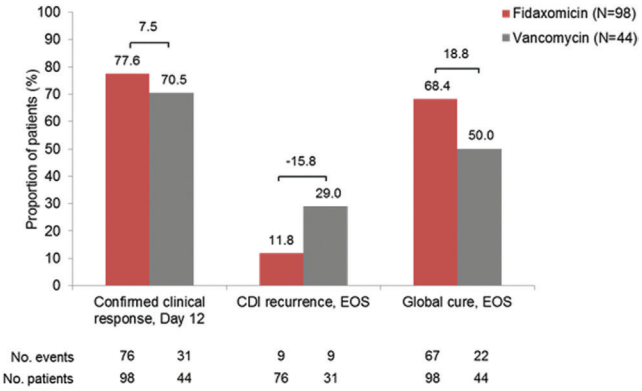
Background. *Clostridium difficile* infection (CDI), a common cause of antibiotic-associated diarrhea, leads to substantial healthcare burden. In children and young adults, the incidence of CDI is increasing. Fidaxomicin (FDX) is a narrow-spectrum macrocyclic antibiotic treatment for CDI in adults, but pediatric data are limited. The primary objective of our study was to investigate safety and efficacy of FDX and vancomycin (VAN) in children.

Methods. Patients aged <18 years with new laboratory-confirmed CDI and diarrhea (watery diarrhea for patients aged <2 years, and ≥3 unformed bowel movements in 24 hours for patients aged ≥2 years) were enrolled in a randomized, investigator-blinded study. Participants were randomized (2:1) to 10 days of treatment with either FDX (oral suspension 32 mg/kg/day or tablets 200 mg BID) or VAN (oral liquid 40 mg/kg/day or capsules 125 mg QID). Concurrent use of other antibiotic treatment for CDI was not permitted. Randomization was stratified by age group. The primary efficacy endpoint was confirmed clinical response (CCR) at Day 12 (absence of diarrhea for 2 consecutive days on treatment and remaining well until treatment discontinuation). Other efficacy endpoints were also evaluated.

Results. Of 142 patients in the full analysis set (FDX n = 98; VAN n = 44), 30 were aged <2 years, 48 were aged 2 to <6 years, 36 were aged 6 to <12 years and 28 were aged 12 to <18 years. At baseline, 28.6% of the FDX arm and 22.7% of the VAN arm had prior confirmed CDI. Overall, 73.5% of the FDX arm and 75.0% of the VAN arm had ≥1 treatment-emergent adverse event. There were three deaths in the FDX arm during the study and two deaths in the VAN arm after end of study (post-Day 40); none were related to treatment. There was a trend to improved CCR and other efficacy outcomes for FDX (figure) and this was statistically significant for global cure (adjusted difference 18.8%; 95% CI 1.5%, 35.3%).

Conclusions. There was a consistent trend for improved efficacy outcomes with FDX compared with VAN, as shown by the adjusted treatment differences, although the small sample size precluded conclusions on most outcome differences.

Figure.



Results are given for the Full Analysis Set: all patients with confirmed CDI who were randomized and received at least one dose of study medication. End of study (EOS) occurred 30 days after the end of 10-day treatment. Confirmed clinical response (CCR) was defined as absence of watery diarrhea symptoms for patients <2 years of age or improvement in the number and character of bowel movements (i.e. <3 unformed bowel movements per day) for patients ≥2 years of age, along with no further requirement for CDAD therapy within 2 days after completion of study drug. Recurrence was defined as recurrence of diarrhea to an extent that was greater than that reported on the last day of study drug, and positive direct or indirect test for the presence of toxigenic *C. difficile* in stool that required (in the investigator's opinion) further anti-infective CDI treatment. Global cure was defined as positive CCR without CDI recurrence until EOS. Bars show adjusted treatment differences calculated using a stratified Cochran-Mantel-Haenszel method

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