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Health Sciences Research Commons

GW Infectious Disease Updates

GW Covid-19 Collection

9-2-2021

Covid-19 Clinical Update 9/02/2021

George Washington University

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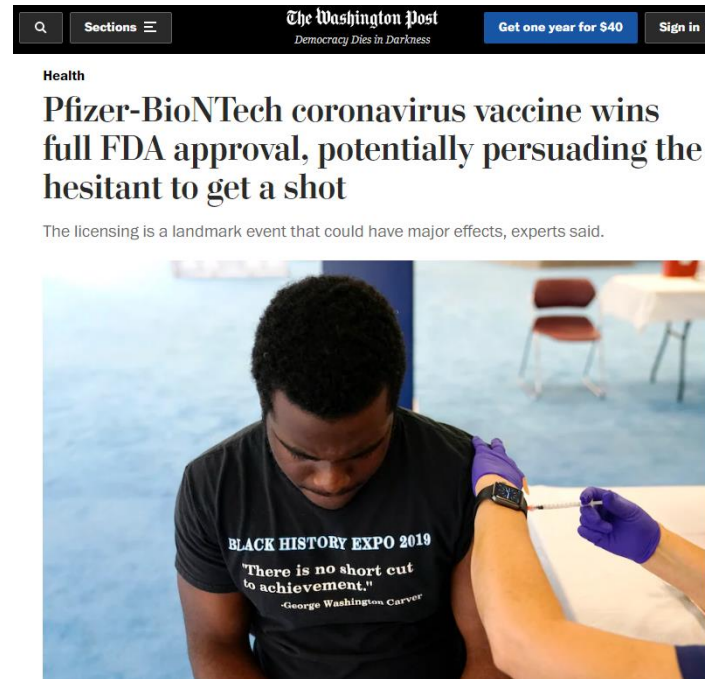
COVID-19 UPDATE

HANA AKSELROD, MD, MPH

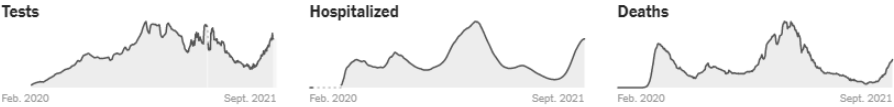
GW DIVISION OF INFECTIOUS DISEASES

MFA COVID-19 LEAD

9/2/2021



New reported cases



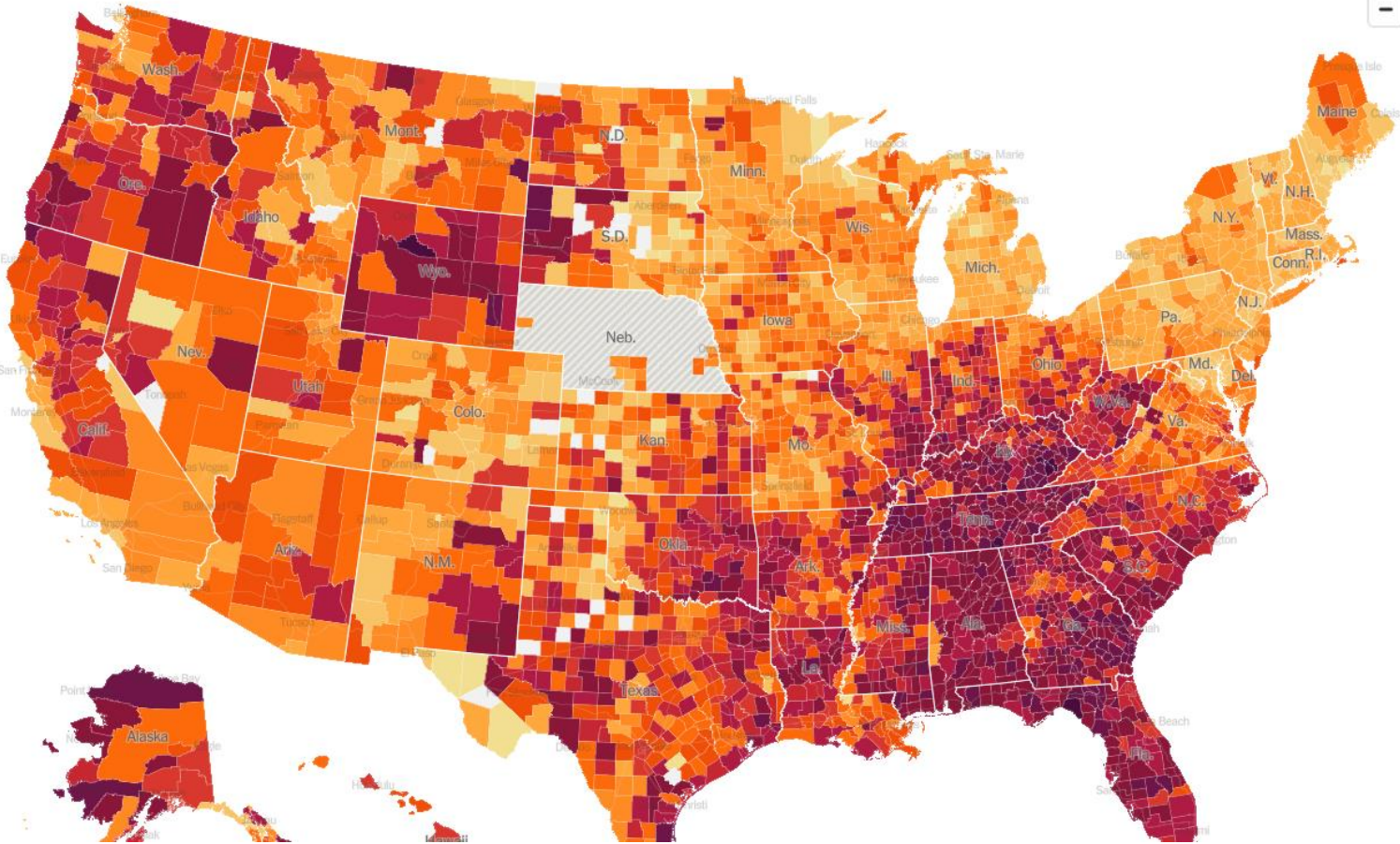
	DAILY AVG. ON SEPT. 1	14-DAY CHANGE	TOTAL REPORTED
Cases	166,080	+18%	39,527,445
Tests	1,368,588	+25%	—
Hospitalized	101,343	+18%	—
Deaths	1,418	+75%	642,451

[About this data](#)

Hot spots

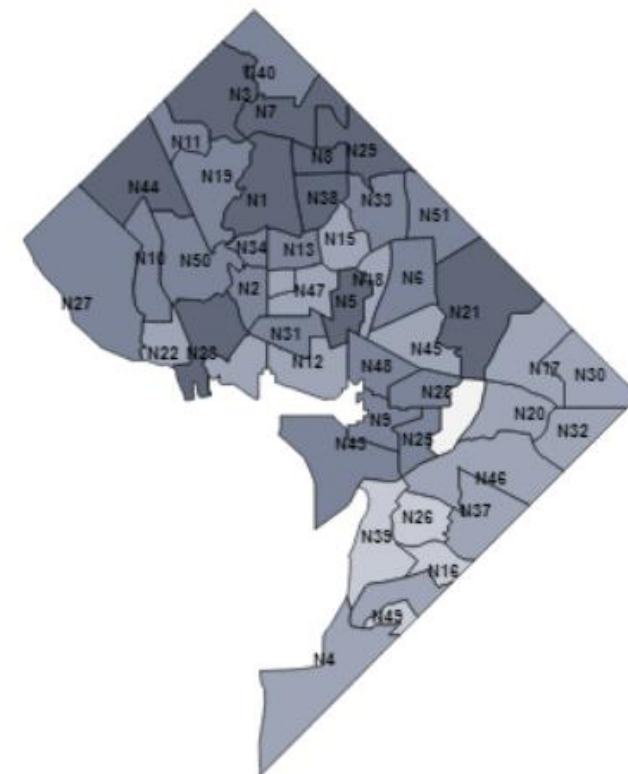
AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK

10 30 50 70 100 250 FEW OR NO CASES MISSING DATA



District of Columbia COVID-19 Daily Case Rate

per 100,000 population (7-day average)



TOTAL DOSES
ADMINISTERED WITHIN DC

927,936

ESTIMATED % RESIDENTS PARTIALLY
OR FULLY VACCINATED**

66.7%

ESTIMATED % RESIDENTS
FULLY VACCINATED**

56.5%

ESTIMATED % OF BREAKTHROUGH
CASES***

0.50%

Effectiveness of COVID-19 Vaccines in Preventing SARS-CoV-2 Infection Among Frontline Workers Before and During B.1.617.2 (Delta) Variant Predominance — Eight U.S. Locations, December 2020–August 2021

Ashley Fowlkes, ScD¹; Manjusha Gaglani, MBBS²; Kimberly Groover, PhD³; Matthew S. Thiese, PhD⁴; Harmony Tyner, MD⁵; Katherine Ellingson, PhD⁶; HEROES-RECOVER Cohorts

Centers for Disease Control and Prevention



Early Release / Vol. 70

Morbidity and Mortality Weekly Report

August 24, 2021

HEROES-RECOVER Cohort

- HCWs and frontline personnel at 8 locations in 6 US states
- Tested weekly for surveillance, and upon onset of symptoms

Delta predominance defined as weeks when Delta VOC accounted for $\geq 50\%$ of sequenced isolates at each study location

N = 4,217 participants, 3,483 (83%) vaccinated. Followed in 12/2020 through mid-8/2021

- 2,278 (65%) Pfizer-BioNTech, 1,138 (33%) Moderna, and 67 (2%) Janssen

Overall VE was 80% (95% CI = 69%–88%)

- 85% within 120 days of completing vaccination vs. 73% over 150 days from completing vaccination
- 91% before Delta VOC became dominant vs. 66% since

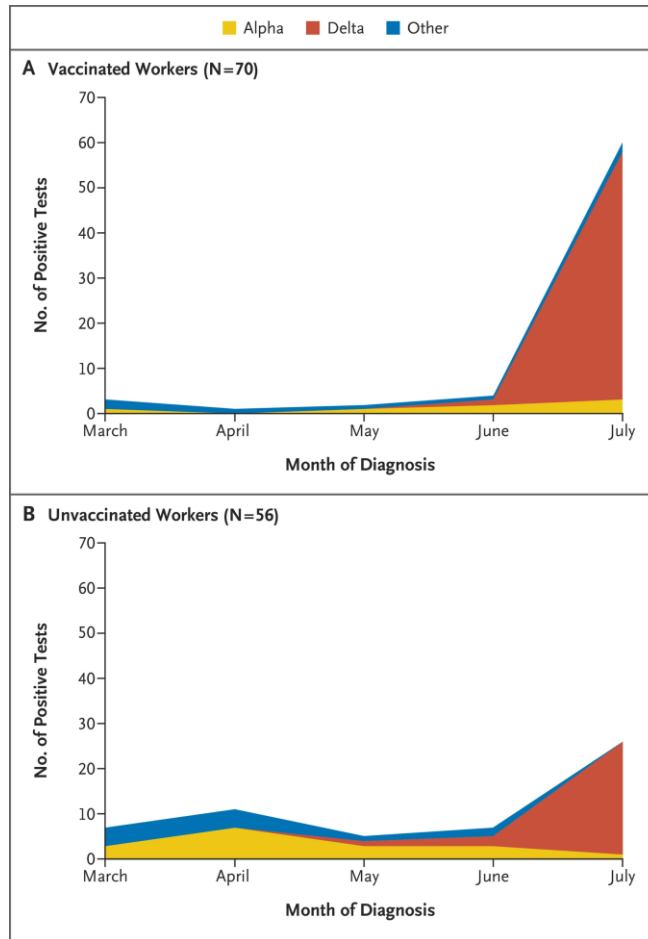
Important limitations and confounders

- Did not capture severity of cases (but know this is less from other studies)
- Longer time since vaccination, change in risk-avoiding behaviors outside of work, family exposures

CORRESPONDENCE

Resurgence of SARS-CoV-2 Infection in a Highly Vaccinated Health System Workforce

- UCSD Health
- 76% vax by 3/2021
- 83% vax by 7/2021
- Symptom-driven PCR screening
- Attack rate:
 - 6.7 if vax in Jan-Feb
 - 3.7 if vax in Mar-May
 - 16.4 if unvaccinated



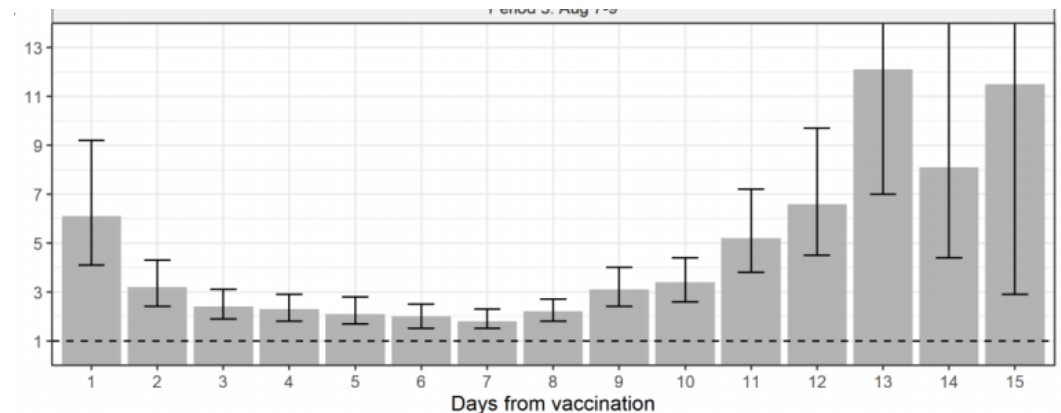
[Comment on this paper](#)

BNT162b2 vaccine booster dose protection: A nationwide study from Israel

Yinon M. Bar-On, Yair Goldberg, Micha Mandel, Omri Bodenheimer, Laurence Freedman, Nir Kalkstein, Barak Mizrahi, Sharon Alroy-Preis, Nachman Ash, Ron Milo, Amit Huppert

doi: <https://doi.org/10.1101/2021.08.27.21262679>

- Booster dose of the Pfizer BNT162b2 vaccine approved in Israel for ≥ 60 years who were fully vaccinated > 5 months previously
- 1,144,690 individuals followed July 30 – August 22
- ≥ 12 days after booster found an 11.4-fold (95% CI: [10.0, 12.9]) decrease in RR of confirmed infection
- > 10 -fold decrease in RR of severe illness. Under a conservative sensitivity analysis, ≈ 5 -fold protection against confirmed infection.



Wear Masks, Open Windows

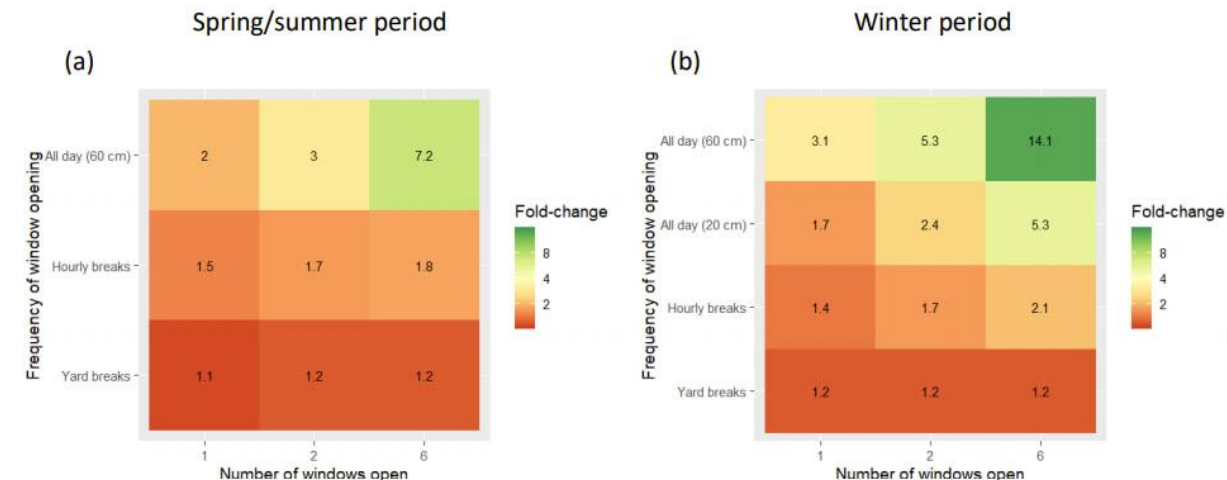
MASKING RCT IN BANGLADESH

- >300,000 adults across 600 villages
- Social and policy interventions increased mask wearing from 13% to 42% over 10 weeks
- The masking group had 9% reduction in symptomatic illness and 12% less symptoms



AEROSOL STUDY IN SWITZERLAND

- Most effective intervention was natural ventilation through full opening of 6 windows all day during the winter (14x ↓), followed by universal use of surgical face masks (8x ↓)

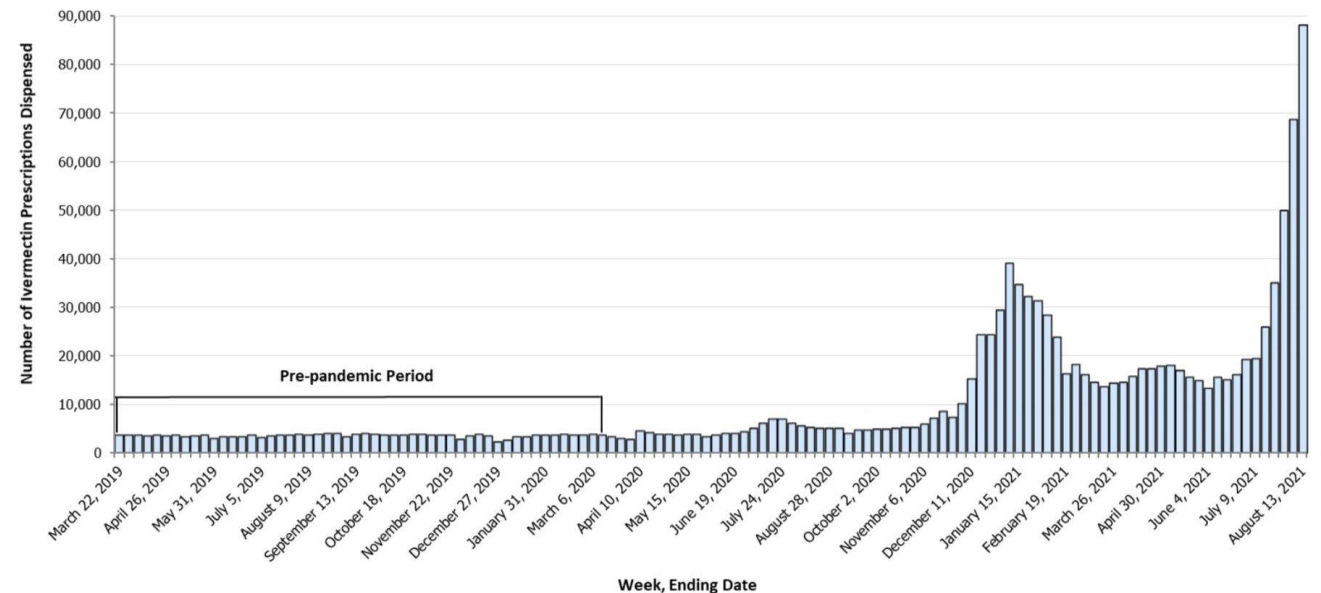


Ivermectin

- Antiparasitic, pediculicide
- Treatment of Strongyloides, Ascaris, Mansonella, Wuchereria, Gnathostoma, Onchocerca, Trichuris, and hookworm species
- Ectoparasites: lice, scabies
- In-vitro: inhibition of host intracellular transport processes slowed SARS-CoV2 reproduction
- No sustained findings of clinical benefit in any stage of COVID-19
- May treat co-occurring parasites
- Adverse effects: GI disturbance, transaminitis, tachycardia, dizziness, headache, dermatitis

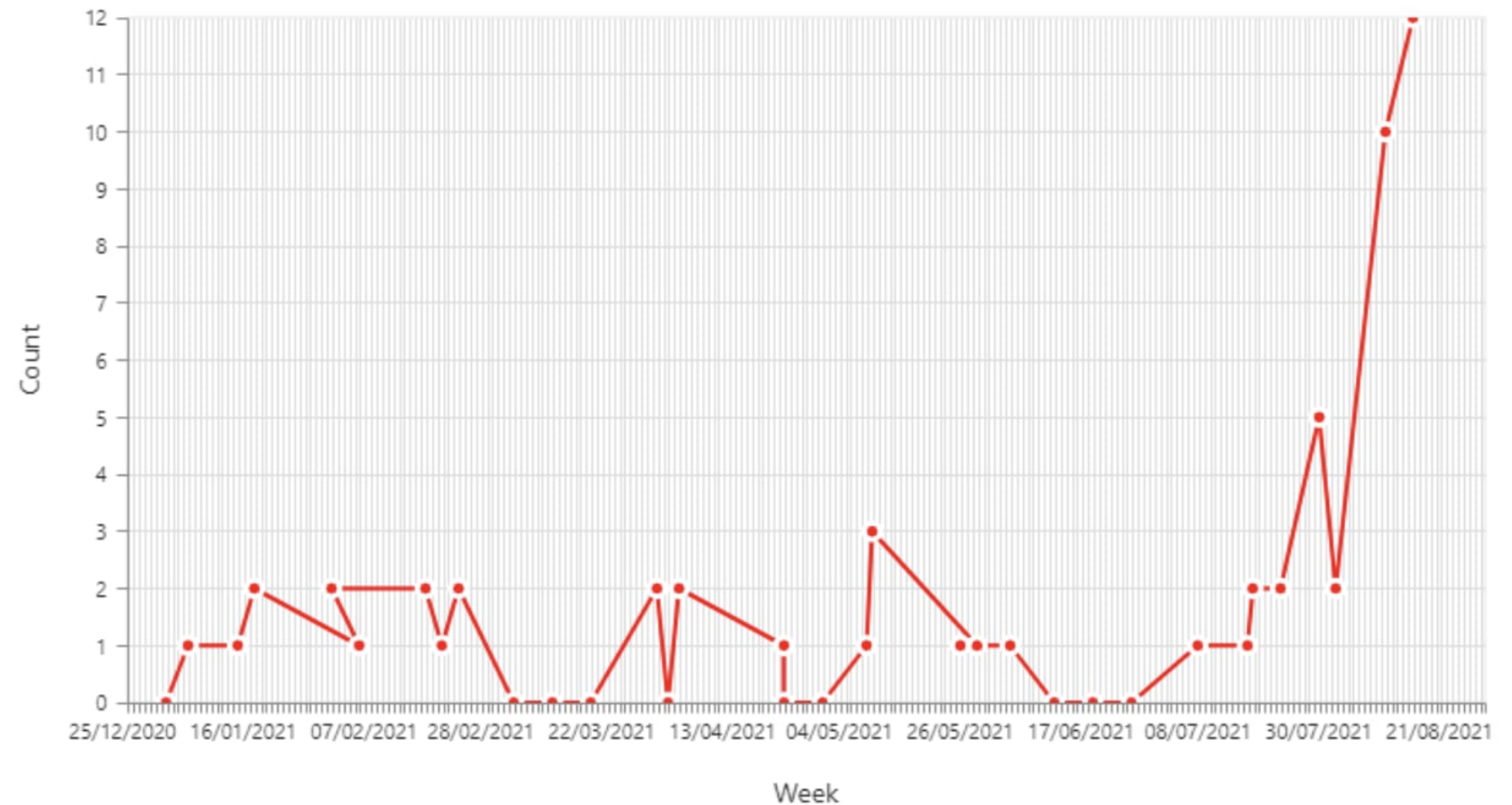
Figure: Estimated number of outpatient ivermectin prescriptions dispensed from retail pharmacies — United States, March 16, 2019–August 13, 2021*

*Data are from the IQVIA National Prescription Audit Weekly (NPA Weekly) database. NPA Weekly collects data from a sample of approximately 48,900 U.S. retail pharmacies, representing 92% of all retail prescription activity. Ivermectin dispensed by mail order and long-term care pharmacies, prescriptions by veterinarians, and non-oral formulations were not included.



Ivermectin

Calls to Poison Control
in Florida about
ivermectin exposure



COVID-19 and Reproductive Health in Men

- Prior evidence of SARS-CoV2 invasion in wide range of tissues during acute infection
- ACE-2 as well as TMPRSS2 expressed in testis tissue
- Other viruses (e.g. Zika, Ebola) can persist in male reproductive system
- COVID-19 infection can inflict endothelial and microvascular damage, potentially implicated in erectile dysfunction and/or male infertility
- Prior study: autopsy findings from 6 men who died of COVID-19: virus in the tissues and decreased sperm count
- Additional study of 2 men receiving penile implants for ED developed after COVID-19, compared to 2 men with no history of COVID-19. TEM found extracellular viral particles and viral RNA was detected by PCR in the COVID-19 survivors but not in the controls.

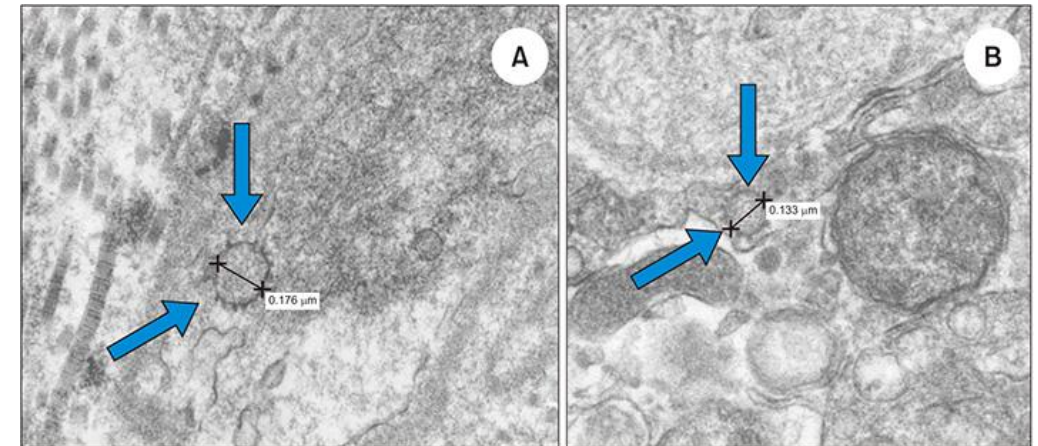
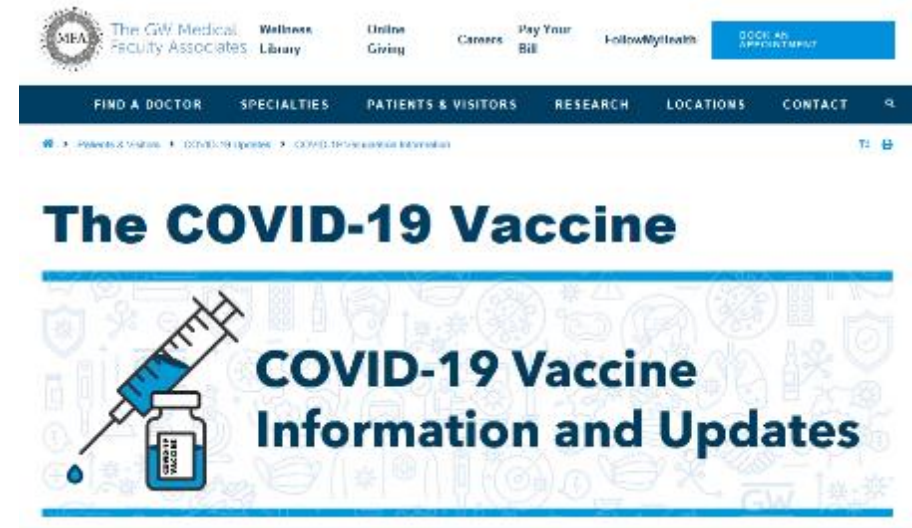


Fig. 1. Ultrastructure features of penile tissue from live seroconverted COVID-19 patients. (A) Coronavirus-like spoked viral particles (arrows) visualized via TEM in the peri-vascular erectile tissue of a live patient who had previously contracted the COVID-19 virus and subsequently seroconverted. Particle diameter measurement indicated on image. (B) Coronavirus-like spoked viral particles (arrows) visualized via TEM in the peri-vascular erectile tissue of a live patient who had previously contracted the Covid-19 virus and subsequently seroconverted. Particle diameter measurement indicated on image.

GW Updates



- **COVID-19 exposures:**
 - **MFA COVID** role on TigerText
 - Occupational Health will facilitate testing
 - University testing locations and IPC
- **COVID-19 isolation:**
 - Most situations: 10 days from test or symptoms
 - Immunocompromised or critically ill: 20 days
 - Major symptoms improve, afebrile 24hrs off antipyretics
 - If must see prior to this: see using COVID PPE protocols
- **All COVID-19 protocols:** <https://smhs.gwu.edu/covid-19>
- **COVID-19 mAb:** **see EUA eligibility, send to GW ED**
- **POC COVID tests (rapid antigen):** clinic managers can order



The screenshot shows the top navigation bar of The GW Medical Center website. The main header is "The COVID-19 Vaccine". Below it is a banner with a syringe and a vial, and the text "COVID-19 Vaccine Information and Updates". The banner is decorated with various medical icons.

<https://www.gwdocs.com/patients-visitors/covid-19-updates/covid-19-vaccination-information/>

DC Home Test Program

Test Yourself

[Register Your Test](#)

[Pick up locations](#)

[Drop box locations](#)

[Map](#)

[How to use your COVID-19 Home Testing Kit](#)

[FAQs](#)

[View this Map in Full Screen](#)

How to use your COVID-19 Home Testing Kit

- Take your COVID-19 Home Testing Kit home and prepare to test yourself
- Log onto testyourself.dc.gov
- Enter the BLUE numbers printed on your sample tube when prompted on the website
- Enter the RED numbers printed on your sample tube when prompted on the website
- Provide your name, demographic information, and insurance information, if applicable*
- Conduct a Nasal Self Swab (find the instructions on the reverse side of the kit)
- Package the kit as shown on the reverse side of the kit
- Drop off your test kit by **8 pm on the same day you take to your test** to closest drop box
- You will receive your results by email (and text, if you opt in)

*Insurance information is not required. By providing insurance information, the District of Columbia will seek reimbursement for the cost of testing from your insurance company. You will not be responsible for any charges, to include co-pays, regardless of whether you provide insurance information.

