same-strain relapse and new-strain reinfection of CDI. We used WGS of paired C. difficile samples from patients with CDI recurrence in the EXTEND study to assess EPFX and SV in relation to relapse and reinfection.

Methods. Patients aged 260 years with CDI were randomized (1:1) to receive either EPFX (fidaxomicin 200 mg tablets, twice daily on Days 1–5 and once daily on alternate days on Days 7–25) or SV (125 mg capsules, four times daily on Days 1–10). Paired stool samples were collected from all patients at screening and from patients with recurrence after test-of-cure (TOC). Recurrence was defined as diarrhoea occurring to a greater extent than the frequency recorded at TOC, and confirmed positive for C. difficile toxin A/B and requiring further CDI therapy. C. difficile isolates from paired samples underwent WGS and single nucleotide variant (SNV) difference analysis. Paired samples with ≤2 SNV differences were considered relapses, paired samples with >10 SNV differences were considered reinfection, and those with >2 but ≤10 SNV differences were considered indeterminate.

Results. At Day 90, 11/177 (6%) patients in the EPFX arm and 34/179 (19%) patients in the SV arm had CDI recurrence. Of these, samples from 7/11 EPFX- and 19/34 SV-treated patients were available for paired WGS analysis. SNV analysis showed that most CDI recurrences were new-strain reinfections (table).

Conclusion. Most recurrences were reinfections, but small sample sizes limited definitive conclusions.

Reference. 1. Guerry et al. (2017). Lancet Inf Dis 18:296–307.
Background. The quadrivalent live attenuated influenza vaccine (LAIV4) showed reduced effectiveness for the A/H1N1 component of the vaccine in 2013–2014 and 2015–2016. To address this, new assays were used to identify H1N1 LAIV strains with improved replicative fitness and immunogenicity. In this study, we compared the shedding and immunogenicity of a new A/H1N1 strain (A/Slovenia), selected using the new assay, to a previous strain (A/Bolivia) with reduced effectiveness.

Methods. Two hundred children aged 24 to <48 months were randomized 1:1:1 to receive two doses of a quadrivalent formulation of 2015–16 LAIV or a trivalent formulation of 2015–2016 LAIV, both containing the H1N1 A/Bolivia strain, or a quadrivalent formulation of the 2017–2018 LAIV containing the new H1N1 A/Slovenia strain (NCT03143101). Nasal and serum immune responses were assessed after Doses 1 and 2, and 28 days after Dose 2. Nasal shedding was assessed on Days 2, 3, 4, 5, and 7 after Dose 1, and Days 2, 4, and 6 after Dose 2. Solicited symptoms, adverse events, and serious adverse events were collected. Statistical testing was limited to the prespecified primary endpoint of hemagglutination inhibition (HAI) antibody responses.

Results. A higher proportion of children shed the A/Slovenia strain vaccine than the A/Bolivia strain on Days 4–7 after Dose 1. The study met its primary endpoint, with the A/Slovenia strain showing 4-fold increase from baseline) for the A/Slovenia strain ≥49x522 and immune responses similar to those seen in previous studies in which the H1N1 vaccine strain was highly efficacious (Figure 2). There were no significant safety findings.

Conclusion. The new H1N1 A/Slovenia strain demonstrated improved immunogenicity compared with a previous strain with reduced effectiveness, and immune responses comparable to a highly efficacious H1N1 LAIV strain. These results support the use of LAIV4 as an important vaccine option.

Figure 1.

1956. Persistence of Immune Response and Safety of an Adjuvanted Recombinant Zoster Vaccine in Older Adults Previously Vaccinated with a Live-Attenuated Herpes Zoster Vaccine: End-of-Study Results of a Phase III, Group-Matched, Clinical Trial

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Background. Herpes zoster (HZ), caused by reactivation of varicella-zoster virus (VZV), typically manifests as a dermal rash and can result in complications, such as postherpetic neuralgia. HZ risk increases with age due to age-related decline of immunity. At time of study start, Zoster Vaccine Live (ZVL), containing live-attenuated VZV was recommended for adults ≥60 years of age. Efficacy of ZVL declines with time since vaccination and increasing age. We evaluated immunogenicity and safety of Adjuvanted Recombinant Zoster Vaccine (RZV) containing truncated form of VZV glycoprotein E (gE) in adults vaccinated with ZVL 25 years before (HZ-PreVac) and in the nonvaccinated adults (HZ-NonVac). In October 2017, the Advisory Committee on Immunization Practices recommended revaccination of ZVL recipients with RZV, based on available data, including 1 month (M) post-dose 2 results of this study (M3). Here we present immunogenicity and safety results up to 12 months post-dose 2 (M14).

Methods. In this phase III, multi-center study (NCT02585140), open-label, 2 parallel groups of group-matched adults 265 years of age, HZ-PreVac and HZ-NonVac, received 2 ZRV doses 2 months apart. Humoral and cellular immune responses were evaluated at various time points up to M14. Solicited and unsolicited adverse events