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Background. Patient and treatment-related factors have been used to stratify COVID-19 outcomes; however, studies in the general population and specifically veterans have yielded variable results. This study was designed to assess how baseline characteristics and interventions correlate with clinical outcomes in patients admitted with COVID-19 at a large academic Veterans Affairs hospital.

Methods. Retrospective chart review was conducted on veterans admitted to the hospital with COVID-19 between March 1 to December 31, 2020. Veterans without respiratory symptoms attributed to COVID-19 or enrolled in a COVID-19 clinical trial were excluded. Primary outcome was in-hospital mortality up to 28 days. Secondary outcomes were 90-day mortality, discharge to higher level of care or remained in the hospital within 28 days, and discharge with new oxygen requirement within 28 days. Patient characteristics and therapeutic interventions were assessed for correlation with primary and secondary outcomes.

Results. Of 497 hospitalized patients reviewed, 293 were included for analysis; 94% were male; average age was 68 years with 64.9% of veterans greater than 65 years of age; 43.7% were Black; 17.4% were Hispanic. In-hospital mortality at 28-days and 90-day mortality were 18.1% and 21.5%, respectively. At discharge, 34.1% had a new oxygen requirement and 17.5% went to a higher level of care. Patients that died in hospital were more likely to be greater than 65 years of age (p<0.001), Hispanic (p<0.007), have chronic kidney disease (CKD) (p=0.005), be admitted to ICU (p<0.001), receive dexamethasone (p<0.001), convalescent plasma (p<0.001), or antibiotics (p<0.001); require mechanical ventilation (p<0.001); or have new onset atrial fibrillation (p<0.001). Veterans also had higher levels of inflammatory markers within 48 hours of hospital admission (see Table 2) and longer length of hospital stay (<0.001). There was a trend for patients that died in the hospital within 28-days to be less likely to be Black (p=0.06).

Disclosures. Benjamin L. Custer, M.D., Alexion Pharmaceuticals (Shareholder) Armata Pharmaceuticals (Shareholder)/Biomarin Pharmaceutical (Shareholder)/Crispr Therapeutics (Shareholder)/CVS Health Corp (Shareholder)/Editas Medicine (Shareholder)/Gilead (Shareholder)/Glaxo Smith Kline (Shareholder)/Hologic Inc (Shareholder)/Mercer (Shareholder)/Mesoblast LTD (Shareholder)/Pfizer (Shareholder)/Sanofi (Shareholder)/UnitedHealth Group (Shareholder)/Vertex Pharmaceuticals (Shareholder)/Dana M. Blyth, MD, Nothing to disclose.
Table 3. Characteristics of the Patients that Survived to Discharge Stratified by Secondary Outcome Measures

| Oxygen requirement at hospital discharge | Discharge level of care at 28 days |
|----------------------------------------|----------------------------------|
| No Oxygen Required (n=1164)             |                                 |
| Race: White (n=542)                     |                                 |
| Race: Black (n=74)                      |                                 |
| Race: Other (n=548)                     |                                 |

Methods. Data were analyzed from clinic referrals from December 13, 2020 through April 20, 2021. Patient demographics, census-based area deprivation index (ADI) scores (scale of 1-10, with 1 representing least socioeconomic deprivation and 10 representing most), and relevant comorbidities were collected. Outcomes included days of symptoms until referral, patient receipt of SMA therapy after referral, adverse events, and ER visits and hospitalizations within 14 days of SMA administration. Association between demographic factors and relevant outcomes were determined using chi-square or Wilcoxon rank-sum tests as appropriate.

Results. Of eligible patients, 310/386 (80%) received treatment; patients were excluded if they were hospitalized before treatment was offered. We collected data on age, comorbidities, date of diagnosis, and admission at baseline. Patients were excluded if they were admitted for hypoxia (1%). Of treated patients, only 3 (1%) no-showed (1%), or were admitted for hypoxia (1%). Of treated patients, only 3 (1%) no-showed (1%), or were admitted for hypoxia (1%). Of treated patients, only 3 (1%) no-showed (1%), or were admitted for hypoxia (1%). Of treated patients, only 3 (1%) no-showed (1%), or were admitted for hypoxia (1%).

Conclusion. Patients were more likely to die in hospital within 28-days if they were greater than 65 years of age, Hispanic and had CKD. Veterans that died in hospital within 28-days had higher inflammatory marker levels and were more likely to receive COVID-19 treatments.

Disclosures. All Authors: No reported disclosures

532. Establishing a SARS-CoV-2 Monoclonal Antibody Infusion Clinic: Early Trends in Outcomes and Disparities

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Background. SARS-CoV-2 monoclonal antibodies (SMA) have demonstrated efficacy in treatment of early, mild to moderate COVID-19 in patients at high risk for progression to severe COVID-19. We created an SMA infusion clinic at a large, urban academic medical center using both internal and community-based referral mechanisms to promote the equitable distribution of treatment.

Methods. We implemented a SARS-CoV-2 monoclonal antibody infusion clinic (SMAIC) at a large, urban academic medical center using both internal and community-based referral mechanisms to promote equitable distribution of treatment. We utilized an influenza-like illness (ILI) referral algorithm that prioritizes patients at highest risk of developing severe disease, as determined by EM/ID with input from a machine learning ensemble of ADI. If a patient declined or did not reply, treatment was offered to the next patient on a ranked eligibility list. Those who declined or did not treat were included in the analysis. Patients were excluded if they were hospitalized before treatment was offered. We collected data on age, comorbidities, date of diagnosis, and admission at 30 days after diagnosis. A multivariate log binomial regression was performed to determine the relative risk of admission within 30 days of diagnosis for those who received mAb therapy as compared to those who did not, adjusting for age and comorbidity. All analysis was done in R (version 4.0.5).

Conclusion. Patients were more likely to die in hospital within 28-days if they were greater than 65 years of age, Hispanic and had CKD. Veterans that died in hospital within 28-days had higher inflammatory marker levels and were more likely to receive COVID-19 treatments.

Disclosures. All Authors: No reported disclosures

533. Protocol for and Efficacy of Monoclonal Antibody (mAb) Treatment of SARS-CoV-2 at a VA Medical Center

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Background. Bamlanivimab and casirivimab/imdevimab were the first monoclonal antibodies (mAb) developed against SARS-CoV-2 and proved beneficial early in the course of infection. However, real-world administration of these therapies presents logistical challenges. We present our experience implementing mAb treatment at a large VA Medical Center and review the efficacy of therapy in preventing hospitalization from COVID-19 in a closed healthcare system.

Methods. All positive outpatient COVID tests performed at VA Greater Los Angeles Healthcare System (GLA) were reviewed by the Emergency Medicine (EM) and Infectious Diseases (ID) Sections for mAb eligibility beginning 12/2/2020. Due to limited supply, treatment was prioritized for patients at highest risk of developing severe disease, as determined by EM/ID with input from a machine learning ensemble risk estimation model produced by VA National Artificial Intelligence Institute (Figure 1). If a patient declined or did not reply, treatment was offered to the next patient on a ranked eligibility list. Those who declined or were eligible but not treated were included in the analysis. Patients were excluded if they were hospitalized before treatment was offered. We collected data on age, comorbidities, date of diagnosis, and admission at 30 days after diagnosis. A multivariate log binomial regression was performed to determine the relative risk of admission within 30 days of diagnosis for those who received mAb therapy as compared to those who did not, adjusting for age and comorbidity. All analysis was done in R (version 4.0.5).