

Study proves safety of hypertension drugs in COVID-19 era

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Patients with high blood pressure have worse COVID-19 outcomes, and this led to speculation that some anti-hypertensive medications may pose increased risks to patients dealing with hypertension.

In response, Dr. Morales and his collaborators within the Observational Health Data Sciences and Informatics (OHDSI) community sought to examine COVID-19 outcomes in users of either angiotensin-converting enzyme (ACE) inhibitors or [angiotensin receptor blockers](#) (ARBs) among an international cohort of more than 1.1 million patients using antihypertensives.

They found there was no increased risk of COVID-19 diagnosis, hospitalization, or subsequent complications for users of either category of drug. This evidence supports regulatory and clinical recommendations that patients should not discontinue ACE inhibitor or ARB therapy due to concerns of increased COVID-19 risk.

Dr. Morales, Wellcome Trust Clinical Research Fellow at the University's School of Medicine, said, "Although people with [high blood pressure](#) may have worse outcomes from COVID-19, this study reassures patients that ACE inhibitors and ARBs do not increase this risk compared to other treatment.

"By comparing people exposed to ACE inhibitors and ARBs against people taking other blood pressure medicines, either alone or in combination, we were able to produce highly consistent results that demonstrate the safety of these drugs.

"Studies published earlier during the pandemic were quite heterogeneous in their design and had some limitations. We used a rigorous approach, and comprehensively show that these drugs do not increase the risk of developing COVID-19."

While other studies have generated similar findings recently, this study is the most comprehensive one to date of COVID-19 susceptibility risks for antihypertensive users. OHDSI researchers examined [electronic health records](#) from a variety of data sources to conduct a systematic

cohort study of ACE, ARB, calcium channel blocker (CCB) and thiazide diuretic (THZ) users.

Powered by [open-source](#) tools, state-of-the-art [analytical methods](#) and global collaboration within the OHDSI community, these findings provide robust and reproducible real-world evidence of clinical significance.

OHDSI is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data through large-scale analytics. All solutions are open-source. OHDSI has established an international network of researchers and observational [health](#) databases with a central coordinating center housed at Columbia University.

Dr. Morales' co-lead author on the paper, published in *The Lancet Digital Health*, was Professor Marc Suchard from University of California, Los Angeles.

More information: Daniel R Morales et al. Renin–angiotensin system blockers and susceptibility to COVID-19: an international, open science, cohort analysis, *The Lancet Digital Health* (2020). [DOI: 10.1016/S2589-7500\(20\)30289-2](#)

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