



EPI WATCH

Monthly Epidemiology Newsletter



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Disease Reporting

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Get your flu vaccine at the 7th Annual Flu Boo!

While the COVID-19 pandemic has been dominating the news coverage, it's important to know that the 2020-2021 flu season started on September 27. During the last flu season, the Centers for Disease Control and Prevention (CDC) estimates that fewer than half of Americans received the flu vaccine and an estimated 39-56 million were infected with the flu, 410,000-740,000 were hospitalized, and 24,000-62,000 people died.

The best way to prevent the flu is to get vaccinated. This year, with the COVID-19 pandemic ongoing, getting the flu vaccine is more important than ever. The flu vaccine can reduce the burden of illness, hospitalizations, and deaths attributed to the flu and help to conserve medical care and supplies for persons with COVID-19.

The flu vaccine is recommended for all persons aged 6 months and older. Vaccination is particularly important for persons at high risk for complications from flu, including persons aged 65 years and older, young children, pregnant women, and people with chronic health conditions such as asthma, diabetes, or heart or lung disease.

The Florida Department of Health in Pinellas County (DOH-Pinellas) will be holding three Flu Boo events this year. Flu vaccines will be available from 5-7PM at the following locations:

- **Tuesday, Oct. 20: 205 Dr. Martin Luther King Jr. St. N. St Petersburg, FL 33701**
- **Wednesday, Oct. 21: 8751 Ulmerton Rd. Largo, FL 33771**
- **Thursday, Oct. 22: 310 N. Myrtle Ave. Clearwater, FL 33755**

The Flu Boo events are open to adults and children over the age of 3 and vaccines are offered at no cost. Vaccines are provided on a first come, first serve basis and appointments are not necessary.

For more information on Flu Boo or to fill out the registration form ahead of time, please visit the [DOH-Pinellas website](#).

References:

Centers for Disease Control and Prevention (2020). 2019-2020 U.S. Flu Season: Preliminary In-Season Burden Estimates. Retrieved from: <https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm>

International Infection Prevention Week, October 18-24

International Infection Prevention Week was established in 1986 and focuses on the importance of infection prevention in saving lives. Infection Preventionists (IPs) work to ensure that health care workers are practicing infection control before, during, and after patient care. This includes hand hygiene, environmental cleaning, wearing of proper personal protective equipment (PPE), safe injection practices, and the cleaning, disinfection, and sterilization of supplies.

If COVID-19 has taught the world anything, it is that infection prevention plays a vital part in mitigating the spread of disease. Throughout 2020, IPs have been looked to for guidance and leadership within their health care facilities. They have worked around the clock to ensure that health care staff can safely care for COVID-19 patients while continuing to provide care for persons with non-COVID related conditions. Next time you see an Infection Preventionist, say thank you for everything they are doing!

For more information on infection control, please visit [CDC Infection Control](#).

COVID-19 Update: Vaccine Clinical Trials

By Austin Morley– Sloan

The COVID-19 pandemic has prompted the government to enact “Operation Warp Speed,” incentivizing pharmaceutical companies to develop a safe, efficacious vaccine in record time. In the US, there are four major vaccine candidates that have entered Phase 3, large-scale clinical trials, with each company utilizing a different approach and dosing regimen for participants. All four vaccines had a similar safety profile, with the most commonly reported side effects being fatigue, headache, chills, body aches, and pain at the injection site, all of which are experienced with current, frequently used vaccines.

Moderna-NIH’s candidate is an mRNA vaccine that encodes a viral spike (S) protein necessary for host cell attachment and viral entry. Their vaccine is given in a two dose regimen 28-days apart. Phase 1&2 data, published in the *New England Journal of Medicine*, suggests that the vaccine has a clean safety profile and is relatively efficacious in protecting against COVID-19. In their most recent Phase 1 study, in adults 56-70 and 71+ years old, they found that their 100µg vaccine regimen elicits an appropriate immune response that is equivalent to their previous trial in adults 18-55 years old and may provide coverage against other strains of the virus. This is an important study that highlights the need for finding a vaccine that protects our most at-risk populations.

AstraZeneca-Oxford’s candidate is an adenovirus-vectored vaccine that expresses the viral S protein that was previously mentioned. Their regimen explores a one dose vaccine schedule with further research being performed on the necessity of a 2-dose regimen. Their candidate was compared against a commercially produced Meningococcal adenoviral-vector vaccine. The study also researched the effects prophylactic Tylenol had on side effects, detailing that it may improve tolerability and reduce confusion with COVID-19 symptoms. A Phase 3 trial was briefly paused, as per safety protocol, for an adverse neurological event in a participant who has since recovered, and their trials have restarted internationally.

BioNTech-Pfizer’s candidate is an mRNA vaccine that encodes the receptor-binding domain of the viral S protein. According to data from their Phase 1&2 trials, published in *Nature*, the advantage to their two dose regimen appears to be a smaller window of 21-days between injections with an accepted safety and reactogenicity profile. This candidate seems to be the front-runner for earliest release after brokering a \$1.95 billion deal with the US government for their first 100 million doses.

Finally, Johnson&Johnson-Janssen’s candidate is an adenoviral vector vaccine encoding the viral S protein. An important feature of their candidate is that it operates efficiently with a one dose regimen. Their completed clinical trial data was recently submitted for review but has not been published as of October 8. Their pre-print submission suggests that they shared the same relative safety profile and reactogenicity of the previously mentioned candidates. Another advantage, beyond a one dose regimen, appears to be a strong immune response within their small sample of 15-participants aged 65-years of age and older.



To date, each candidate has demonstrated the desired immune response and safety profile for a vaccine to reach mass-production; however, there are several considerations that are mutually shared for each clinical trial’s results. The Phase 3 trials are currently underway; therefore, generalizability of results will be vital. Next, it is imperative that future research of these candidates detail each vaccine’s ability to protect our most at-risk populations, primarily those in long-term care facilities, minority populations, and those from disadvantaged backgrounds. Finally, the long-term effects and protective nature of each vaccine must be thoroughly reviewed. These candidates provide a glimpse of hope for a return to a new normal after months of being ravaged by the COVID-19 pandemic. Please stay tuned for further developments.

For more information on the status of COVID-19 vaccines currently in development, you can visit the [New York Times Coronavirus Vaccine Tracker](#).

Additional information on COVID-19 vaccines can be found at [FDA COVID-19 Vaccines](#).

References:

Jackson L, Anderson E, Roupael N et al. An mRNA Vaccine against SARS-CoV-2 — Preliminary Report. *New England Journal of Medicine*. 2020. doi:10.1056/nejmoa2022483

Folegatti P, Ewer K, Aley P et al. Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial. *The Lancet*. 2020;396(10249):467-478. doi:10.1016/s0140-6736(20)31604-4

Mulligan, M.J., Lyke, K.E., Kitchin, N. et al. Phase I/II study of COVID-19 RNA vaccine BNT162b1 in adults. *Nature* (2020). <https://doi.org/10.1038/s41586-020-2639-4>

A Study of Ad26.COV2.S for the Prevention of SARS-CoV-2-Mediated COVID-19 in Adult Participants - Full Text View - ClinicalTrials.gov. <https://clinicaltrials.gov/ct2/show/NCT04505722>. Published 2020. Accessed October 9, 2020.

Select Reportable Diseases in Pinellas County

Disease	Pinellas		YTD Total		Pinellas Annual Totals		
	September 2020	September 2019	Pinellas 2020	Florida 2020	2019	2018	2017
A. Vaccine Preventable							
Measles	0	0	0	1	1	7	0
Mumps	0	1	1	50	7	10	3
Pertussis	0	3	8	205	27	32	36
Varicella	0	1	15	276	33	67	24
B. CNS Diseases & Bacteremias							
Creutzfeldt-Jakob Disease (CJD)	0	0	0	10	3	1	2
Meningitis (Bacterial, Cryptococcal, Mycotic)	0	0	2	63	7	9	7
Meningococcal Disease	0	0	2	16	1	1	0
C. Enteric Infections							
Campylobacteriosis	21	28	179	2577	310	264	207
Cryptosporidiosis	8	8	31	224	64	34	40
Cyclosporiasis	2	0	8	127	28	4	6
<i>E. coli</i> Shiga Toxin (+)	0	3	6	329	24	15	22
Giardiasis	4	5	22	517	52	41	45
Hemolytic Uremic Syndrome (HUS)	0	0	0	2	1	0	0
Listeriosis	0	0	2	31	2	1	0
Salmonellosis	27	21	135	4467	201	233	279
Shigellosis	1	2	15	438	22	40	26
D. Viral Hepatitis							
Hepatitis A	0	19	4	841	377	113	1
Hepatitis B: Pregnant Woman	1	2	15	266	24	14	25
Hepatitis B, Acute	2	7	24	422	72	52	51
Hepatitis C, Acute	11	3	85	1227	82	40	30
E. Vector Borne/ Zoonoses							
Animal Rabies	0	1	0	60	2	1	3
Rabies, possible exposure	9	7	87	2499	128	130	140
Chikungunya Fever	0	0	0	0	0	0	0
Dengue	0	0	1	97	3	0	0
Eastern Equine Encephalitis	0	0	0	0	0	0	0
Lyme Disease	3	3	9	102	22	14	19
Malaria	0	0	1	15	5	3	0
West Nile Virus	0	0	0	76	0	0	0
Zika Virus Disease	0	0	0	1	3	2	5
F. Others							
Chlamydia	312	417	2538	n/a	4588	4422	418
Gonorrhea	149	136	985	n/a	1537	1439	1574
Hansen's Disease	0	0	0	23	0	0	0
Legionellosis	7	6	27	624	43	37	28
Mercury Poisoning	1	0	1	9	1	1	1
Syphilis, Total	37	42	270	n/a	479	438	382
Syphilis, Primary and Secondary	13	19	117	n/a	213	190	160
Syphilis, Early Latent	17	19	103	n/a	191	158	128
Syphilis, Congenital	0	0	2	n/a	6	2	5
Syphilis, Late Syphilis	7	4	48	n/a	69	88	89
Tuberculosis	4	1	17	n/a	23	33	28
<i>Vibrio</i> Infections	1	2	10	145	18	6	11

*YTD up to August 1, 2020. n/a = not available at this time

Reportable diseases include confirmed and probable cases only. All case counts are current and provisional. Data is collected from the Merlin Reportable Disease database, surveillance systems maintained at the Florida Department of Health in Pinellas County, and Florida CHARTS <http://www.floridacharts.com/charts/default.aspx>. STD data in STARS is continually updated. Please note, data from the previous month takes up to an additional month or more to be correctly updated.