Leading experts urge health care workers to accept COVID-19 vaccinations ASAP

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Vaccines to prevent common and serious infectious diseases have had a greater impact on improving human health than any other medical advance of the 20th century.

Alarmingly, in the United States today, vaccination rates are higher in the general population than among health care workers. In fact, according to a WebMD and Medscape Medical News analysis of data collected by the U.S. Department of Health and Human Services from 2,500 hospitals across the country, as of the end of May, only 1 in 4 hospital workers nationwide who have direct contact with patients had received even a single dose of a COVID-19 vaccine. According to the U.S. Centers for Medicare and Medicaid Services, 59 percent of staff and 80 percent of residents in nursing homes are vaccinated.

In a commentary published in *The American Journal of Medicine*, Charles H. Hennekens, M.D., Dr.PH, a world renowned preventive medicine and public health academician from Florida Atlantic University's Schmidt College of Medicine, and his collaborator, address the clinical and public health challenges as well as ethical implications for health care workers to achieve high levels of vaccinations to protect themselves, their coworkers and the general public from COVID-19. The urgency derives from the fact that cases are already increasing in all 50 U.S. states and the majority are due to the Delta variant, which is far more transmissible and likely to be a harbinger of newer variants resistant to the vaccines.

The authors say that currently in the U.S., COVID-19 is largely an epidemic of the unvaccinated. Thus, health care workers who reject the vaccine greatly increase their risk of becoming infected. They may then expose their patients, families and fellow citizens to COVID-19. Some hospitals and clinics are now requiring COVID-19 vaccination as a mandatory condition of employment. Ironically, virtually all health care workers would seek effective and safe therapies for any communicable or chronic disease. Most routinely accept major surgery and sometimes toxic chemotherapy and/or radiation therapy for cancer.

"On a daily basis, we try to prevent and treat illness based on a sufficient

totality of evidence that allows rational clinical decision making for individual patients and policy making for the health of the general public," said Hennekens, senior author, first Sir Richard Doll Professor and senior academic advisor, FAU's Schmidt College of Medicine. "At present, in the U.S., health care workers and the general public should be acutely aware that these vaccines provide the best opportunity to combat COVID-19. Rejection of the COVID-19 vaccine by health care workers poses an 'ethical quagmire,' because levels of protection far exceed those of the influenza or pneumococcal vaccines, which have been widely accepted by the vast majority of adults, including health care providers."

The authors also emphasize that perhaps the greatest reassurance to health care workers should be that less than 5 percent of those receiving the COVID-19 vaccine become infected, of which, perhaps 94 percent will not transmit the virus to others. In addition, the side effects of the COVID-19 vaccine are far less than from the vaccine for influenza. Specifically, serious side effects from the COVID-19 vaccines occur in the range of one per million doses.

In the commentary, the authors also highlight the significant differences between COVID-19 and influenza. Mortality rate from COVID-19 is about 30 times higher; and a positive COVID-19 patient is likely to transmit to about six people compared with one or two for influenza. The efficacy of COVID-19 vaccines are 95 percent, significantly higher than for conventional influenza vaccine. COVID-19 vaccines offer almost complete protection against hospitalization, admission to intensive care units and death.

The authors also emphasize that in 2021, collegial, collaborative and coordinated efforts of academia, industry, federal, state and local governments. as well as regulatory authorities in the U.S. led to the almost miraculous development of effective and safe vaccines that have been widely distributed in record times. Most vaccines take up to a

decade or longer to develop and prove their efficacy and safety whereas multiple effective and safe COVID-19 vaccines have been developed and widely distributed throughout the U.S. in less than one year.

"The war on COVID-19 is being fought most successfully, valiantly, and selflessly by health care workers in hospitals who are doing the most good for the most patients, while placing themselves and their loved ones at increased risks from exposure from their patients," said Hennekens. "As competent and compassionate health care professionals, we must redouble our efforts to promote evidence-based clinical and public health practices that should include vaccination of all U.S. health care workers."

Dennis G. Maki, M.D., professor of medicine, director of the COVID-19 Intensive Care Unit and an internationally renowned infectious disease clinician and epidemiologist from the University of Wisconsin School of Medicine and Public Health, is first author. Maki and Hennekens served together for two years as lieutenant commanders in the U.S. Public Health Service as epidemic intelligence service officers with the U.S. Centers for Disease Control and Prevention (CDC). They served under Alexander D. Langmuir, M.D., who created the Epidemic Intelligence Service (EIS) and Epidemiology Program at the CDC, and Donald A. Henderson, M.D., chief of the Virus Disease Surveillance Program at the CDC in the 1960s, both of whom made significant contributions to the eradication of polio and smallpox. The authors note that today, many responsible and knowledgeable authorities in the U.S. have opined that widespread vaccinations were instrumental in the eradication of smallpox and polio.

For having saved more than 1.1 million lives through his discoveries, in 2012, *Science Heroes* ranked Hennekens No. 81 in the history of the world, ahead of Jonas Salk (No. 83) who developed the polio vaccine.

More information: Dennis G. Maki et al, Healthcare workers need covid-19 vaccination: clinical, public health and ethical considerations, *The American Journal of Medicine* (2021). DOI: 10.1016/j.amjmed.2021.06.030

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