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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Ibuprofen and other “NSAIDs” appear safe in patients with covid-19.

Early in the pandemic there was widespread concern that use of nonsteroidal anti-inflammatory medications (NSAIDs) such as ibuprofen, Aleve, Motrin, Advil, might lead to worse outcomes for patients with covid-19. A new article published in [Lancet Rheumatology](#) suggests that these concerns appear to have been unfounded.

In a large, multicenter study in the United Kingdom, which included 255 healthcare facilities and 78,674 patients hospitalized with confirmed or highly suspected SARS-CoV-2 infection, researchers followed the outcomes of a cohort of patients as they progressed through their disease (i.e. the study was prospective, not retrospective). The project sought to characterize what effect, if any, NSAID use had on in-hospital mortality for covid-19 patients. Patients were included in the study if they reported NSAID use within two weeks of the hospital admission.

Just over 5 percent of patients were taking NSAIDs prior to hospitalization. When comparing these patients to others who were similar (in terms of demographics and severity of disease at the time of hospitalization, as determined through a process called “propensity score matching analysis”), NSAID use was *not* associated with an increased in-hospital mortality. Furthermore, use of NSAIDs was not associated with increased need for escalating oxygen therapy, mechanical ventilation, kidney injury, or the need for intensive care.

Let’s dig into the methods for a moment. There is debate in the health services research community regarding pros and cons of the “propensity scoring” methods that were used for this study. The key question is whether this procedure—which amounts to finding a matching patient to serve as a “control” every time you find a patient in the group who “received the drug”—sufficiently mimics a randomized clinical trial in which some patients are randomized to receive a medication and others are not. While that’s a black box, this study has many features to recommend it: it was prospective (i.e. it was not a chart review of cases whose outcomes were already known), and it involved patients from several hospitals. The limitations of the small retrospective studies that preceded it—including some that had the opposite finding—were far greater. In sum, this is the best study on this topic we know of to-date.

At this time, if a patient’s symptoms can be adequately treated with NSAIDs and there are no other contraindications to its use, the presence of covid-19 should not deter using this effective class of fever and pain-reducing medications.

As ever, the covid-19 pandemic has been humbling for healthcare providers and researchers. Over and over, we have seen that concrete data from robust studies (i.e. not relying on retrospective studies) are needed before making conclusions both about which medications to give our patients and which ones we need to avoid.

—Joshua Niforatos, MD, MTS

POLICY BRIEFING

Herd immunity seen as less likely. US seeks more modest goals for pandemic management.

Slowing vaccine rates have been a growing concern in the United States, as the combination of an [effective](#) vaccination distribution campaign, difficulty reaching unvaccinated populations, and outright [resistance](#) have left supply outpacing demand for the first time. In the early stages of the vaccine rollout, the desired goal was reaching “herd immunity.” In other

words, the percentage of vaccinated population (or those with strong antibodies from prior infections) that would leave the virus without a sufficient number of new hosts who could spread the virus to the remaining unvaccinated citizens. But now, given the slowed rates in dose delivery, many experts are starting to [expect](#) SARS-CoV-2 to become a recurrent, though hopefully manageable disease.

The degree of global vaccination, continued preventive strategies and the virus' underlying mutability will all contribute to future planning for a post-pandemic world. While herd immunity has provided a national goal, viral transmission is local, and widely disparate rates of immunization will play a large role in whether a herd immunity-like effect will be achievable. Other factors, like the interconnectedness or seclusion of different populations will have an impact too. Further, some new variants have been found to be more [transmissible](#) and other emerging variants may be less vulnerable to our vaccine-induced antibodies. If such variants appear widely, higher immunity targets will be needed to provide herd-like protection.

With such uncertainty, health leaders have started planning for scenarios involving a prolonged coronavirus presence. Current efforts, like the focusing of vaccination on the most vulnerable and continuing to combat vaccine hesitancy, have led to a significant decline in hospitalizations and deaths and will likely remain a mainstay of future directives. New booster shots may also eventually be needed to address developing variants.

But the nightmare situation, and the reason why vaccination will remain a cornerstone of prevention, is the potential for the virus to evolve beyond vaccine coverage, resulting in a renewed pandemic. Avoiding this outcome is the goal. A continued push for rapid and widespread vaccine acceptance is the best strategy we have. *Various.*

—*Brief19 Policy Team*

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