The Thing About Boosters

This meeting will be recorded and will be available at www.fmda.org/journalclub.php

FMDA Journal Club

September 22, 2021
Swati Gaur MD, MBA, CMD, AGSF – Special Guest
Diane Sanders-Cepeda, DO, CMD – Host

The Thing about Boosters

Swati Gaur MD MBA CMD
AGSF

- Dr Gaur has no financial disclosures

Objectives

- Discuss the current guidance and clinical research surrounding 3rd shots/boosters
- Unpack the ethical considerations associated with boosters
- Identify how we in the in PALTC community should be approaching boosters for our PALTC residents and geriatric patients

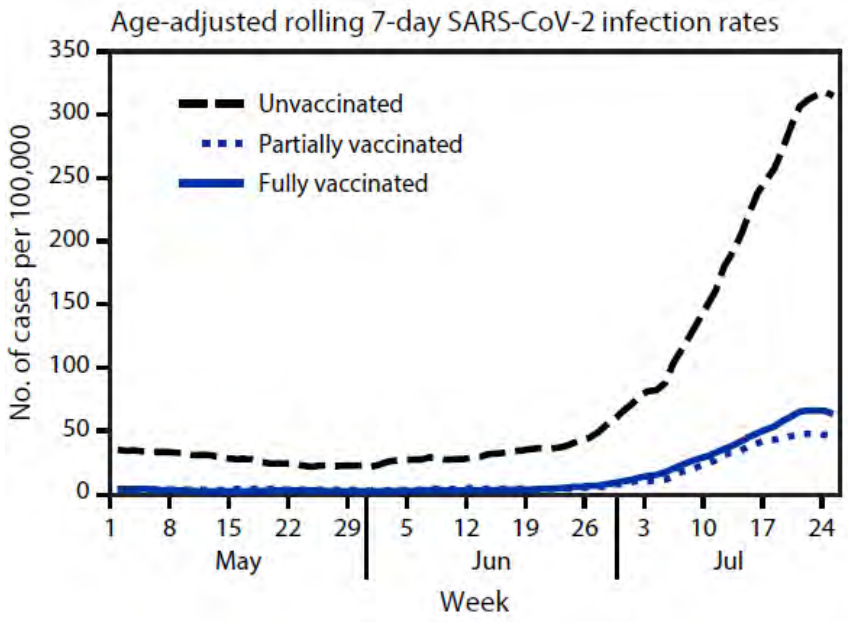
What is the vaccination percentage in your community?

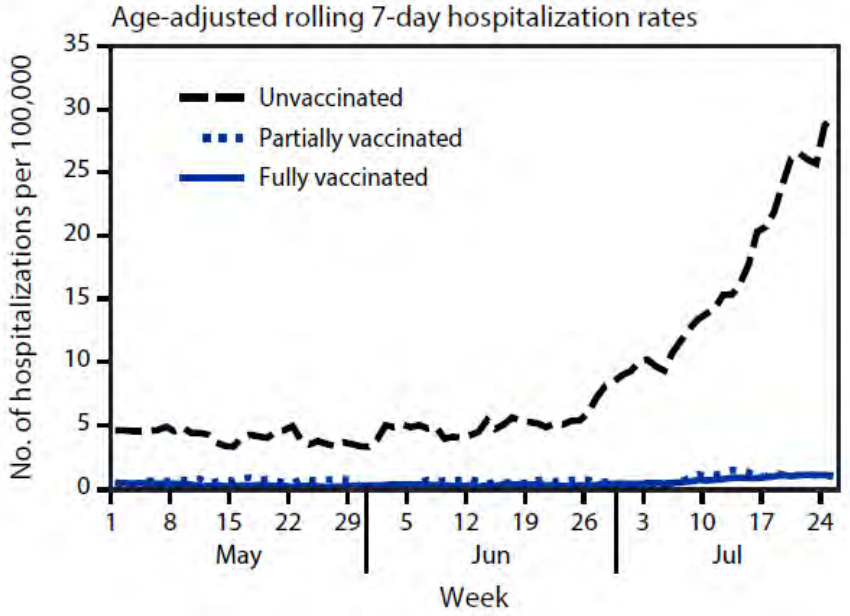
- <30%
- 30-50 %
- 50-70 %
- >70%

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Early Release / Vol. 70
August 24, 2021

SARS-CoV-2 Infections and Hospitalizations Among Persons Aged ≥16 Years, by Vaccination Status — Los Angeles County, California, May 1–July 25, 2021

Jennifer B. Griffin, PhD[1]; Meredith Haddix, MPH[1]; Phoebe Danza, MPH[1]; Rebecca Fisher, MPH[1]; Tae Hee Koo, MPH[1]; Elizabeth Traub, MPH[1]; Prabhu Gounder, MD[1]; Claire Jar



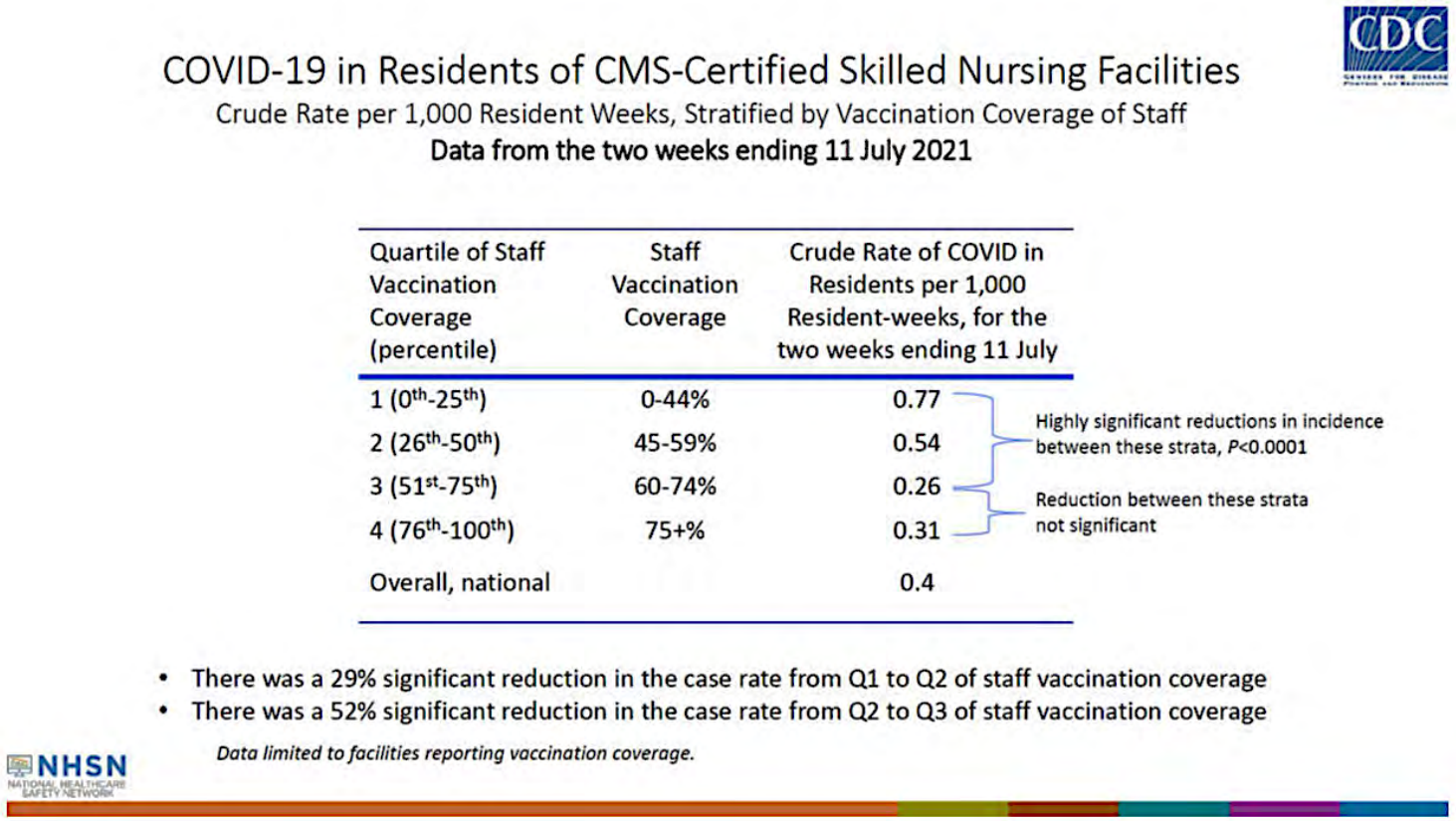


What is the rate of vaccination in your staff?

- 0-44%
- 45-59%
- 60-75%
- >75%

Why is rate of vaccination important?

66% reduction in cases if staff vax is >60-75%vs <44% staff vax



COVID-19 in Residents of CMS-Certified Skilled Nursing Facilities

Crude Rate per 1,000 Resident Weeks, Stratified by Vaccination Coverage of Staff

Data from the two weeks ending 11 July 2021

Quartile of Staff Vaccination Coverage (percentile)	Staff Vaccination Coverage	Crude Rate of COVID in Residents per 1,000 Resident-weeks, for the two weeks ending 11 July
1 (0th-25th)	0-44%	0.77
2 (26th-50th)	45-59%	0.54
3 (51st-75th)	60-74%	0.26
4 (76th-100th)	75+%	0.31
Overall, national		0.4

Highly significant reductions in incidence between these strata, $P<0.0001$

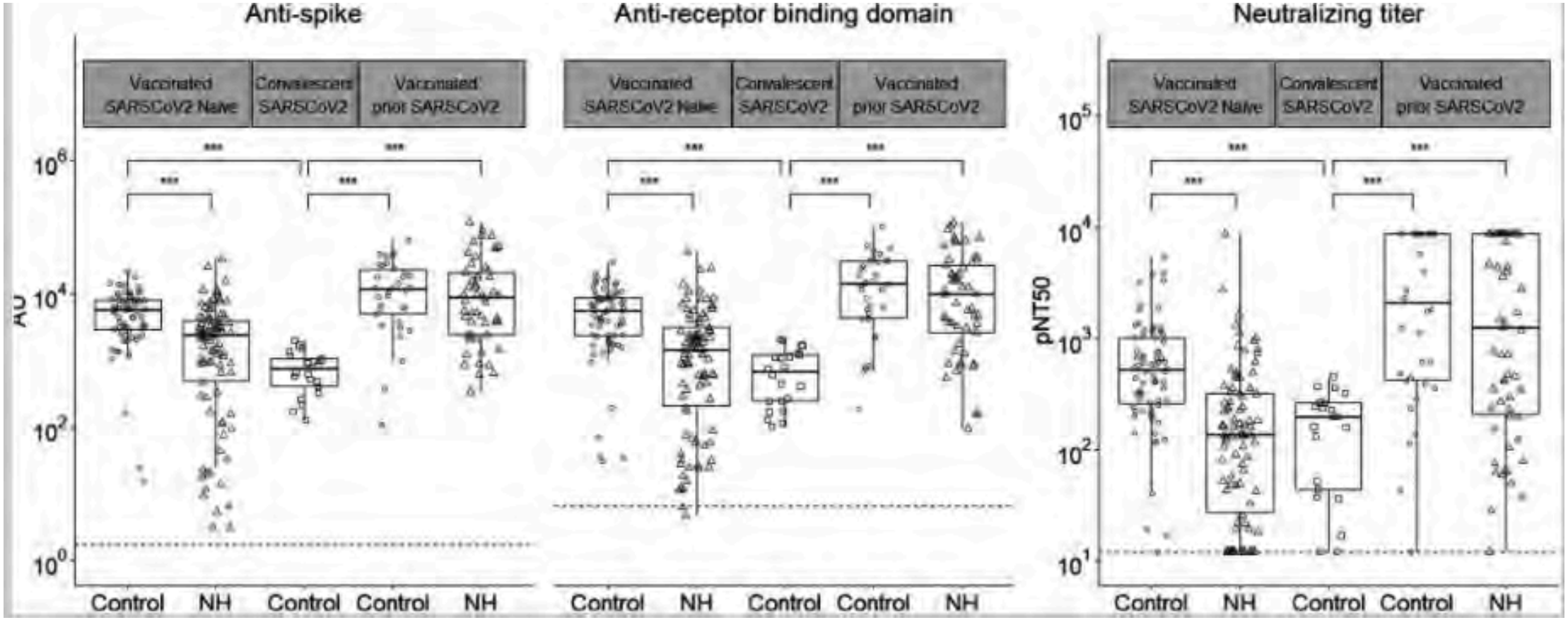
Reduction between these strata not significant

- There was a 29% significant reduction in the case rate from Q1 to Q2 of staff vaccination coverage
- There was a 52% significant reduction in the case rate from Q2 to Q3 of staff vaccination coverage

Data limited to facilities reporting vaccination coverage.

NHSN NATIONAL HEALTHCARE SAFETY NETWORK

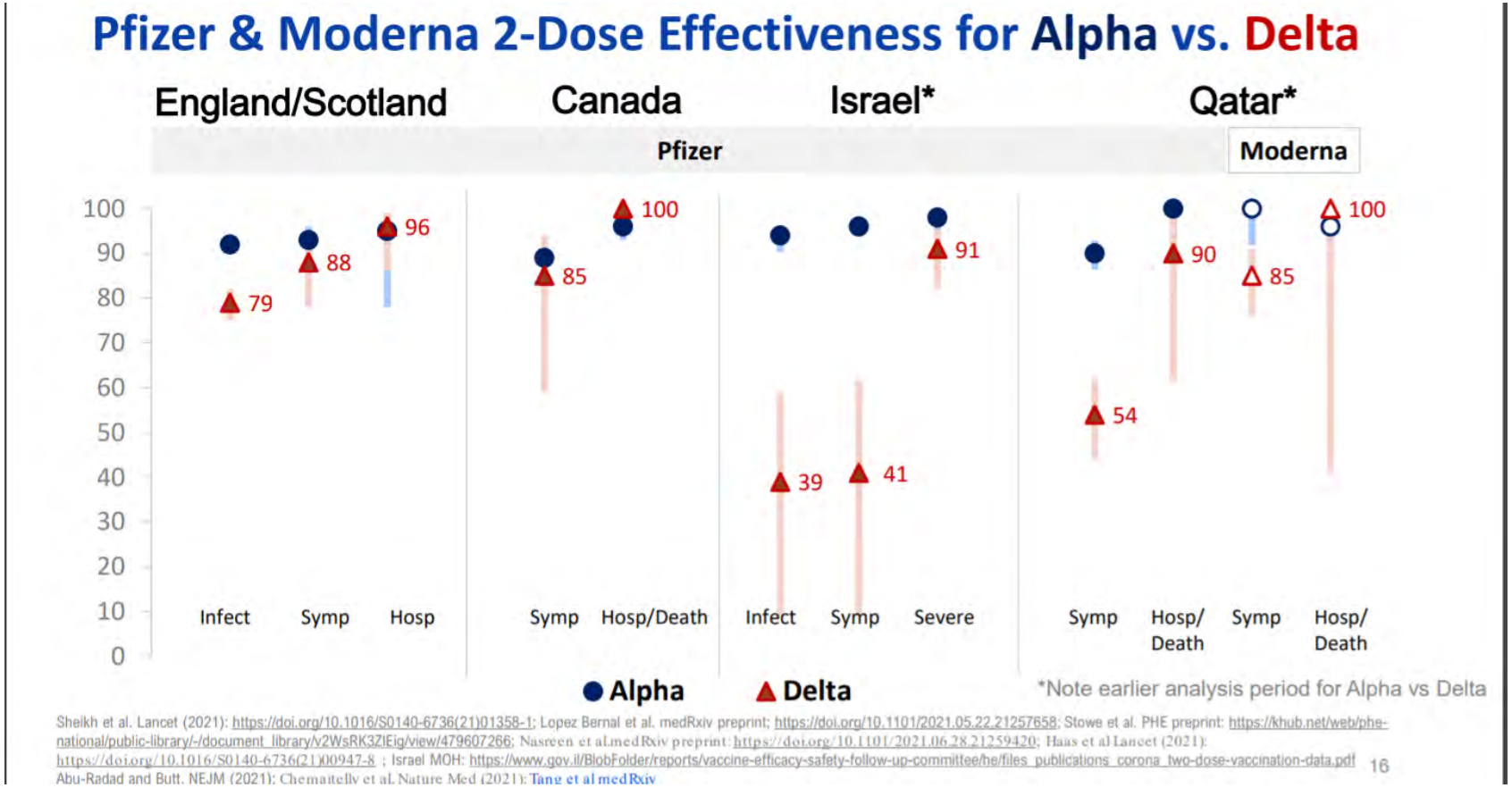
Why does it happen? Immunity in older adults



Canaday etal

Real world data on immunity over time

ACIP meeting, August 13, 21



Sheikh et al. Lancet (2021): https://doi.org/10.1016/S0140-6736(21)01358-1; Lopez Bernal et al. medRxiv preprint; https://doi.org/10.1101/2021.05.22.21257658; Stowe et al. PHE preprint: https://khub.net/web/phe-national/public-library/-/document_library/v2WsRK3ZlEig/view/479607266; Nasreen et al.medRxiv preprint: https://doi.org/10.1101/2021.06.28.21259420; Haas et al Lancet (2021): https://doi.org/10.1016/S0140-6736(21)00947-8 ; Israel MOH: https://www.gov.il/BlobFolder/reports/vaccine-efficacy-safety-follow-up-committee/he/files_publications_corona_two-dose-vaccination-data.pdf Abu-Radad and Butt. NEJM (2021); Chemaitelly et al. Nature Med (2021); Tang et al medRxiv

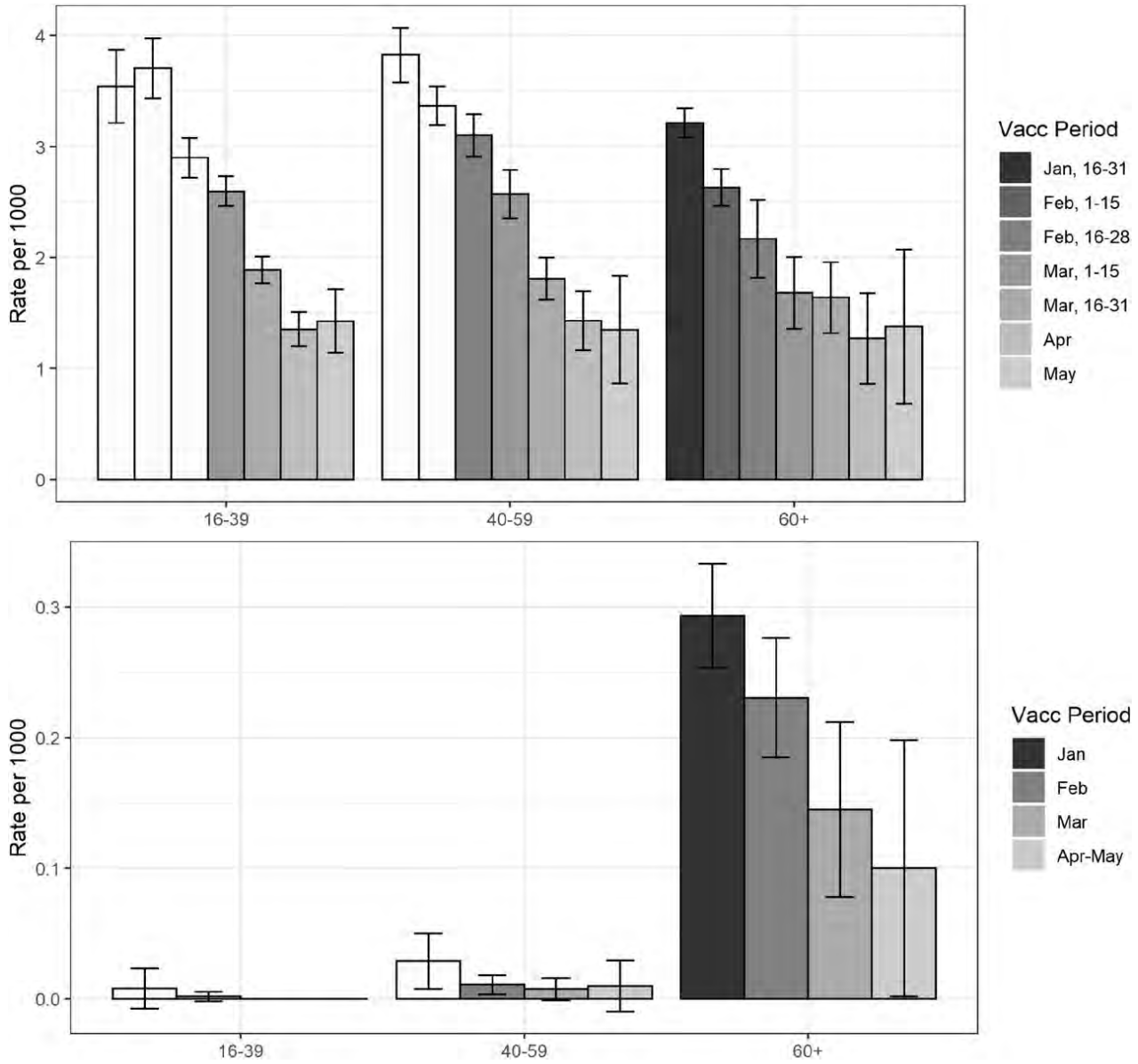
Immunity of the same LTC group in 6 months

- http://medrxiv.org/lookup/doi/10.1101/2021.08.15.21262067

Supplemental Table 1. Proportion at the lower limit of detection (LLD, 1:12 titer) with pseudovirus neutralization assay (pNT50).

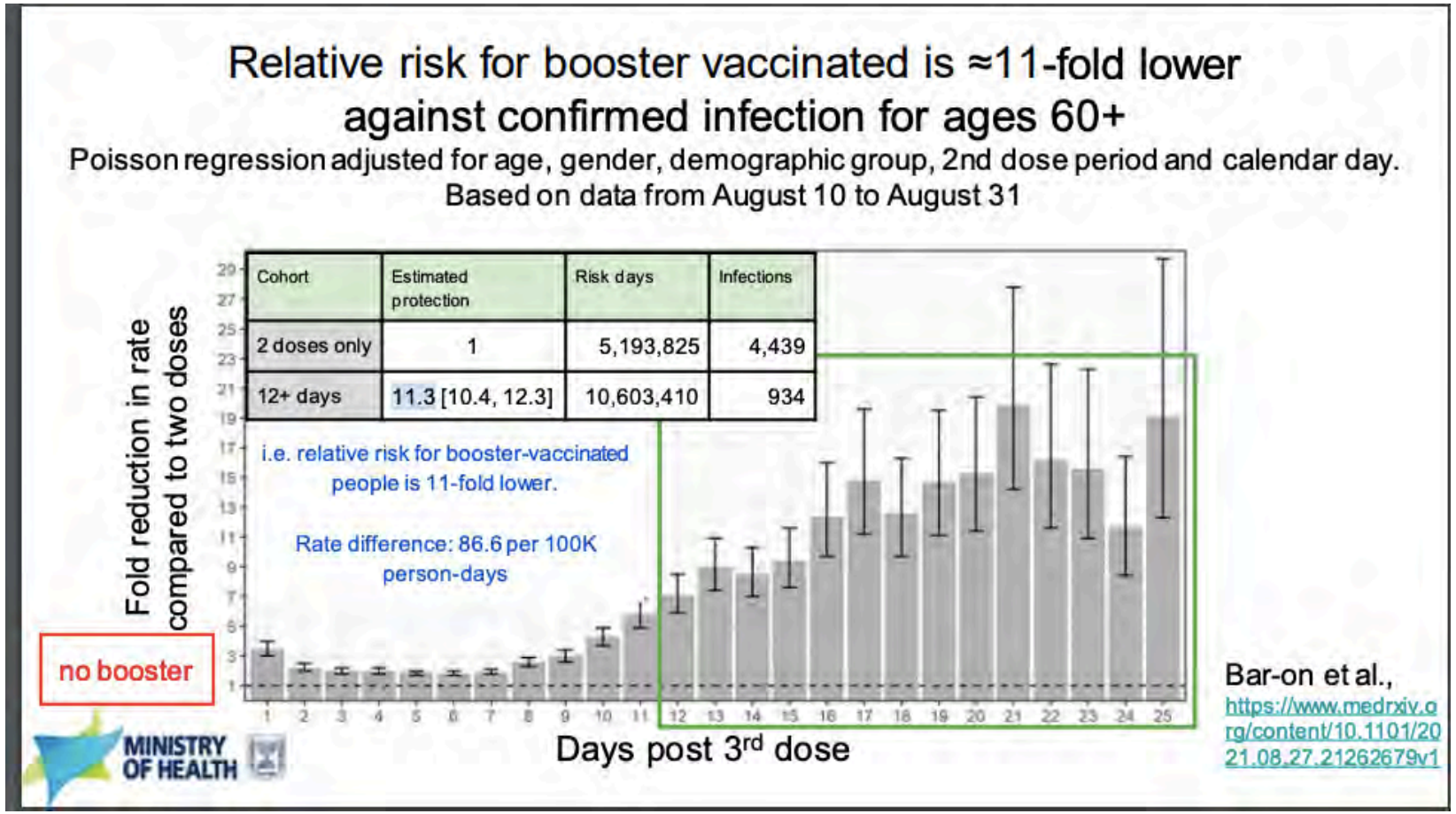
	2 weeks post-vaccination	Fisher's exact test *p*-value	6 months post-vaccination	Fisher's exact test *p*-value
Naïve				
Control	1/64 (2%)	0.005	10/64 (16%)	<0.001
NH resident	11/73 (16%)		51/73 (70%)	
Prior infection				
Control	0/26	NS	5/26 (19%)	0.19
NH resident	0/43		15/43 (35%)	

Israel data:



https://www.medrxiv.org/content/10.1101/2021.08.24.21262423v1.full-text

Israel Study: VRBPAC hearing Sept 17



Implications for LTC: residents and HCW

Table 2. Primary Outcomes of Confirmed Infection and Severe Illness.*

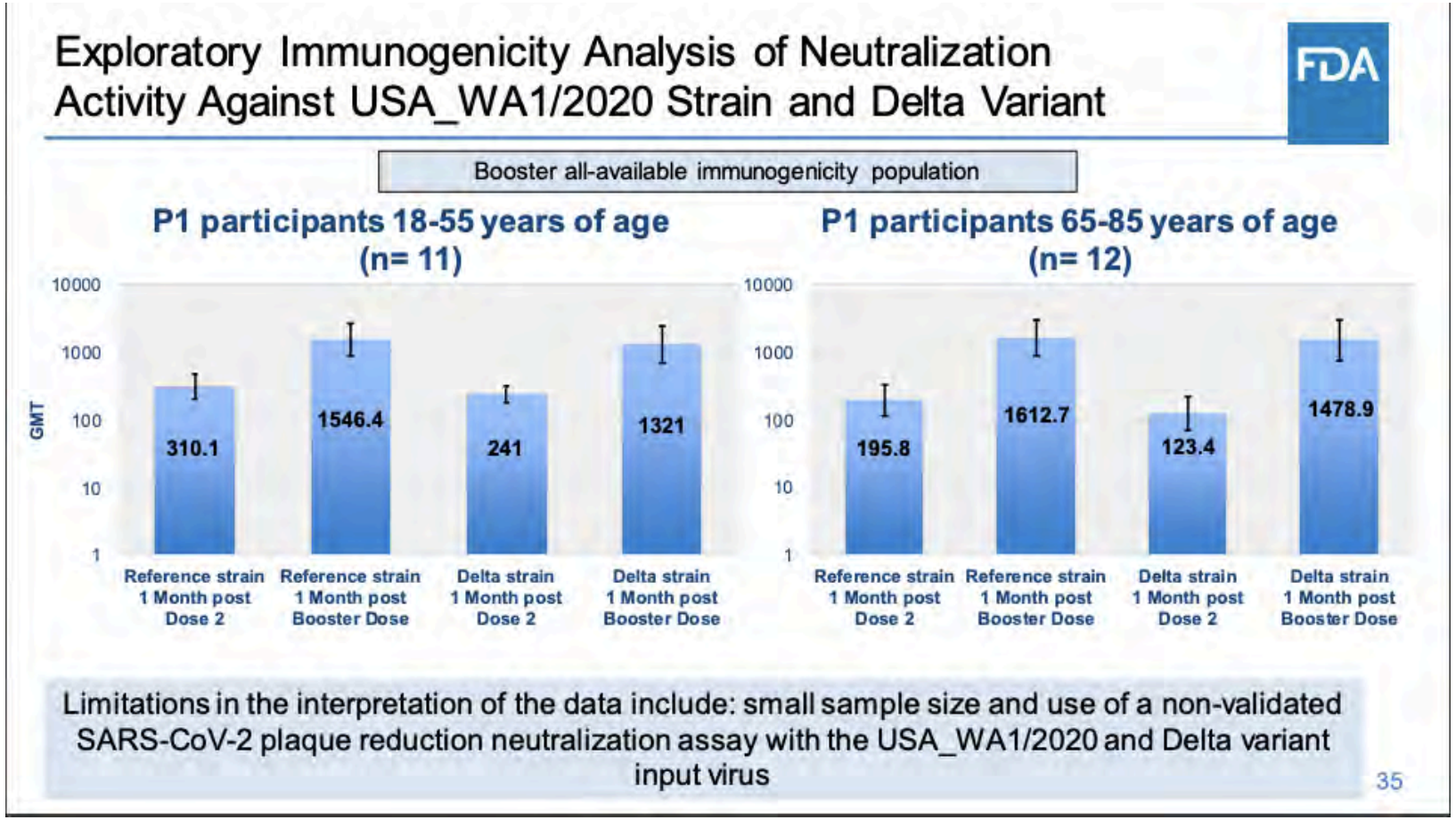
Outcome	Nonbooster Group	Booster Group	Adjusted Rate Ratio (95% CI)†
Confirmed infection			11.3 (10.4 to 12.3)
No. of cases	4439	934	
No. of person-days at risk	5,193,825	10,603,410	
Severe illness			19.5 (12.9 to 29.5)
No. of cases	294	29	
No. of person-days at risk	4,574,439	6,265,361	

* Listed are the results of the Poisson regression analysis in participants who received a booster vaccine and in those who did not receive a booster. The booster group includes data that were obtained at least 12 days after receipt of the booster dose.

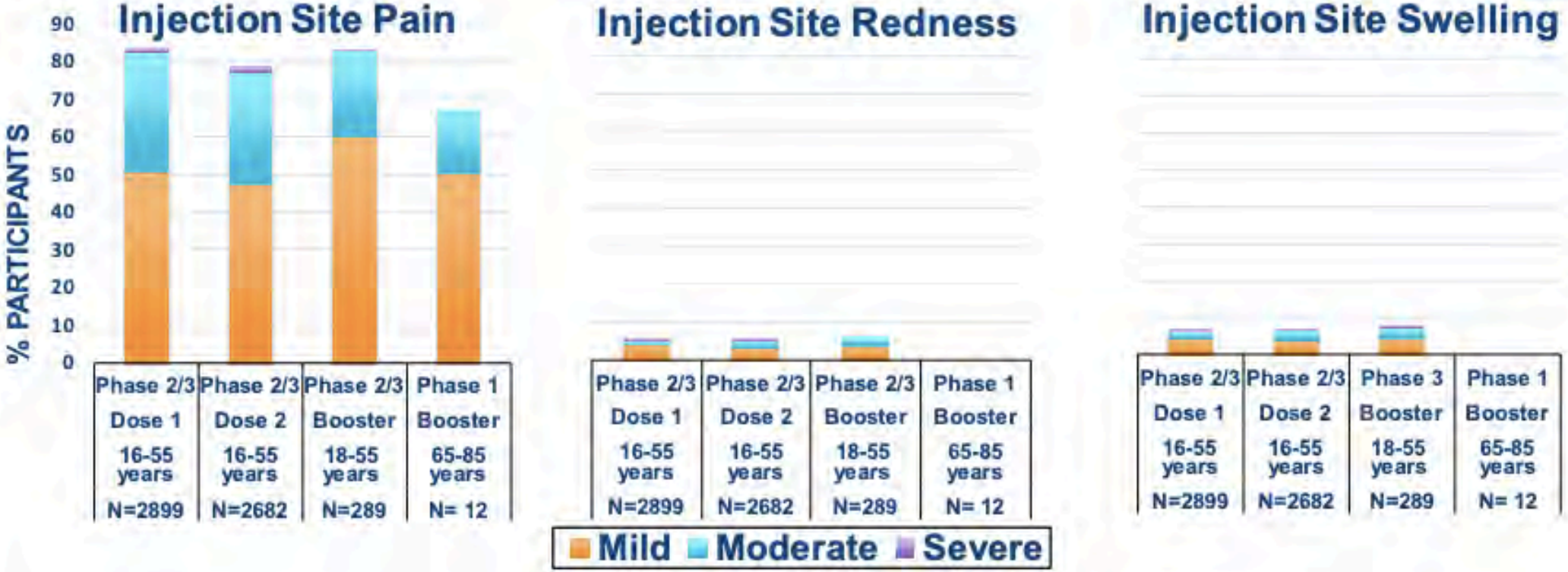
† The rate ratio is the estimated factor reduction in the rate in the booster group as compared with the rate in the nonbooster group.

YM Bar-On et al. N Engl J Med 2021. DOI: 10.1056/NEJMoa2114255

VRBPAC hearing Sept 17: Pfizer data

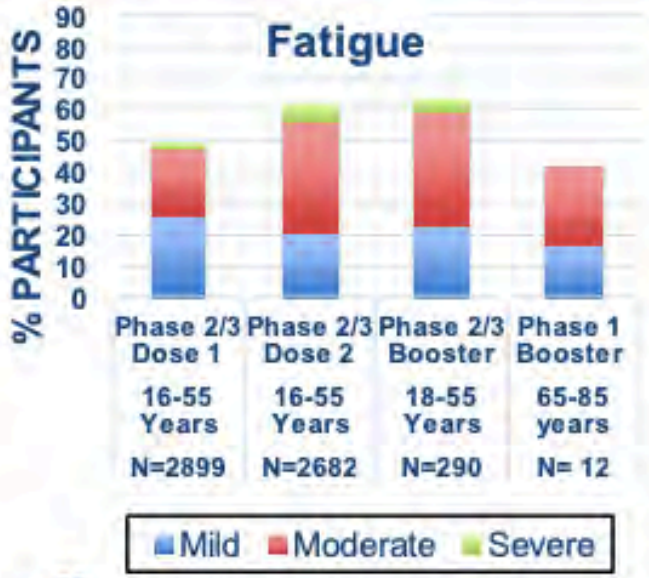


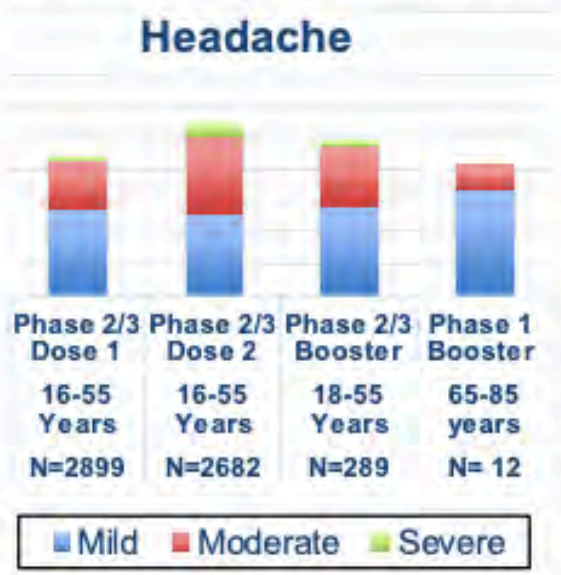
Safety: Local Reactogenicity (7 Days After Each Dose)



Phase 2/3 Dose 1 and 2 participants from reactogenicity subset; N= number of paticipants reporting at least 1 yes or no response for the specified reaction after the specified dose.

Safety: Systemic Reactogenicity (7 Days After Each Dose)



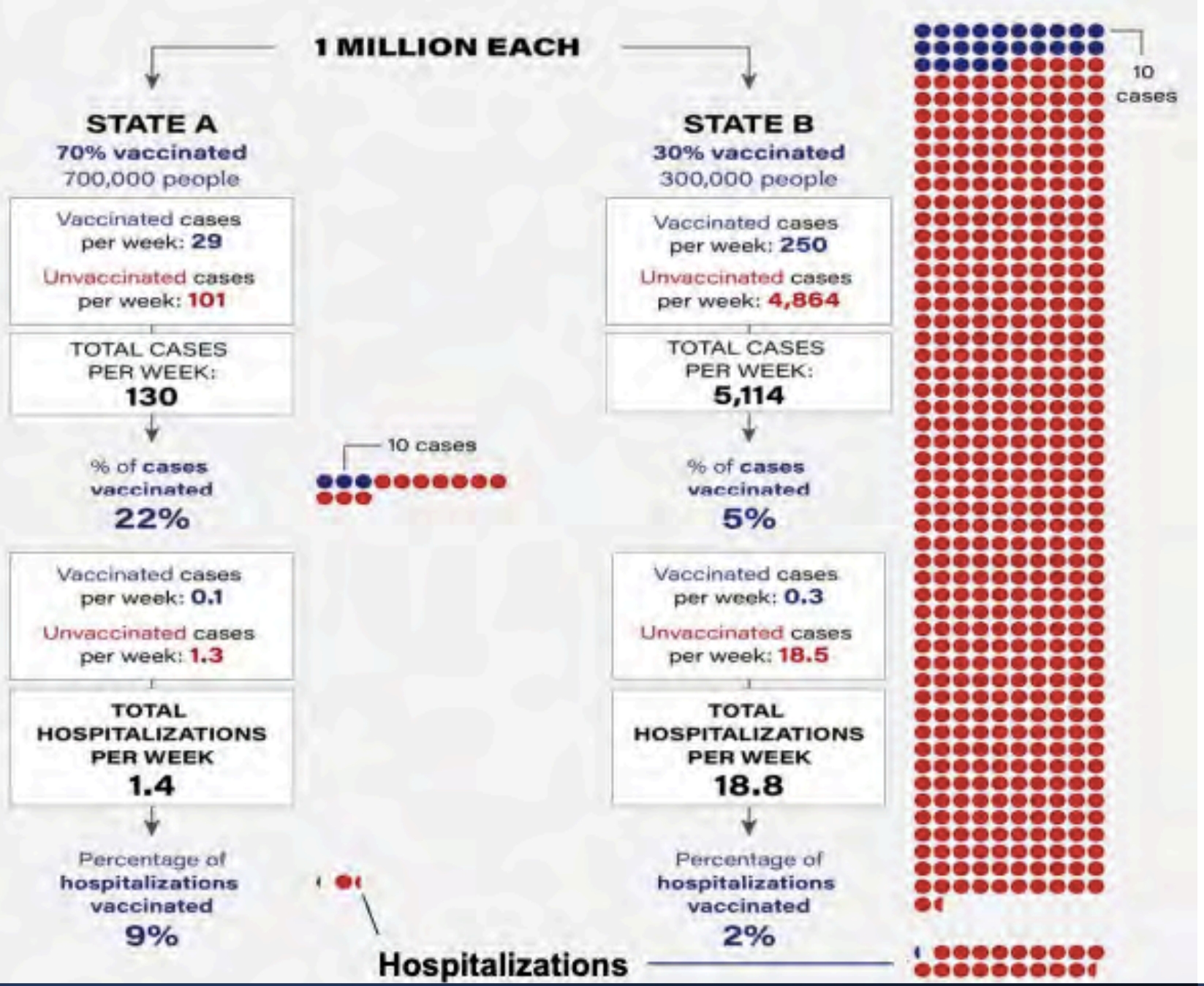


Phase 2/3 Dose 1 and 2 participants from reactogenicity subset

N= number of participants reporting at least 1 yes or no response for the specified reaction after the specified dose

Mild= does not interfere with activity; Moderate= some interference with activity; Severe= prevents

Ethical Considerations

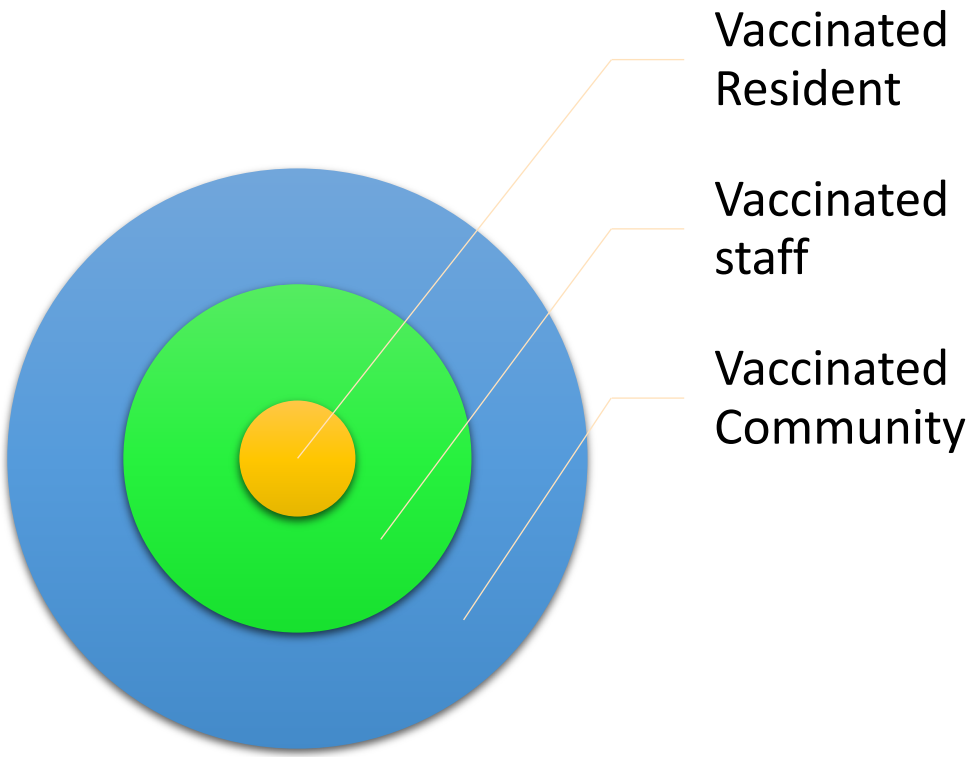


Understanding Breakthrough Cases

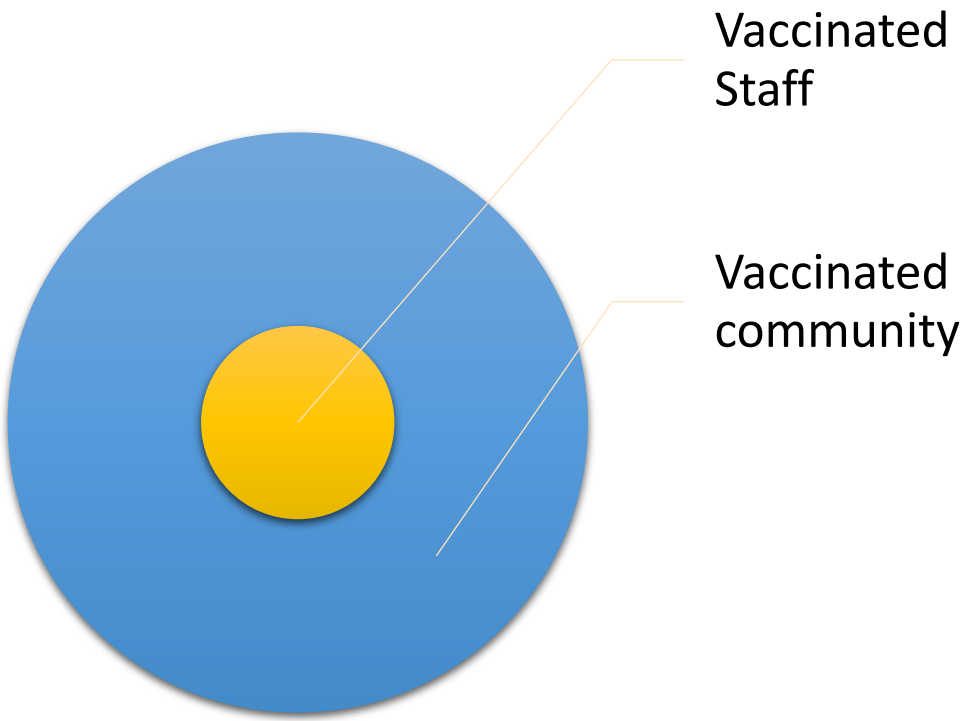
- Less vaccination= less community level protection
- More transmission
- More Unvaccinated
- Some vaccinated
- More hospitalization
- More deaths

Vaccination is our #1, 2, 3 strategy

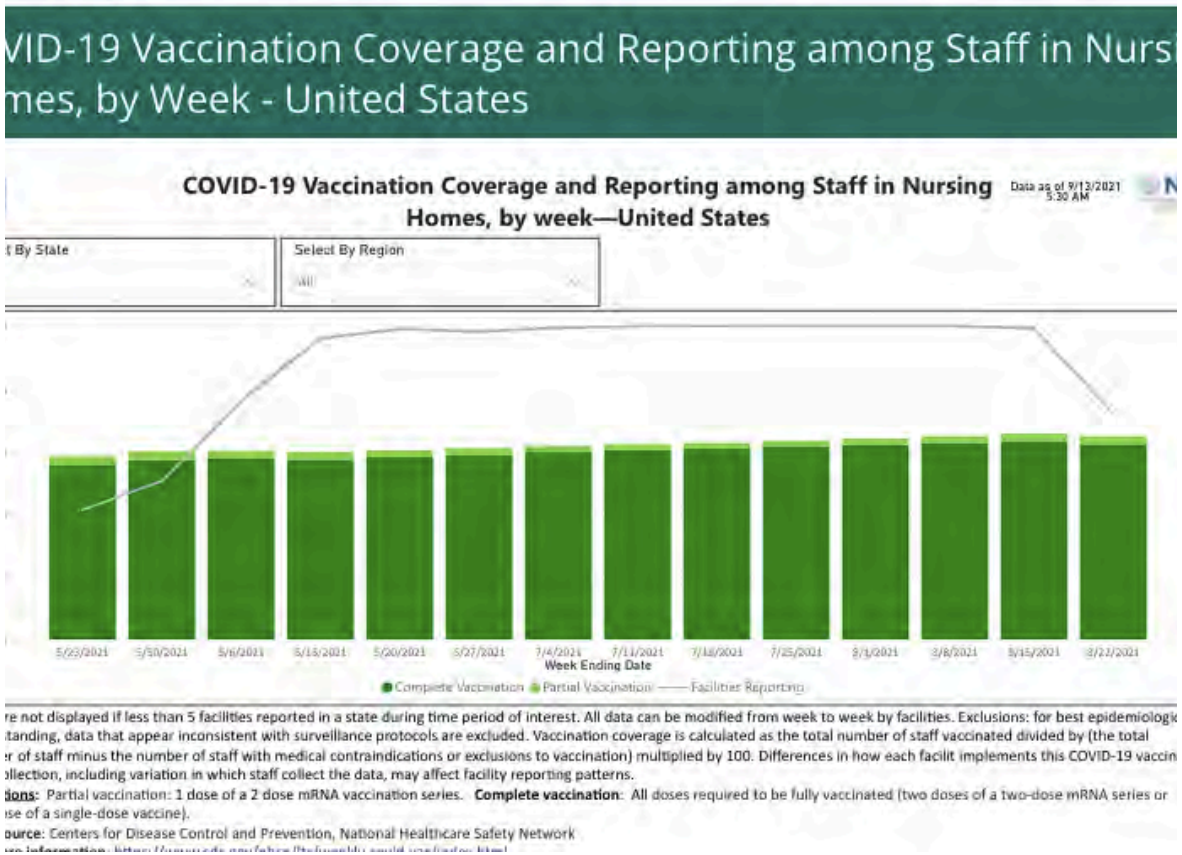
Protecting our residents

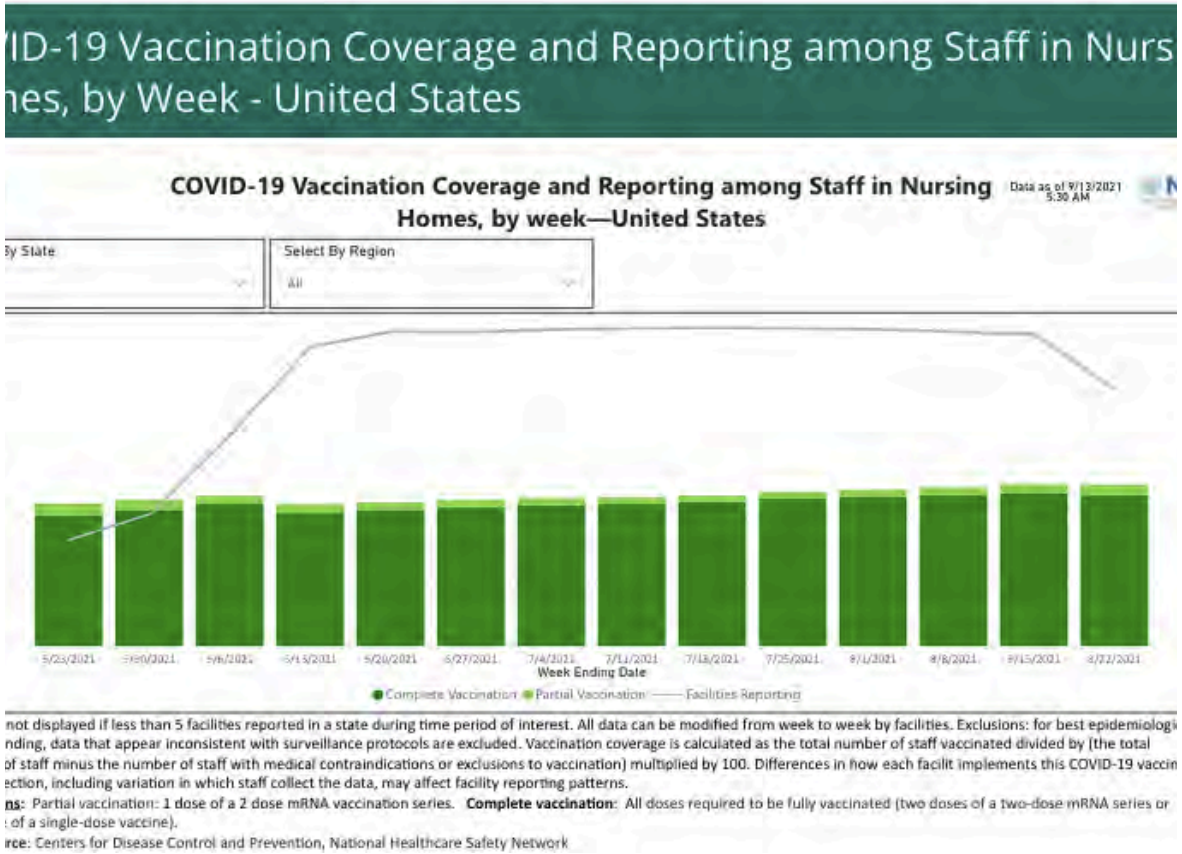


Protecting our staff



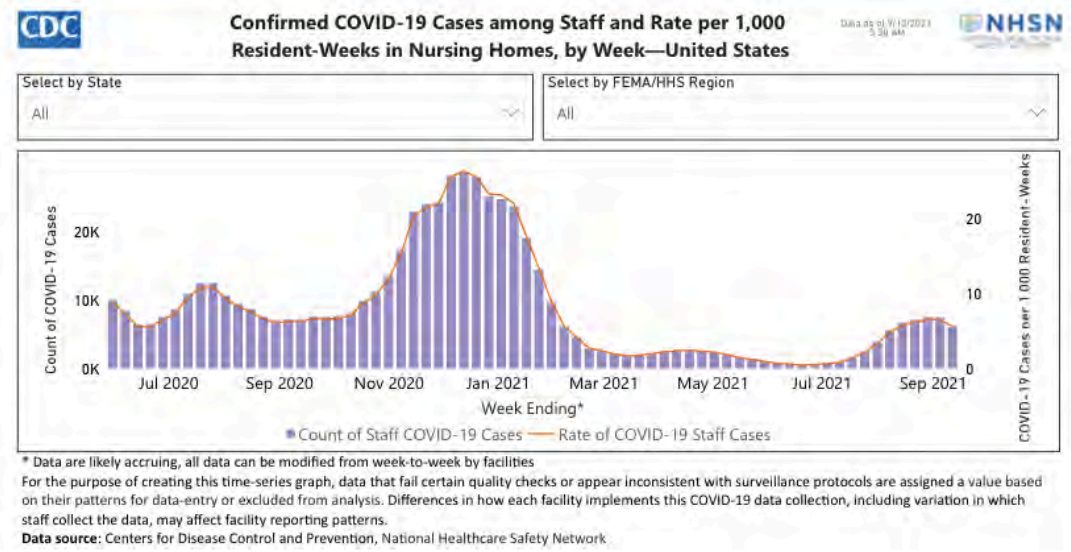
Staff Vaccination rates: US vs FL





Staff COVID-19 rates: US vs FL

Confirmed COVID-19 Cases among Staff and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States



* Data are likely accruing, all data can be modified from week-to-week by facilities

For the purpose of creating this time-series graph, data that fail certain quality checks or appear inconsistent with surveillance protocols are assigned a value based on their patterns for data-entry or excluded from analysis. Differences in how each facility implements this COVID-19 data collection, including variation in which staff collect the data, may affect facility reporting patterns.

Data source: Centers for Disease Control and Prevention, National Healthcare Safety Network

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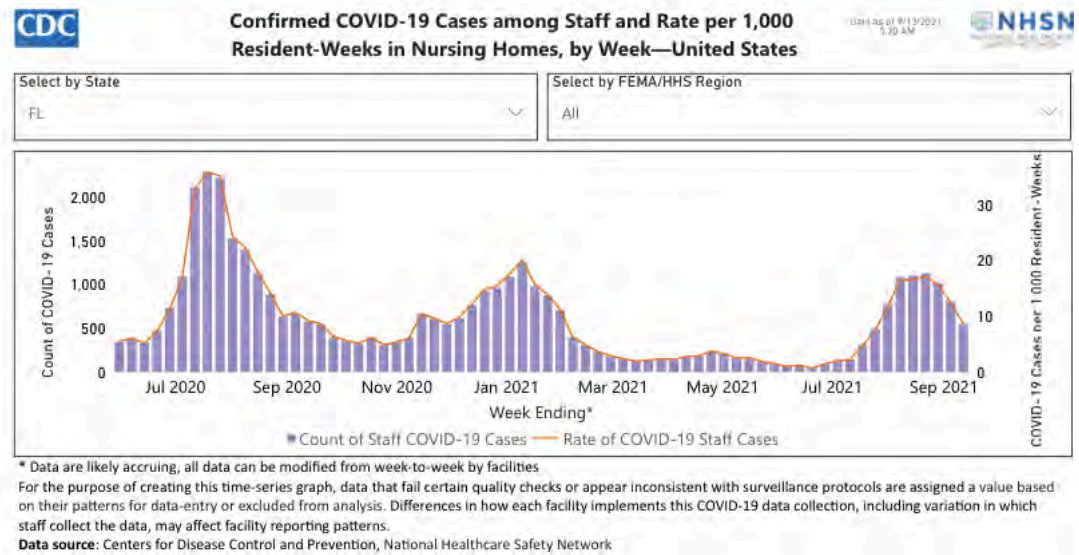

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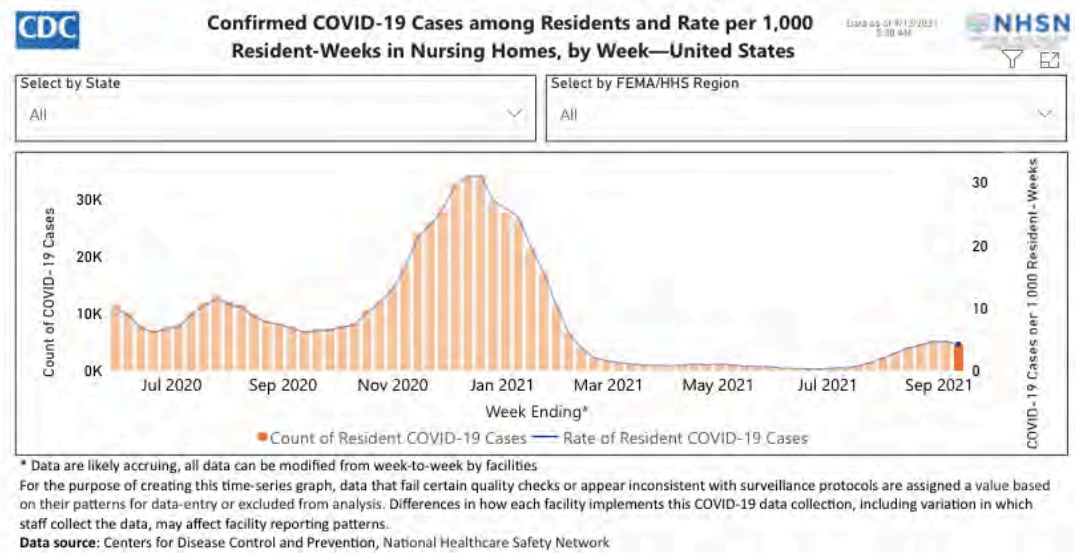
Resident COVID-19 cases: US vs FL

Confirmed COVID-19 Cases among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States



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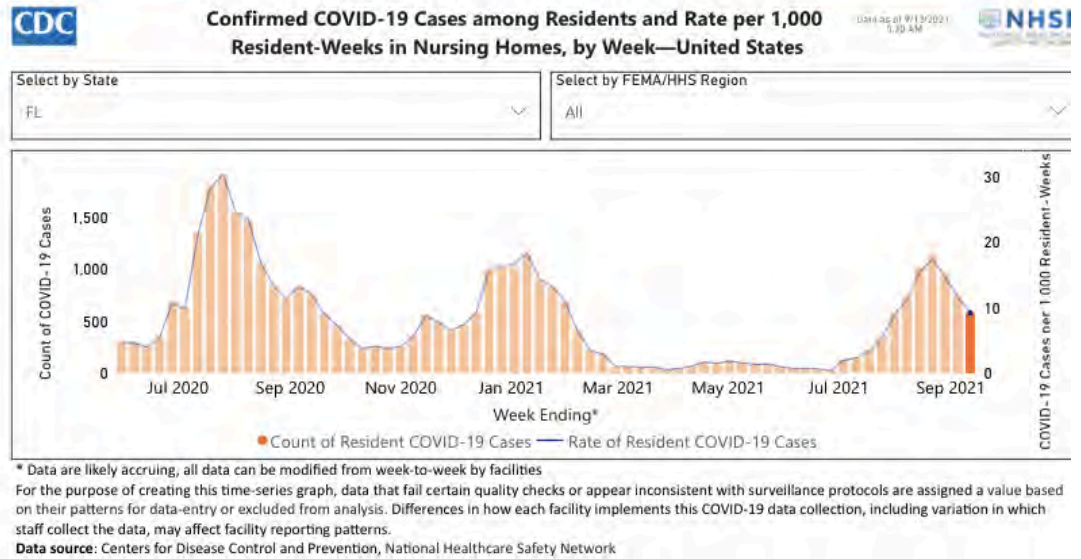

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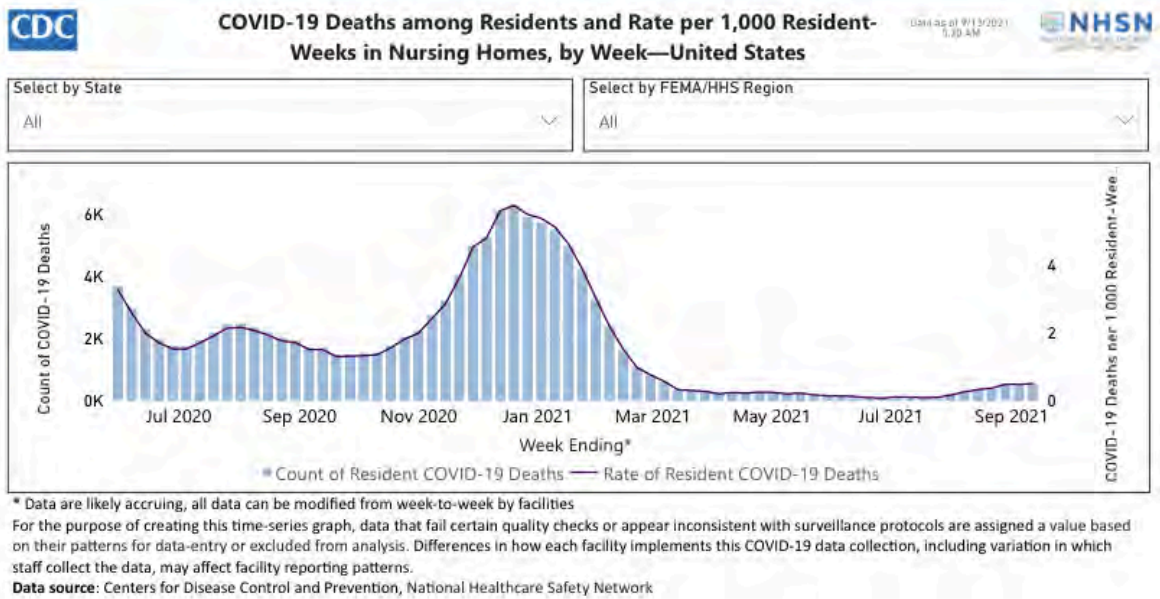
Resident COVID-19 deaths: US vs FL

COVID-19 Deaths among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States



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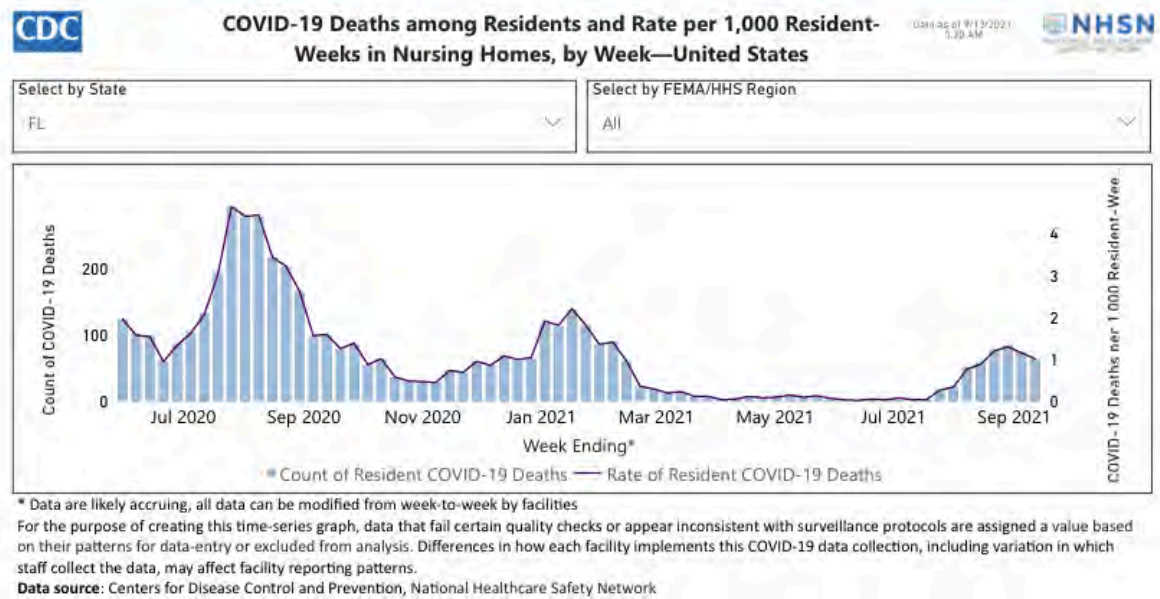

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How we prepare: Boosters in LTC

Unanswered questions:

- Does the data of Pfizer vaccine apply to Moderna?
- Do we give the same vaccine or a different vaccine is acceptable?

Coadministration of Influenza and COVID-19 vaccine

Coadministration of Influenza Vaccines with COVID-19 Vaccines

- ACIP influenza statement cites current *Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States:*
  - States that COVID-19 vaccines may be administered without regard to timing of other vaccines.
  - Vaccines administered at the same visit should be given at different sites (separated by an inch or more, if possible).
  - If COVID-19 vaccines are given with vaccines that might be more likely to cause a local reaction (e.g., high-dose or adjuvanted influenza vaccines), administer in separate limbs, if possible.
- Notes that providers should check current CDC COVID-19 vaccination guidance for updated information concerning coadministration.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fvaccines%2Fcovid-19%2Finfo-by-product%2Fclinical-considerations.html#Coadministration

https://emergency.cdc.gov/coca/ppt/2021/090921_slide.pdf

Vaccine logistics

Your team

1. Consultant pharmacist
2. DON/ Nurse leadership
3. Medical director

- ❑ Tabulate the type of prime vaccine series – (data on heterologous?)
- ❑ Coordinate with consultant pharmacist on vaccine supply
- ❑ Schedule date of ‘vaccine clinic’
- ❑ Consents/ Assent
- ❑ Staffing logistics
- ❑ Educate staff on observation and assessment of anaphylaxis
- ❑ E Kit for vaccine
- ❑ Vaccine reporting

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html

Thank You!

Questions…

The Florida Society For Post-Acute And Long-Term Care Medicine

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Best Care Practices
In the Post-Acute & Long-Term Care Continuum

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