The Use of Paxlovid Amongst the Elderly & Reduced Hospital Stays

Kate Ames, Nicole Chandler, Maria Gichana, Madeline Gill

University of Maine, School of Nursing

NUR 456: Professional Practice through the Lifespan

Dr. Valerie Herbert

October 17, 2023

Abstract

Coronaviruses are a large family of viruses infecting many species and cause a variety of illnesses. COVID-19 is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Understanding that COVID-19 can cause severe disease in vulnerable populations has launched the development of viral treatments. Nirmatrelvir-ritonavir (Paxlovid) is an oral antiviral treatment authorized for adults with mild to moderate symptoms who are at an increased risk for severe disease. These authors pose the question: For older adults over the age of 65 who have had COVID-19, does the use of Paxlovid reduce hospitalizations, compared to those not treated with Paxlovid? A literature search was conducted on Nursing Reference Center Plus, CINAHL, PubMed, and National Library of Medicine/PubMed Central. The following terms were used: cov*, paxlov*, hospital*, elder* which resulted in a total of 11 articles out of 82 articles. Inclusion criteria consist of individuals ≥ 65 with symptoms that onset within 3-5 days of receiving Paxlovid. They must also have one or more risk factors that increase the risk for severe infection. Exclusion criteria consist of individuals under the age of 18 or \geq 65 with mild to moderate symptoms that have lasted longer than 5 days. As well as severe renal/hepatic impairment, history of significant reactions to the active ingredients in Paxlovid, or contraindicated medications. Limitations include inconsistencies in the day of diagnosis and medication compliance. The evidence found that Paxlovid was effective in reducing hospital stays in older adults as opposed to those who did not receive Paxlovid.

Keywords: Paxlovid, COVID-19, hospitalizations, treatments, elderly

References

- Dryden-Peterson, S., Kim, A., Kim, A. Y., Caniglia, E. C., Lennes, I. T., Patel, R., Gainer, L.,
 Dutton, L., Donahue, E., Gandhi, R. T., Baden, L. R., & Woolley, A. E. (2023).
 Nirmatrelvir plus ritonavir for early COVID-19 in a large U.S. Health System. *Annals of Internal Medicine*, *176*(1), 77–84. <u>https://doi.org/10.7326/m22-2141</u>
- Lamb, Y. N. (2022). Nirmatrelvir plus ritonavir: First approval. *Drugs*, 82(5), 585–591. https://doi.org/10.1007/s40265-022-01692-5
- Malden, D. E., Hong, V., Lewin, B. J., Ackerson, B. K., Lipsitch, M., Lewnard, J. A., & Tartof, S. Y. (2022). Hospitalization and emergency department encounters for covid-19 after paxlovid treatment California, December 2021–May 2022. *MMWR. Morbidity and Mortality Weekly Report*, 71(25), 830–833. https://doi.org/10.15585/mmwr.mm7125e2
- Najjar-Debbiny, R., Gronich, N., Weber, G., Khoury, J., Amar, M., Stein, N., Goldstein, L. H., & Saliba, W. (2022). Effectiveness of paxlovid in reducing severe coronavirus disease 2019 and mortality in high-risk patients. *Clinical Infectious Diseases*, 76(3). https://doi.org/10.1093/cid/ciac443
- Park, H., Park, Y. J., Lee, H. Y., Yu, M., Song, Y.-J., Lee, S. E., Lee, J.-J., Lee, E.-S., & Kim, Y. (2022). The effectiveness of PAXLOVID treatment in long-term care facilities in South Korea during the outbreak of the omicron variant of SARS-COV-2. *Osong Public Health and Research Perspectives*, *13*(6), 443–447. <u>https://doi.org/10.24171/j.phrp.2022.0262</u>
- Shah, M. M., Joyce, B., Plumb, I. D., Sahakian, S., Feldstein, L. R., Barkley, E., Paccione, M., Deckert, J., Sandmann, D., Gerhart, J. G., & Hagen, M. (2023). Paxlovid associated with decreased hospitalization rate among adults with COVID-19 — United States, April– September 2022. 23(1), 150–155. <u>https://doi.org/10.1016/j.ajt.2022.12.004</u>

- Vuppalanchi, S., Weaver, L., Box, K., & Pontones, P. (2022). Tolerance and clinical outcomes of covid-19 antiviral therapy in long-term care residents. *Journal of the American Geriatrics Society*, 70(10), 3033–3035. <u>https://doi.org/10.1111/jgs.17940</u>
- Weng, C., Xie, R., Han, G., Yuan, Y., Li, S., Wang, C., Wang, X., Jiang, W., & Jiang, L. (2023). Safety and efficacy of Paxlovid against Omicron variants of coronavirus disease 2019 in elderly patients. *Infectious Diseases and Therapy*, *12*(2), 649–662. https://doi.org/10.1007/s40121-023-00760-x
- Zhang, L., Zhang, S., Han, J., Yi, Y., Zhou, H., & Li, J. (2022). Paxlovid administration in elderly patient with covid-19 caused by Omicron Ba.2.0: A case report. *Medicine*, 101(45). <u>https://doi.org/10.1097/md.00000000031361</u>
- Zhao, C., Zhang, J., Hou, X., Yeung, C. H., & Zeng, A. (2023). A high-frequency mobility big-data reveals how COVID-19 spread across professions, locations and age groups.
 PLOS Computational Biology, *19*(4). <u>https://doi.org/10.1371/journal.pcbi.1011083</u>
- Zhong, W., Yang, X., Jiang, X., Duan, Z., Wang, W., Sun, Z., Chen, W., Zhang, W., Xu, J., Cheng, J., Yuan, X., & Li, Y. (2023). Factors associated with prolonged viral shedding in older patients infected with Omicron ba.2.2. *Frontiers in Public Health*, 10. https://doi.org/10.3389/fpubh.2022.1087800