COVID-19 Vaccine Nasal Spray

Administering the Oxford/AstraZeneca COVID-19 vaccine through the nose reduced viral shedding in animal models, a recent study led by a National Institute of Allergy and Infectious Diseases (NIAID) scientist found.

University of Oxford researchers are now conducting an open-label clinical trial of the intranasal vaccine in healthy human volunteers.

All COVID-19 vaccines now in use are injected into muscle, producing antibodies that circulate in the blood but aren’t necessarily present in the nose and nasal passages, suggesting that vaccinated individuals could still become infected and transmit the virus. Previous studies in rhesus monkeys showed that the Oxford/AstraZeneca vaccine, which isn’t authorized for use in the US, protected against pneumonia but did not reduce shedding from their upper respiratory tract.

The authors of the new study first compared the injected and the intranasal vaccines in hamsters. Both routes of administration produced high antibody levels, but the nasal spray outperformed the injection.

Vaccinated and unvaccinated hamsters were then exposed to SARS-CoV-2, and both the injected and intranasal vaccines protected hamsters from serious disease.

The researchers then gave 2 doses of the intranasal vaccine to 4 rhesus monkeys, who developed antibody levels similar to those seen in people who’d recovered from COVID-19. The 4 vaccinated monkeys, along with 4 unvaccinated rhesus monkeys, were then exposed to SARS-CoV-2. The vaccinated monkeys had less virus in their noses and lung tissue, and none of them developed symptoms of pneumonia, while 3 of the unvaccinated monkeys did.

Although the observed differences between the animals that received the intranasal vaccine and the ones that didn’t were very encouraging, they weren’t significant, the authors noted. Too few animals were vaccinated to establish clear correlations, they wrote.

Still, senior author Vincent Munster, PhD, of the NIAID’s virology laboratory, said in a statement, “These results justify additional tests of nasal delivery for COVID-19 vaccines in people.”

New Grants for Suicide Prevention

The Substance Abuse and Mental Health Services Administration (SAMHSA) recently awarded $17.8 million in grants to help communities prevent suicide during the COVID-19 pandemic.

“Americans throughout our nation continue to struggle with COVID-related increases in depression, anxiety, trauma, grief, isolation, job and home loss, and other stressors,” SAMHSA Administrator Miriam Delphin-Rittmon, PhD, said in a statement. “These grants support outreach to people at risk of suicide and victims of domestic violence.”

The 26 grant recipients receive as much as $800,000 each. They will provide such services as suicide screening, assessment, and treatment; support for people who have attempted or are at risk of attempting suicide and their household members; training for clinicians who serve adults at risk of suicide; and enhanced services for victims of domestic violence and their dependents—including a safe place to stay if they can’t remain in their home.

Tracking COVID-19 Supply Shortages

Changes in how the US Department of Health and Human Services (HHS) collected information about hospitals’ supplies and equipment during the COVID-19 pandemic made it more difficult for some to provide data because the revised reporting requirements lacked clarity, according to a recent US Government Accountability Office (GAO) draft report.

The HHS has used data from HHS Protect, a data hub launched in April 2020, to distribute resources and inform the public. Initially, the HHS used hospital capacity data reported to HHS Protect to inform its allocation of remdesivir, which had received Emergency Use Authorization in May 2020 for treating patients with COVID-19, followed by approval in October. The allocation strategy evolved and eventually came to be based on the state’s share of national confirmed or suspected COVID-19 hospitalized patients. After September 30, 2020, the federal government played no role in allocating remdesivir.

In October 2020, the HHS implemented an interagency effort to analyze HHS Protect hospital capacity data and identify shortages in capacity, staffing, and personal protective equipment. Since that time, HHS officials told the GAO, they’ve facilitated distribution of supplies and staff resources in 40 states. As of June 2021, the interagency effort had flagged 2600 instances of shortages, according to the HHS officials interviewed for the GAO report.

The HHS also developed an interactive map, updated daily, with national and state-level data about inpatient bed totals and the number and percent used for all patients and for patients with COVID-19.

However, representatives of hospital associations and local public health officials told the GAO that they have relied on state and local data, which they said were more useful for them than HHS Protect data. A representative of an epidemiological association said its members needed more granular data for case investigations than that provided by HHS Protect.

HHS officials said they had no comments on the report, according to the GAO. – Rita Rubin, MA

Note: Source references are available through embedded hyperlinks in the article text online.