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Treatment with Hydroxychloroquine Cut Death Rate Significantly in COVID-19 Patients, Henry Ford Health System Study Shows

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DETROIT – Treatment with hydroxychloroquine cut the death rate significantly in sick patients hospitalized with COVID-19 – and without heart-related side-effects, according to [a new study](#) published by [Henry Ford Health System](#).

In a large-scale retrospective analysis of 2,541 patients hospitalized between March 10 and May 2, 2020 across the system's six hospitals, the study found 13% of those treated with hydroxychloroquine alone died compared to 26.4% not treated with hydroxychloroquine. None of the patients had documented

serious heart abnormalities; however, patients were monitored for a heart condition routinely pointed to as a reason to avoid the drug as a treatment for COVID-19.

The study was published today in the International Journal of Infectious Diseases, the peer-reviewed, open-access online publication of the International Society of Infectious Diseases (ISID.org).

Patients treated with hydroxychloroquine at Henry Ford met specific protocol criteria as outlined by the hospital system's Division of Infectious Diseases. The vast majority received the drug soon after admission; 82% within 24 hours and 91% within 48 hours of admission. All patients in the study were 18 or over with a median age of 64 years; 51% were men and 56% African American.

"The findings have been highly analyzed and peer-reviewed," said Dr. [Marcus Zervos](#), division head of Infectious Disease for Henry Ford Health System, who co-authored the study with Henry Ford epidemiologist Samia Arshad. "We attribute our findings that differ from other studies to early treatment, and part of a combination of interventions that were done in supportive care of patients, including careful cardiac monitoring. Our dosing also differed from other studies not showing a benefit of the drug. And other studies are either not peer reviewed, have limited numbers of patients, different patient populations or other differences from our patients."

Zervos said the potential for a surge in the fall or sooner, and infections continuing worldwide, show an urgency to identifying inexpensive and effective therapies and preventions.

"We're glad to add to the scientific knowledge base on the role and how best to use therapies as we work around the world to

provide insight,” he said. “Considered in the context of current studies on the use of hydroxychloroquine for COVID-19, our results suggest that the drug may have an important role to play in reducing COVID-19 mortality.”

The study also found those treated with azithromycin alone or a combination of hydroxychloroquine and azithromycin also fared slightly better than those not treated with the drugs, according to the Henry Ford data. The analysis found 22.4% of those treated only with azithromycin died, and 20.1% treated with a combination of azithromycin and hydroxychloroquine died, compared to 26.4% of patients dying who were not treated with either medication.

“Our analysis shows that using hydroxychloroquine helped saves lives,” said neurosurgeon [Dr. Steven Kalkanis](#), CEO, Henry Ford Medical Group and Senior Vice President and Chief Academic Officer of Henry Ford Health System. “As doctors and scientists, we look to the data for insight. And the data here is clear that there was benefit to using the drug as a treatment for sick, hospitalized patients.”

Overall, hospital system patients in the study experienced an 18.1% in-hospital mortality rate. Regardless of treatment, mortality was highest in:

- Patients older than 65,
- Patients who identified as Caucasian,
- Patients admitted with reduced oxygen levels,
- Patients who required ICU admission.

Patients who died commonly had serious underlying diseases, including chronic kidney and lung disease, with 88% dying from respiratory failure. Globally, the overall mortality from SARS-

COV-2 is estimated to be approximately 6% to 7%, with mortality in hospitalized patients ranging between 10% and 30%, according to the study. Mortality as high as 58% has been seen among patients requiring ICU care and mechanical ventilation.

According to the U.S. Centers for Disease Control & Prevention, hydroxychloroquine (also known as hydroxychloroquine sulfate) is a U.S. Food & Drug Administration (FDA)-approved arthritis medicine that also can be used to prevent or treat malaria. It is available in the United States by prescription only. The drug is sold under the brand name Plaquenil and it is also sold as a generic medicine. It is commonly used by patients with arthritis, lupus or other rheumatic conditions.

Dr. Zervos also pointed out, as does the paper, that the study results should be interpreted with some caution, should not be applied to patients treated outside of hospital settings and require further confirmation in prospective, randomized controlled trials that rigorously evaluate the safety and efficacy of hydroxychloroquine therapy for COVID-19.

“Currently, the drug should be used only in hospitalized patients with appropriate monitoring, and as part of study protocols, in accordance with all relevant federal regulations,” Dr. Zervos said.

Henry Ford Health System, as one of the region’s major academic medical centers with more than \$100 million in annual research funding, is involved in numerous COVID-19 trials with national and international partners.

Henry Ford Health System is currently also involved in a prophylactic hydroxychloroquine study: “Will Hydroxychloroquine Impede or Prevent COVID-19,” or WHIP COVID-19. [The study](#) is a 3,000-person, randomized, double-blinded look at whether

hydroxychloroquine prevents healthcare and frontline workers from contracting the COVID-19 virus. The WHIP COVID-19 team is working on expanding study sites while there is a lull in the number of COVID-19 cases in Southeast Michigan. This is in preparation for a potential increase of COVID-19 cases as Fall flu season approaches, with additional sites available for convenient enrollment of healthcare workers and first responders. The WHIP COVID-19 team is also taking this gift of time to reach out to other areas of the world that are seeing a blossoming of cases: Brazil and Argentina. There are currently 619 people enrolled in the study, out of a target of 3,000.

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About Henry Ford Health System:

Under the leadership of President and CEO Wright L. Lassiter, III, Henry Ford Health System is a \$6.5 billion integrated health system comprised of six hospitals, a health plan, and 250+ sites including medical centers, walk-in and urgent care clinics, pharmacy, eye care facilities and other healthcare retail.

Established in 1915 by auto industry pioneer Henry Ford, the health system now has 32,000 employees and remains home to the 1,900-member Henry Ford Medical Group, one of the nation's oldest physician groups. An additional 2,200 physicians are also affiliated with the health system through the Henry Ford Physician Network. An active participant in medical education and training, the health system has trained nearly 40% of physicians currently practicing in the state and also provides education and training for other health professionals including nurses, pharmacists, radiology and respiratory technicians.

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