2) the strongest predictors of day 28 GMFR, and 3) more highly correlated (negatively) with GMFR following eIV4 than LAIV4. For both IV, the GMFR for cell-grown and egg-grown A/H3N2 antigens did not differ within IV type. Future studies incorporating immunoglobulin and cellular immune responses may delineate differences between these IV types not observable through HI assays.

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100. Safety Analysis of Live-Attenuated Measles, Mumps, Rubella Vaccine Among Hematopoietic Cell Transplant Recipients Vaccinated Within Two Years of Transplant

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**Session:** O-21. Innovations and Advancements in Vaccines

**Background.** Measles, mumps and rubella (MMR) vaccine is a live-attenuated vaccine usually contraindicated within the first two years of hematopoietic cell transplant (HCT). During the 2019 measles outbreak at our center, the benefits of administering MMR vaccine within the first two years after HCT were weighed against the potential risks.

**Methods.** We conducted a retrospective review of patients who received MMR vaccination within two years of an autologous or allogeneic HCT. Patients’ demographics, date and type of HCT, underlying hematologic disease, type of immunosuppressive therapy and date of MMR vaccination were extracted from the electronic medical record. Adverse reactions that could be related to the vaccine were collected for up to 42 days post-vaccination and all hospitalizations and deaths following vaccination were reviewed.

**Results.** A total of 129 patients (75 autologous and 54 allogeneic HCT) were vaccinated between 300-729 days after HCT (median of 718 days). The median age at vaccination was 61 years old, 57% of the patients were male and 43% were on immunosuppressive therapy, 87% of whom were on maintenance therapy for multiple myeloma after auto-HCT. Seven patients (5%) had adverse reactions within 42 days of vaccination: six had respiratory tract infections (three with associated fever) and one had a rash leading to a brief hospitalization. This was a 37-year-old female who had an allogeneic HCT 542 days prior to MMR vaccination. She presented with a centrifugal maculopapular rash that was confirmed to be caused by the vaccine strain rubella virus (Fig 1). She fully recovered without sequelae. There was no other vaccine-associated illness identified in the cohort, after a median follow-up of 676 days.

**Figure 1:** Study population and inclusion criteria

**Table 1. Multivariable binomial logistic regression results for PCV13 full primary dosing completion vs. not full completion (partial or no vaccine), N=144,799**

| Variable                        | Coefficient | 95% CI | p-value |
|---------------------------------|-------------|--------|---------|
| COVID                           | 1.01        | 1.00-1.02 | 0.04   |
| Household income                | 1.01        | 1.00-1.03 | 0.05   |
| Education                       | 1.01        | 1.00-1.02 | 0.01   |
| Neighborhood education          | 1.01        | 1.00-1.02 | 0.02   |
| Income group                    | 1.01        | 1.00-1.02 | 0.03   |
| Median household income         | 1.01        | 1.00-1.02 | 0.04   |
| Median age of household head    | 1.01        | 1.00-1.02 | 0.03   |

**Conclusion.** MMR vaccine appears to be well tolerated in selected HCT recipients when given earlier than 2 years after transplant. No attributable severe outcomes or deaths were described. A mild uncomplicated case of vaccine-associated rubella illness was seen after vaccination. In the setting of a measles outbreak, assessment of potential risks and benefits of MMR vaccination given within two years of HCT remains important.

**Disclosures.** Stephen R. Walsh, MDCM, Janssen Vaccines (Scientific Research Study Investigator) Regeneron (Scientific Research Study Investigator) Sanofi Pasteur (Scientific Research Study Investigator) Matthew Cheng, MD, Genentech Lifesciences (Advisor or Review Panel member) Kanvas Biosciences (Board Member, Shareholder) Immuno biosciences (Advisor or Review Panel member) Sanjat Kanjilal, MD, MPH, Glakosmithkline (Advisor or Review Panel member) Nicolas C. Issa, MD, AiCuris (Scientific Research Study Investigator) Astellas (Scientific Research Study Investigator) GSK (Scientific Research Study Investigator) Merck (Scientific Research Study Investigator)
Table 2. Primary dosing full completion rate pre-COVID vs. during COVID by social, demographic, and clinical risk factors

| Social/Demographic/Clinical Risk Factors | Pre-COVID | During COVID | Relative Change |
|----------------------------------------|-----------|--------------|----------------|
| Overall                                | 79.4%     | 77.9%        | 1.5% decrease  |
| Social risk                            | 78.8%     | 77.1%        | 1.7% decrease  |
| Demographic risk                       | 80.1%     | 79.2%        | 0.9% decrease  |
| Clinical risk                          | 80.0%     | 79.3%        | 0.7% decrease  |

Conclusion. Health inequities in PCV13 primary series completion existed prior to COVID-19 and have remained during the pandemic. Our results, however, suggest that during the pandemic, groups traditionally considered to have better healthcare access (Whites, higher income, more education) had more impact on vaccine uptake. Further research is needed to confirm these trends as COVID mitigation measures subside.

Disclosures. Liping Huang, MD, MA, MS, Pfizer Inc (Employee) Jennifer L. Nguyen, ScD, MPH, Pfizer Inc (Employee) Johanna Perdrizet, MPH, Pfizer Inc (Employee) Tamuno Alfred, PhD, Pfizer Inc (Employee) Adriano Arguedas, MD, Pfizer (Employee)

102. A Retrospective Case Series of West Nile Neuroinvasive Disease in Two Tertiary Health Centers in Miami
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Session: O-22. Neurologic Infections

Background. According to the Centers for Disease Control and Prevention, Florida was the third leading state in reported West Nile Neuroinvasive Disease (WNND) infections in 2020. WNND accounts for less than 1% of all West Nile virus (WNV) infections but carries a 10% mortality rate. The clinical characteristics of WNND have not been well described in Florida, an area with high mosquito activity. We hereby describe the clinical characteristics of WNND at two large hospitals in Miami.

Methods. A 10-year retrospective study was performed at the University of Miami Hospital and Mount Sinai Medical Center to identify adult patients with confirmed WNV infection and neuroinvasion. Patient demographics, symptoms, neurological exam findings, laboratory diagnostics, intensive care unit (ICU), and hospital length of stay (LOS), and outcomes were described.

Results. Eleven patients (73% male, mean age 64.4 ± 16.3 years) were identified between January 2010 to December 2020. The most prevalent comorbidities were HTN (64%) and DM (27%). The most common positive findings on the review of symptoms were fever (100%), confusion (81.8%), and headache (63.6%). The mean hospital LOS was 15.5 ±11.3 days, while the mean ICU LOS was 7.2 ± 11.9 days. The majority of patients (75%) spent more than 2 weeks in the ICU. Subject age was correlated with hospital LOS with a Pearson correlation of 0.624 (p=0.04). The survival rate was 91%. At the time of discharge, 80% of patients continued to have neurological symptoms.

Conclusion. This is the largest case series of WNND in Florida. Most cases occurred during summer 2020, which corresponds to the peak of the COVID-19 pandemic. Despite pandemic restrictions, we may have seen an increase in WNV cases due to higher-than-normal temperatures promoting mosquito abundance, increased outdoor activities due to the COVID-19 pandemic, and/or the redistribution of public health resources towards the pandemic rather than mosquito control. Residual neurological symptoms and impaired functional outcomes are common. Within the limitation of our small sample size, subject age appeared to correlate with hospital LOS. This correlation should be further explored in a larger case series. A high index of suspicion for WNND is suggested for patients presenting with fever and neurologic symptoms in Florida.

Disclosures. Cynthia Rivera, MD, Gilead Sciences (Advisor or Review Panel member) Viiv Healthcare (Advisor or Review Panel member)

Figure 1: The percentage of subjects with different types of WNND. The section titled others, includes atypical presentations such as amnesia, focal neurological deficits (ataxia, hemiparesis), and myelopathy.

Figure 2: Month and year of presentation at the time of hospital admission.

Figure 3: Clinical presentation (%).