

Comparing immunization status between ICU and non-ICU admitted patients infected with COVID-19

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Purpose: Recent studies have shown routine vaccinations including measles-mumps-rubella (MMR), pneumococcal conjugate (PCV13), and varicella may provide partial protection against COVID-19. While many factors contribute to the severity of COVID-19 infection, the purpose of this study is to evaluate whether or not vaccination histories have any impact on the severity of COVID-19 in patients whom were admitted to a non-ICU and ICU nursing units.

Methods: This is a single center, retrospective, observational study of COVID-19 infected hospital patients. Patients will be stratified by the severity of their COVID-19 infection. This will be determined based on admission to the intensive care unit versus the general medicine floor. Immunization records will be obtained by chart review via data obtained from Kansas Immunization Registry (WebIZ). The factors evaluated will include the types of vaccines given and time period of administration. Patients to be included are first time admissions to the hospital for COVID-19 between May 2020 and September 2020. Data that will be collected will include but not be limited to age, sex, comorbidities, other medications to treat COVID, oxygen requirements, pertinent lab values, patient outcomes and discharge disposition.

Results: Of 270 patient encounters, 53 patients met inclusion criteria. 14 patients required an ICU stay. The odds of going to the ICU for patients were reduced, although, not significantly. Alternatively, patients who received PCV13 were at significant risk for requiring an ICU stay.

Conclusion: Routine vaccinations may provide protection against severe COVID-19 infection, however, COVID-19 vaccinations are now available.