Results. 160 Veterans were diagnosed with INF from December 1, 2017 to April 26, 2018. 106 had INF A, 54 INF B. Of the 160 cases, 15 were in DEC, 61 in JAN, 69 in FEB, 13 in MAR, 2 in APRIL 10 INF A isolates subtyped as: 9 H1N1, 2 H1N1pdm09. 5 INF B isolates subtyped as Yamagata lineage. Demographics: Median age 63 years (23–93); Race: 79% Caucasian, 16% Black, 1% Asian, 1% Pacific Island, 3% Hispanic. INF A cases: 95% had a previous medical history of CHF; INF B: 1% had a previous medical history of CHF. Mortality: 24%, 12% and 14%. The median BMI was 29 (17–51). 101 tested in ER, 36 in clinics, 5 in our related adult and nursing homes, and 17 during their hospitalization. 56 (35%) had received the INF vaccine this season. The median duration from vaccination to diagnosis was 100.5 days (2–175 days). 25 required hospitalization with 5 of them in ICU; 40% of the hospitalized patients had received the INF vaccine. The median length of stay was 4.5 days. 139 received oseltami- vir (OSE), 13 supportive treatment, 8 antibiotics alone, and 7 OSE-antibiotics. 5 patients expired (3 INF A, 2 INF B) 3 were not vaccinated; one patient developed NSTEMI and survived. Hospitalized patients were older vs. 60, P=0.018, more likely to have COPD (P = 0.0069), CHF (P = 0.0066), and history of lung cancer. There was no difference in risk for hospitalization between vaccinated and unvacci- nated Veterans, P = 0.649.

Conclusion. The months of JAN and FEB had the highest flu activity, mirroring the INF activity in our nation as reported by the CDC. The majority of our patients were not vaccinated. 5 fatalities were noted. Not surprisingly, the vaccine was insufficient to prevent hospitalization and increase the contribution of non-influenza viruses (NIV) to the annual burden of respiratory illnesses (RI) is evolving. Improvements in diag- nostic techniques, including the increasing clinical use of respiratory viral PCR panels (vPCR), have markedly advanced our understanding of the contributions of NIV to the “influenza season.”

Methods. A retrospective analysis of all vPCR results from one hospital system, collected between October 1, 2016 and March 7, 2017, including inpatient and outpa- tient samples was performed. 2,047 vPCR tests were reviewed; after removing those with undetermined results and internal control samples, 1,924 were analysed. Data points abstracted included detection and identification of virus, and date of detec- tion. We compared the total and monthly rates of NIV with IV, throughout the study period.

Results. Of 1,924 vPCR results, 985 (51%) were positive for a respiratory virus. Of these, 302 (31%) were IV, and 683 (69%) were NIV. For every month studied, the ratio of NIV to IV exceeded 50%, including the height of the season. The most com- monly detected viruses were Influenza A (30%), Rhino/Enterovirus (24%), RSV (19%). Coronavirus O/C4D (7%) and Metapneumovirus (5%). The peak influenza incidence temporal pattern coincides with the national peak months of January and February. The NIV incidence paralleled the trend in IV incidence, dominated by Rhino/Enterovirus and RSV, but without a specific virus driving the trend.

Conclusion. Non-influenza respiratory viruses cause substantial viral RI during the winter months. Non-viral syndromes during the height of influenza season have traditionally been attributed to IV, including influenza-like illness (ILI); however, these can now be better characterized using patient-specific vPCR panels, leading to improved understanding of NIV epidemiology. Even during the period of highest IV activity, NIV infections were more common than IV. Understanding the high incidence paralleled the trend in IV incidence, dominated by Rhino/Enterovirus and RSV, but without a specific virus driving the trend.

Methods. A retrospective chart review of patients with Influenza admitted from September 1, 2017 to April 14, 2018. Diagnosis was confirmed by Rapid flu test (RDT) or Target Enriched Multiplex PCR (TEM PCR). Demographic, clinical, lab, treat- ment, and outcomes data were obtained. Analysis included prevalence and rel- ative risk (RR)

Results. 220 patients were identified (47 males, 73% White). Median age was 70 years (range 18–99). 65% had Flu A and 27% Flu B. 81% came from home, 17% from a facility (nursing home, assisted living), 49% had flu vaccination (Figure 1). Flu strain and vaccination status had no association RR 1.31 (95% CI 0.85–2.01, P = 0.21). Common comorbidities were lung disease 44%, obesity 41%, DM 36%, CAD 34%, CHF 31% (Figure 2). Common presentations were respiratory 79% and constitu- tional 53%, 68% were hypoxic and 4% hypotensive on arrival. 42% had new CXR/ CT finding and 55% had pneumonia. Sensitivity of RDT was 38%. 91% were treated with oseltamivir (21% within 48 hours of flu detection). Median treatment duration was 5 days. Hospitalizations peaked in January (Figure 3). Median length of hospital stay was 6 days. 23% had severe flu (needed NPPV 13%, intubation 12%, pressor 5%, ICU stay 16%) which showed significant association with arrival from facility RR 2.21 (95% CI 1.36–3.56, P = 0.001), lung disease RR 1.91 (95% CI 1.7–2.14, P = 0.001) and co-detection of respiratory pathogens (TEM PCR/sputum culture/serology) RR 2.65 (CI 1.60–4.38, P = 0.0001), but none with age >65 RR 1.46 (95% 0.83–2.56, P = 0.18), flu type RR 1.59 (95% CI 0.85–2.98, P = 0.14), active smoking RR 1.40 (95% CI 0.79– 2.47, P = 0.24) or vaccination RR 1.21 (95% CI 0.70–2.12, P = 0.48). Fatality rate was 6% with significant association with arrival from facility RR 4.56 (95% CI 1.55–13.60, P = 0.006).

Conclusion. 2017–2018 Influenza season showed widespread activity and is expected to be of “high severity”.

2520. Epidemiology, Clinical Manifestations, and Outcomes of the 2017–2018 Influenza Season Among Hospitalized Patients at a Tertiary Care Center

Results. Plasma NLR, creatinine, ALT, AST, LDH and CK levels in fatal cases were significantly higher than those in survival ones (P < 0.001 for all parameters), while platelet count was significantly lower (P < 0.01). All population were re-evalu- ated according to NLR. Plasma ALT, AST, LDH, CK, and creatinine levels when NLR was ≥ 2 were significantly lower than those when NLR was > 2 (P = 0.006 P = 0.017, P < 0.001, P < 0.0001, P < 0.001, respectively) (Table 1). The area under an ROC curve for NLR was 72% (P < 0.001).

Table 1: Demographic and Laboratory Characteristics in the Patients With Crimean-Congo Hemorrhagic Fever