Evaluating Effectiveness of Remdesivir on Intubation Rates in Patients Hospitalized with Severe Covid-19 at Tuba City Regional Health Care Corporation (TCRHCC)

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Abstract:

Background: TCRHCC is a Joint Commission accredited health center providing services to more than 15,000 patients within 6,000 square mile area of the Navajo and Hopi Reservations. As of April 20, 2021, TCRHCC was heavily burdened by COVID-19 with over 5,000 positive cases which is 16.7% of the Navajo Nation COVID-19 positive cases and over 1,000 deaths. On May 21, 2020, TCRHCC Pharmacy and Therapeutics Committee (P&T) added remdesivir on restricted formulary as a treatment option for hospitalized patients with severe COVID-19. This study has been established to evaluate rate of intubation in COVID-19 patients before and after the training, TCRHCC remdesivir criteria compliance, hospitalized COVID-19 patient discharge to home, and transfer out to higher level of care.

Methods: A pre-training retrospective chart review of hospitalized COVID-19 patients eligible to receive remdesivir (n=30) was completed between May 21, 2020 to August 31, 2020 to evaluate initial intubation rates. Training includes education on P&T recommendation of use, appropriate transfer log documentation, and communication among departments was provided to inpatient clinical pharmacists, intensive care and respiratory unit nursing, patient care manager/transfer team from Dec 21 to Dec 31, 2020. Post-training retrospective chart review (n = 95) was then completed for the time period between Jan 1 to March 31, 2021 to evaluate the objectives.

Results: Data between pre and post-training showed: Intubation requirement decreased 26%, TCRHCC remdesivir criteria compliance increased 22%, hospitalized COVID-19 patients discharge to home increase 15%, and transfer out to higher level of care decreased 21%

Conclusion: Our study showed improvement in intubation requirements in hospitalized COVID-19 patients using TCRHCC remdesivir restrictions. However, we could not conclude the training and remdesivir utilization improved in hospitalized COVID-19 patients' clinical outcomes due to vaccine availability, addition of other treatments (dexamethasone, continuous positive airway pressure), study design and improved nursing staff

Image:

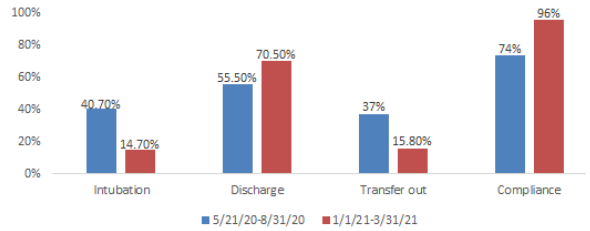


Figure 1: Eligible Patients on Remdesivir (05/21/20 – 08/31/20 vs 01/01/21 – 03/31/21)

References:

1. Bhimraj A, Morgan RL, etc.Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. Infectious Diseases Society of America 2021; Version 4.2.0. Available at https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/. Accessed3/1/2020.
2. Coronavirus 19/COVID19 Dash board. Service Unit Map. TCRHCC: Coronavirus Information Dashboard (tchealth.org). Accessed 4/20/21
3. COVID-19: Navajo Department of Health – Navajo Nation. COVID-19 (navajo-nsn.gov). Accessed 4/20/21
4. John H. Beigel, Kay M. Tomashek, etc. Remdesivir for the Treatment of Covid-19 – Final Report. The New England Journal of Medicine. N Engl J Med 2020; 383:1813-1826. DOI: 10.1056/NEJMoa2007764
5. Tracking Coronavirus in Arizona. The New York Times. Arizona Coronavirus Map and Case Count - The New York Times (nytimes.com). Accessed Oct 30 2018.

Biography:

Kyle Nguyen is a Commissioned Corps Officer serving at TCRHCC. He finished one year of postgraduate pharmacy training at TCRHCC and continues to serve the underserve population since 2018. The mission of the USPHS Commissioned Corps is to protect, promote, and advance the health and safety of our Nation. This project has been established to evaluate patients hospitalized with severe COVID-19 clinical outcomes that were eligible to receive remdesivir.

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