

## UPDATE ALERT

**Update Alert 2: Risks and Impact of Angiotensin-Converting Enzyme Inhibitors or Angiotensin-Receptor Blockers on SARS-CoV-2 Infection in Adults**

In this second monthly update of our living review (1), we searched MEDLINE (Ovid) weekly from 9 June 9 to 6 July 2020 using the same search strategy as described in the original review. We did not limit by language. This search update yielded 91 results (de-duplicated). After an independent dual-review process, we identified 3 new meta-analyses, 5 new observational studies, and 1 in-progress trial for inclusion.

**New Evidence**

Results of 3 new meta-analysis (2–4) evaluating the association of angiotensin-converting enzyme inhibitor (ACEI) or angiotensin-receptor blocker (ARB) use with coronavirus disease 2019 (COVID-19) illness severity are consistent with the findings that we reported in the original manuscript. Five new observational studies also examine this association. Four of these studies found that use of ACEIs or ARBs is not associated with more severe COVID-19 illness (5–8). In a retrospective study of 113 patients hospitalized with COVID-19 in Turkey, use of ACEI/ARBs was associated with higher in-hospital mortality (9). However, a major limitation of the study is that the group of patients taking ACEI/ARBs were older and more likely to have coronary artery disease than the non-ACEI/ARB group.

Overall, inclusion of these 3 new meta-analyses and 5 new observational studies does not change the certainty of evidence rating we reported in the original manuscript for key question 2—high-certainty evidence that ACEI or ARB use is not associated with more severe COVID-19 disease.

**In-Progress Trials**

We identified 1 randomized controlled trial that is currently in progress in the Netherlands comparing ARB therapy (valsartan) with placebo on intensive care unit admission, mechanical ventilation, and death among hospitalized adults with COVID-19 (10). The estimated study completion date is December 2021.

**Citation Update**

A study by Yang and colleagues (11) that was included in our original manuscript as a preprint has now been published.

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