

# Current Status of the Covid-19 Outbreak

*OLLI Coffee Hour*

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*08 February 2021*

# Initial Topics for Today's Discussion

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1. What is the current status of the outbreak?
2. What will the ending of the outbreak look like?
3. Will new variants be a problem?
4. What is the time from vaccination to protection?
5. Can people shed virus after vaccination?
6. Will delayed second dose still be effective?

# Current Status of the Outbreak

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- U.S. cases down 30%; hospitalizations down 25%; deaths down 5%
- Illinois cases down 39%; hospitalizations down 27%; deaths down 26%
- Champaign slow, secular decline for all three
- U.S. currently immunizing 1.3 million people per day

# Coronavirus in the U.S.: Latest Map and Case Count

Updated February 7, 2021, 12:23 A.M. E.T.

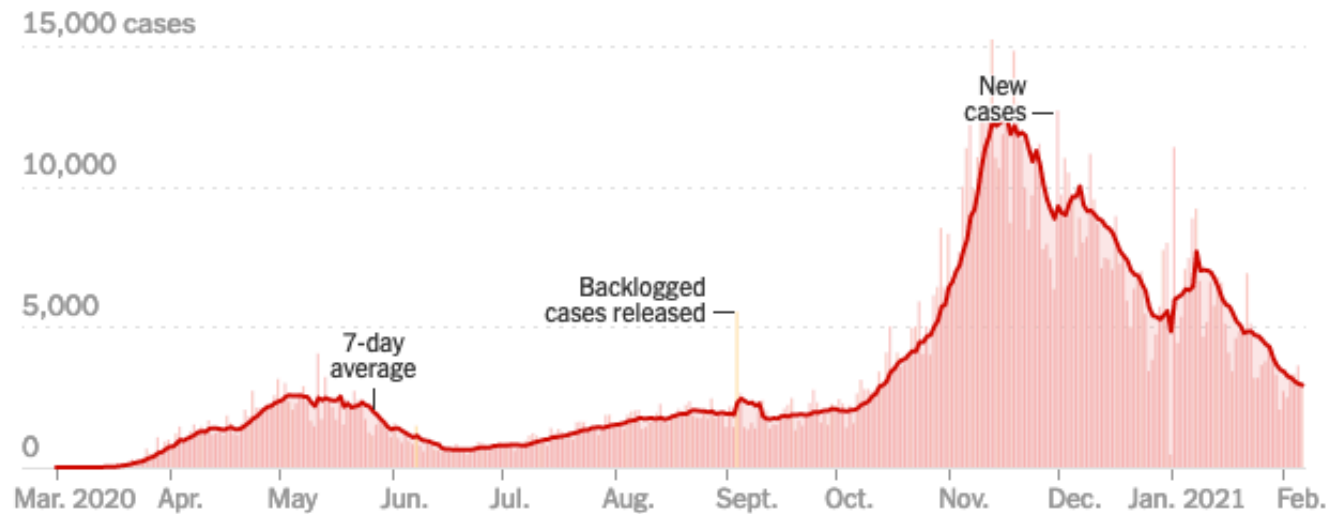
[Leer en español](#)



	TOTAL REPORTED	ON FEB. 6	14-DAY CHANGE
<b>Cases</b>	<b>26.9 million+</b>	<b>105,027</b>	<b>-31%</b> ↘
<b>Deaths</b>	<b>462,037</b>	<b>2,662</b>	<b>-5%</b> ↘
<b>Hospitalized</b>		<b>84,233</b>	<b>-25%</b> ↘

# Illinois Coronavirus Map and Case Count

Updated February 7, 2021, 12:23 A.M. E.T.



	TOTAL REPORTED	ON FEB. 6	14-DAY CHANGE
<b>Cases</b>	<b>1.1 million+</b>	<b>2,991</b>	<b>-39%</b> ↘
<b>Deaths</b>	<b>21,676</b>	<b>73</b>	<b>-26%</b> ↘
<b>Hospitalized</b>		<b>2,271</b>	<b>-27%</b> ↘

■ Day with reporting anomaly. Hospitalization data from the Covid Tracking Project; 14-day change trends use 7-day averages.

# Tracking Coronavirus in Champaign County, Ill.



Champaign County is at a **very high risk** level.

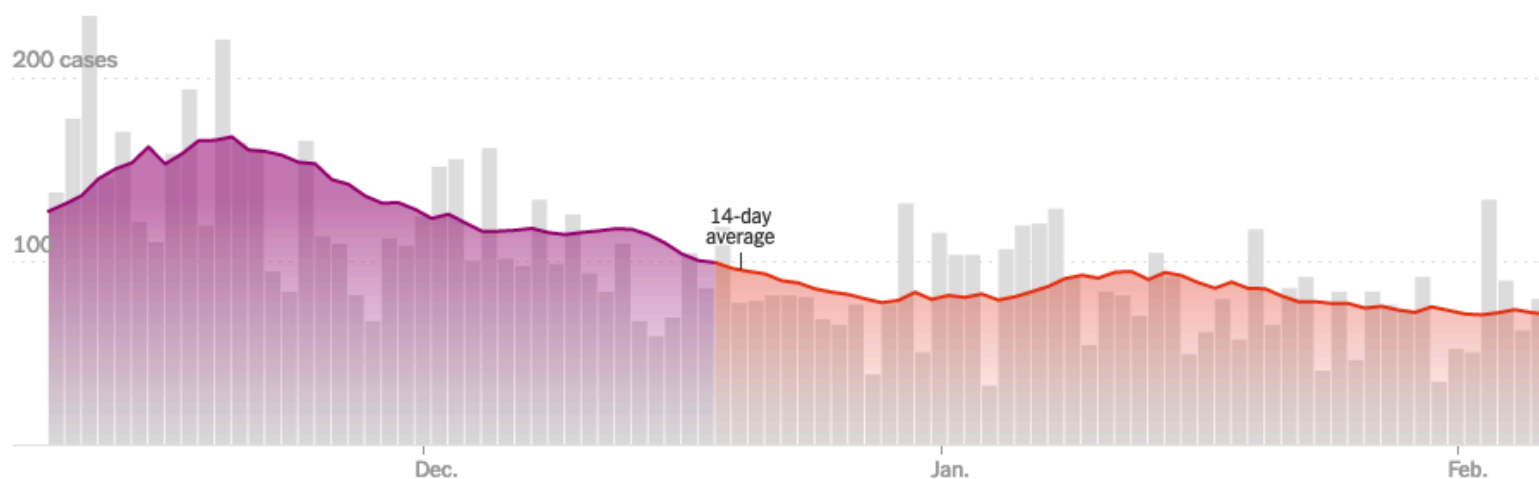
[Full national risk map >](#)

The risk of getting Covid-19 is based on cases per capita and test positivity.

■ LOW ■ MEDIUM ■ HIGH ■ VERY HIGH ■ EXTREMELY HIGH

## New reported cases by day

TOTAL ON FEB. 6 **79** 14-DAY CHANGE **-9%**



**Hospitalized**  
NO RECENT DATA



**Deaths**  
LAST TWO WEEKS  
12

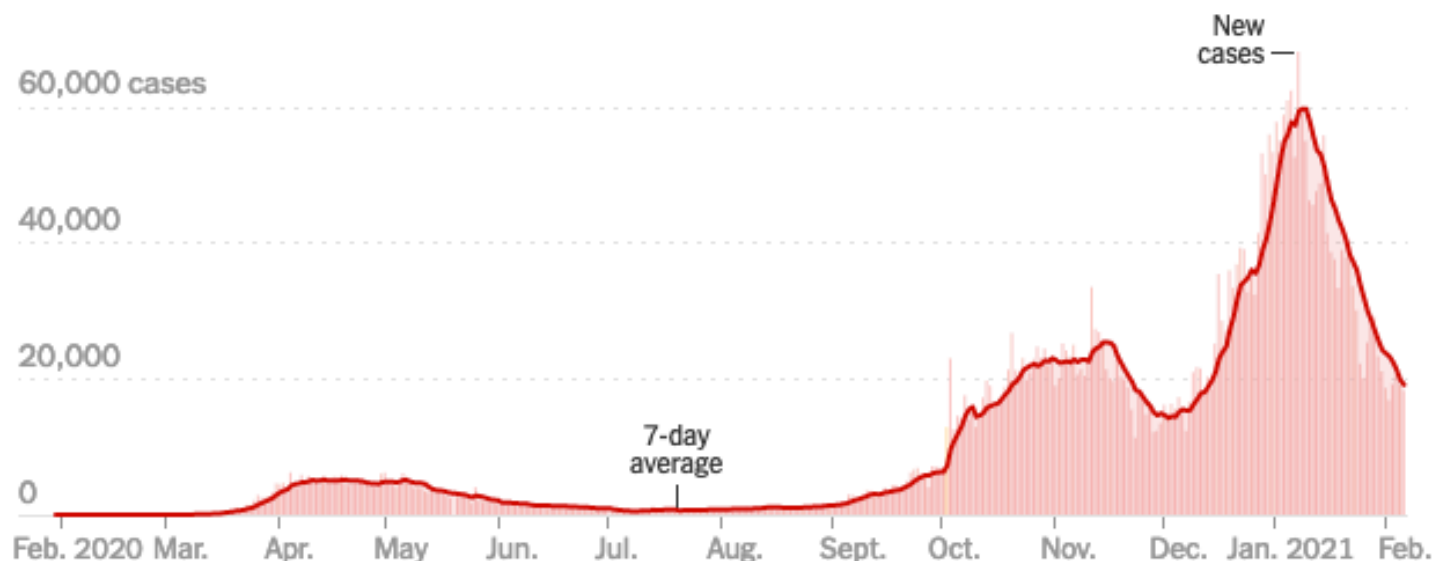


**Test positivity**  
14-DAY AVG.  
1%



# United Kingdom Coronavirus Map and Case Count

Updated February 7, 2021, 12:23 A.M. E.T.



	TOTAL REPORTED	ON FEB. 6	14-DAY CHANGE
<b>Cases</b>	<b>3.9 million+</b>	<b>18,262</b>	<b>-49%</b> ↘
<b>Deaths</b>	<b>112,092</b>	<b>828</b>	<b>-25%</b> ↘

■ Day with reporting anomaly. 14-day change trends use 7-day averages.

# Brazil Coronavirus Map and Case Count

Updated February 7, 2021, 12:23 A.M. E.T.



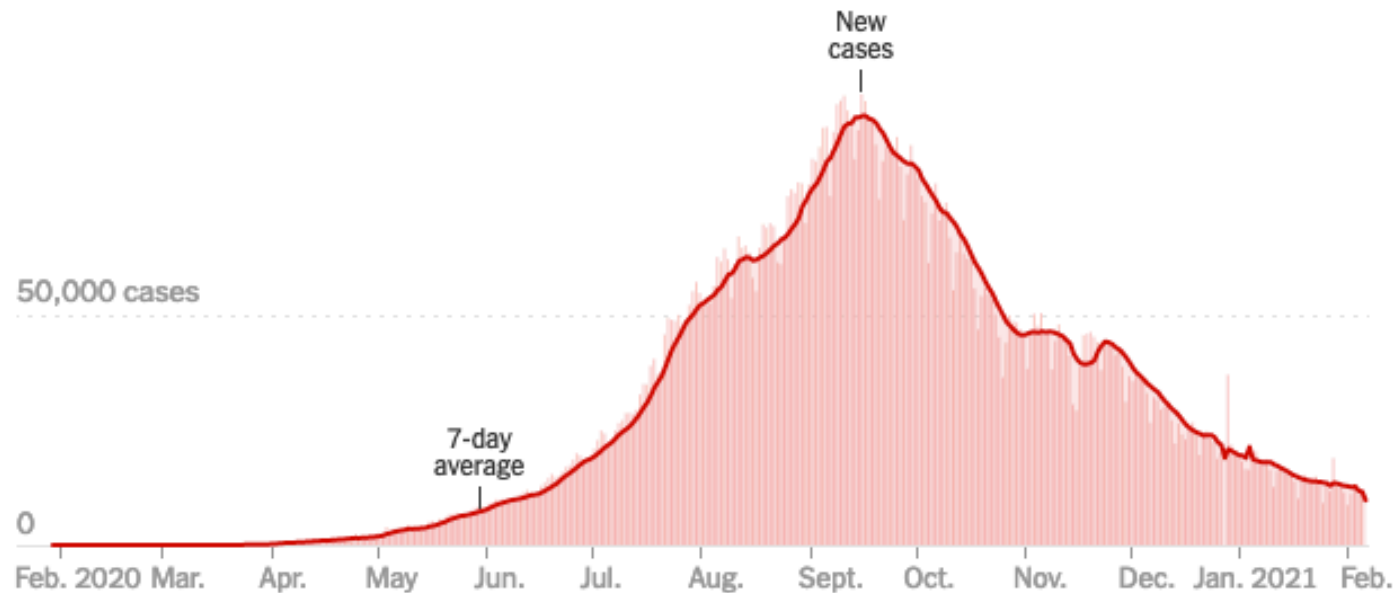
	TOTAL REPORTED	ON FEB. 6	14-DAY CHANGE
<b>Cases</b>	<b>9.4 million+</b>	<b>50,630</b>	<b>-11%</b> →
<b>Deaths</b>	<b>231,012</b>	<b>978</b>	<b>-1%</b> →

14-day change trends use 7-day averages.



# India Coronavirus Map and Case Count

Updated February 7, 2021, 12:23 A.M. E.T.



	TOTAL REPORTED	ON FEB. 6	14-DAY CHANGE
<b>Cases</b>	<b>10.8 million+</b>	<b>0</b>	<b>-29%</b> ↘
<b>Deaths</b>	<b>154,996</b>	<b>0</b>	<b>-40%</b> ↘

14-day change trends use 7-day averages.

WORLD COUNTRIES

## SOUTH AFRICA

### OVERVIEW

All Time

Past Day

Past Week

Past Month

New Cases

24,464

↕ Record high:

130,849 Jan 3–Jan 9

New Deaths

2,229

↕ Record high:

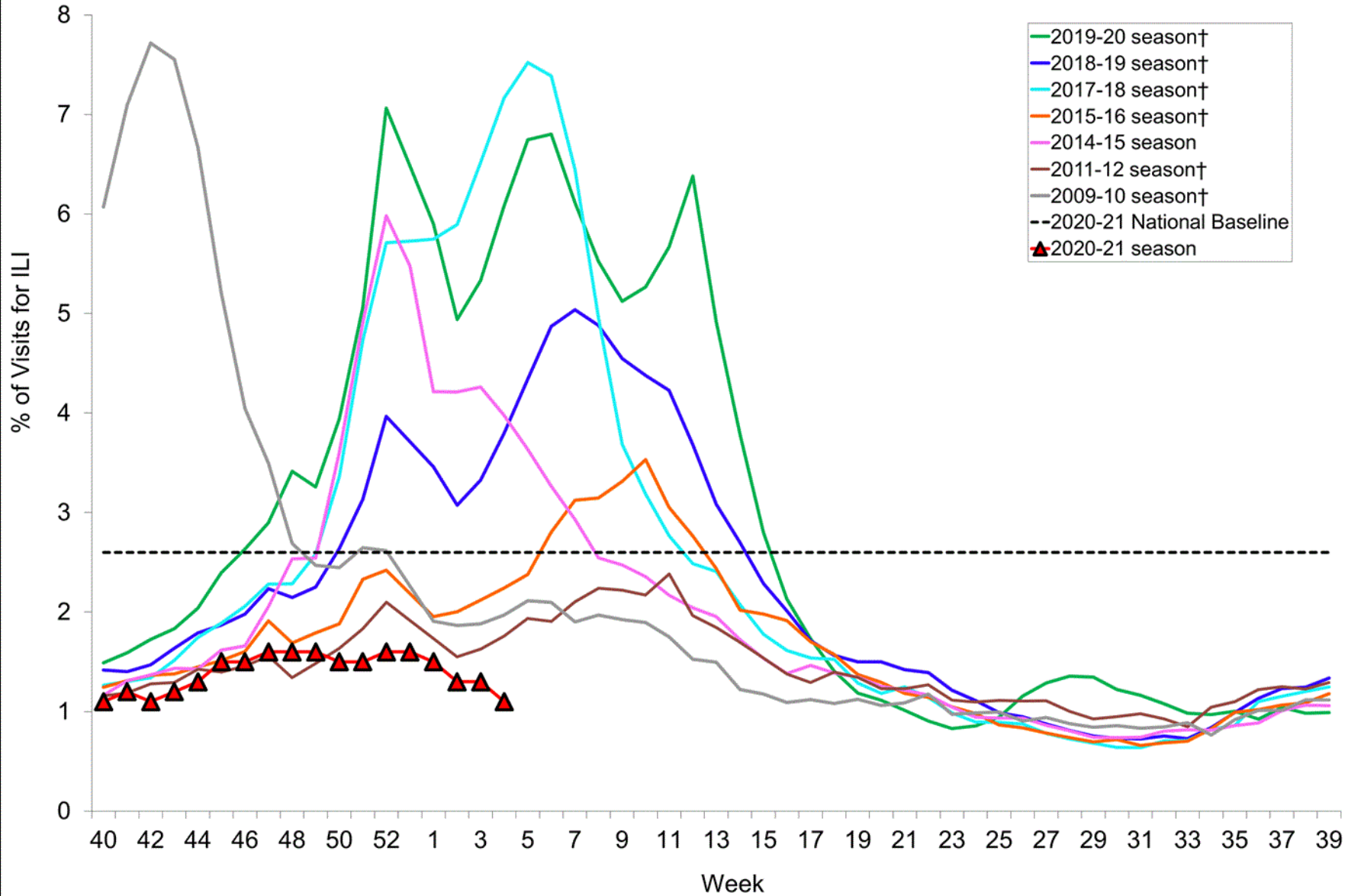
3,942 Jan 10–Jan 16

# The Ending of the Outbreak

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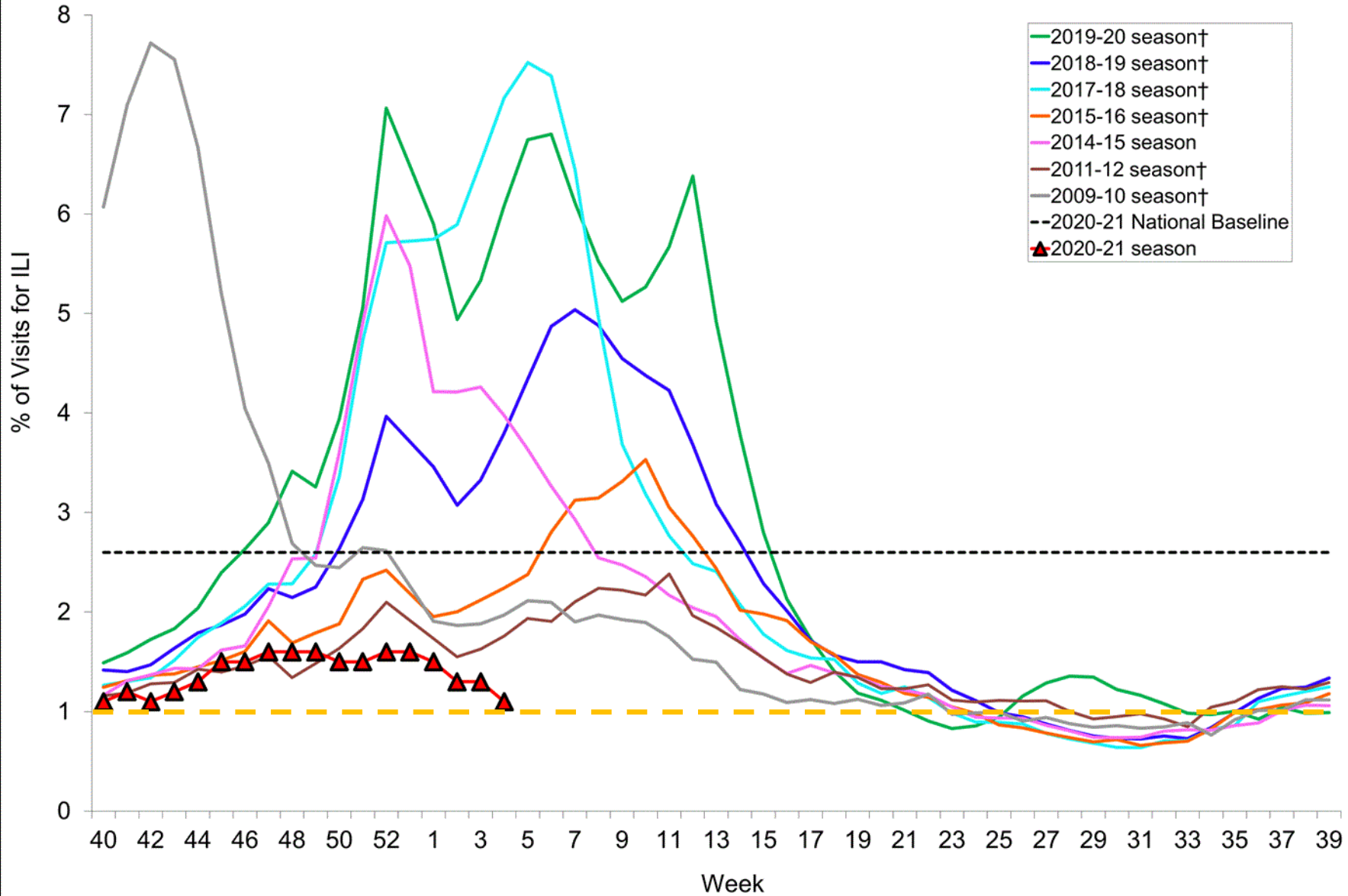
- Outbreaks tend to end rapidly
- Covid-19 should be no exception
- Often, we don't fully understand the reasons for the ending of an outbreak
- Hopefully the declines that we are seeing now represent the beginning of the end

# Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2020-2021 and Selected Previous Seasons

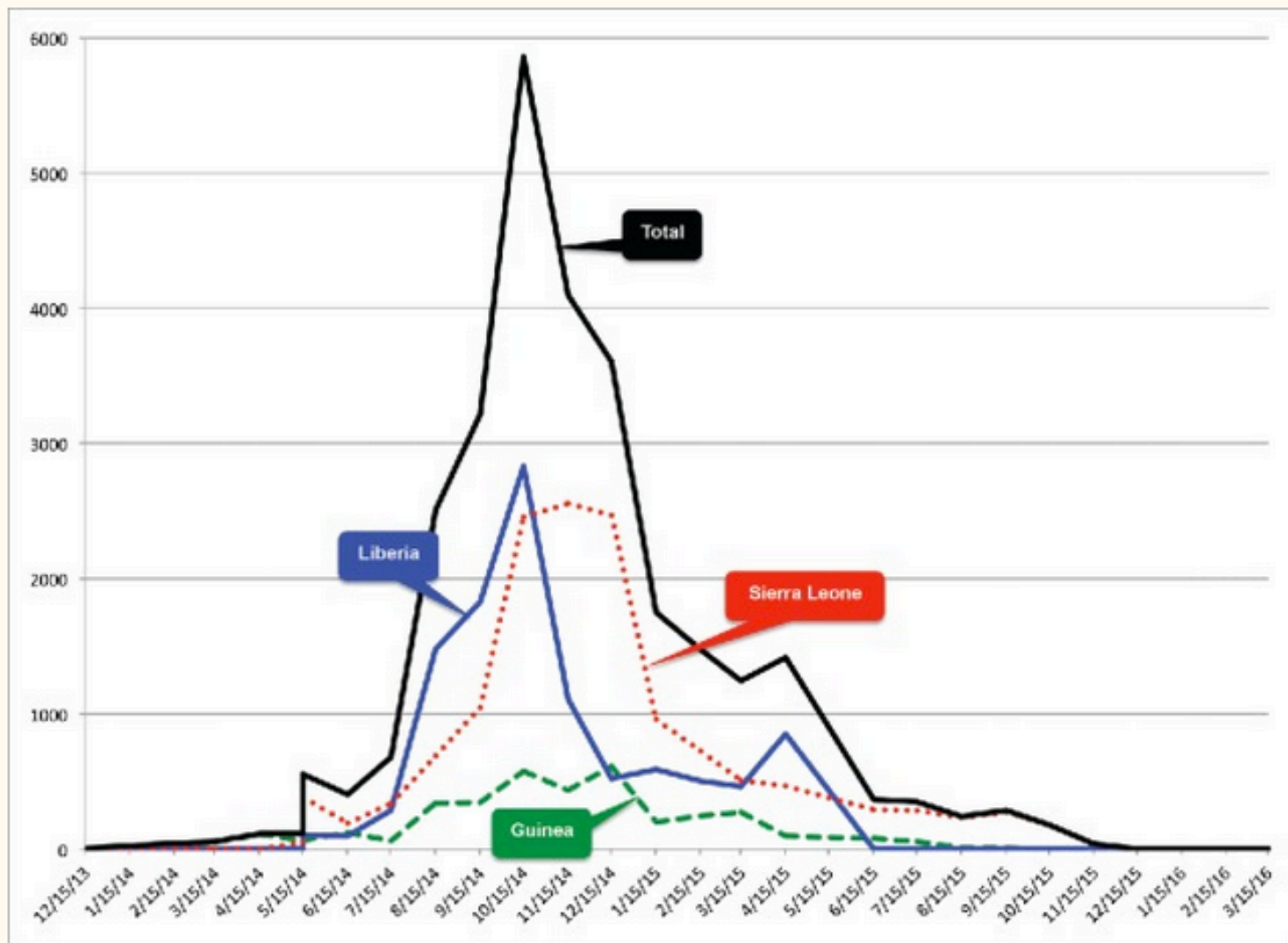


†These seasons did not have a week 53, so the week 53 value is an average of week 52 and week 1.

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**Figure 1.**

Epidemic curve of Ebola virus disease cases: Guinea, Sierra Leone, Liberia, and 3-nation total by month, December 2013-March 2016.

# Will New Variants be a Problem?

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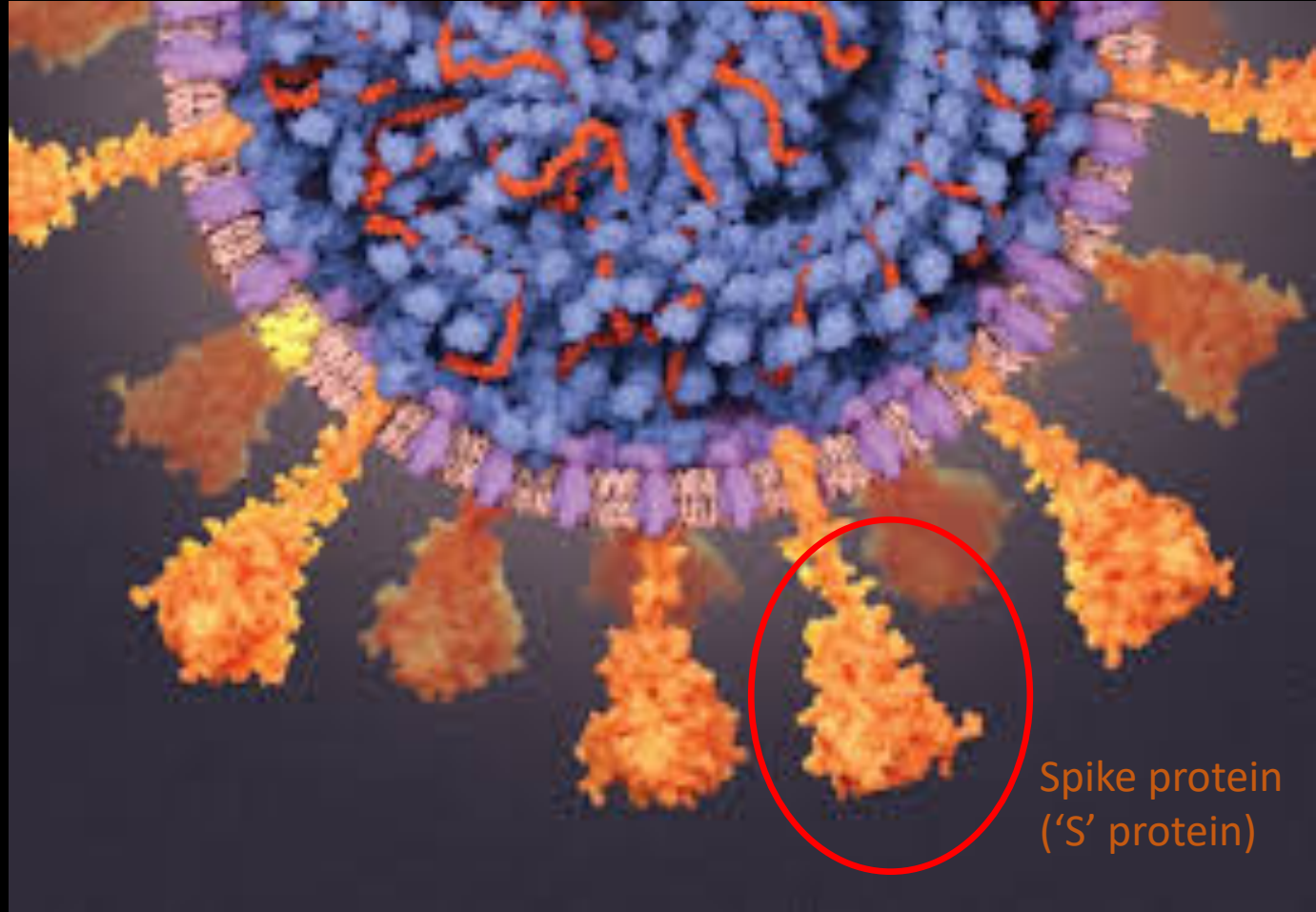
- Coronaviruses are constantly evolving
- Three main variants are now circulating in the U.S.
  - United Kingdom: *B.1.1.7*
  - South Africa: *B.1.351*
  - Brazil: *P.1*
- Current U.S. vaccines are effective against these variants
- Not a major problem...yet

# Platforms for U.S. Vaccines

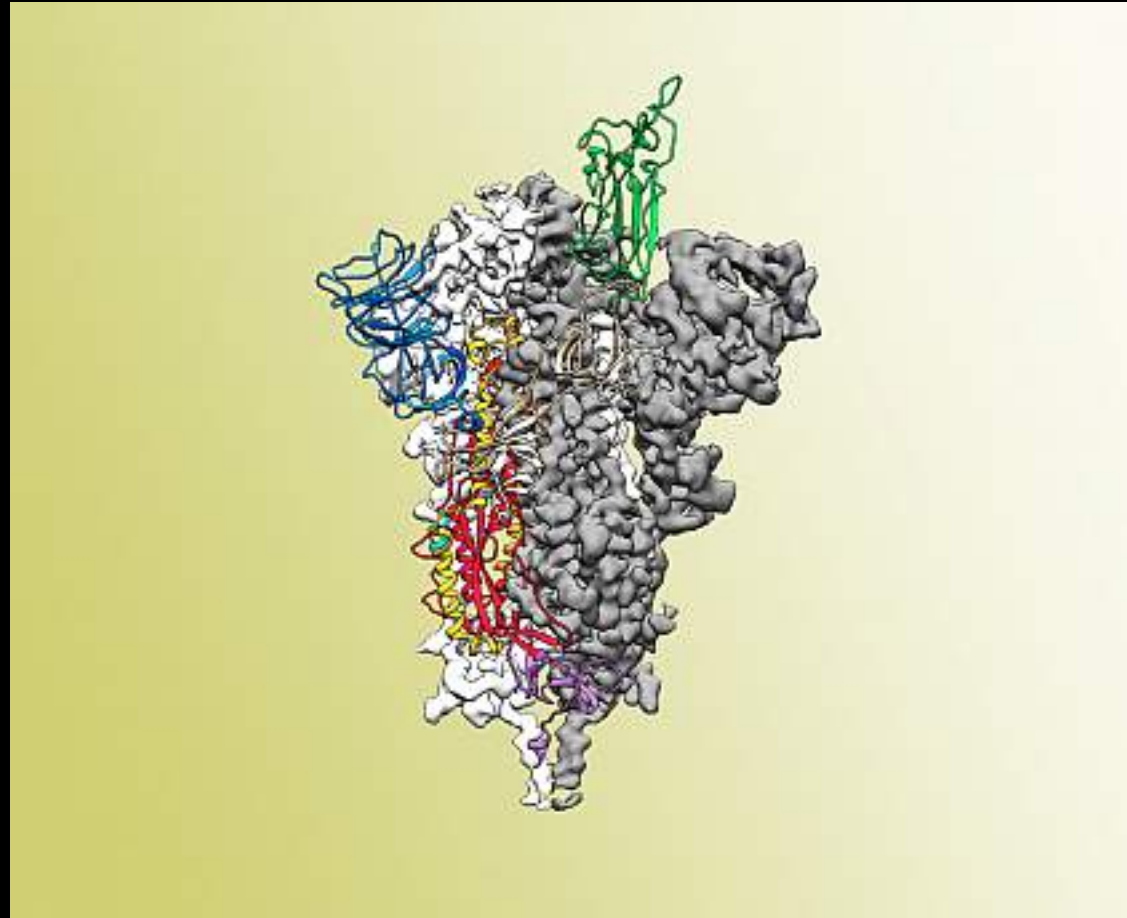
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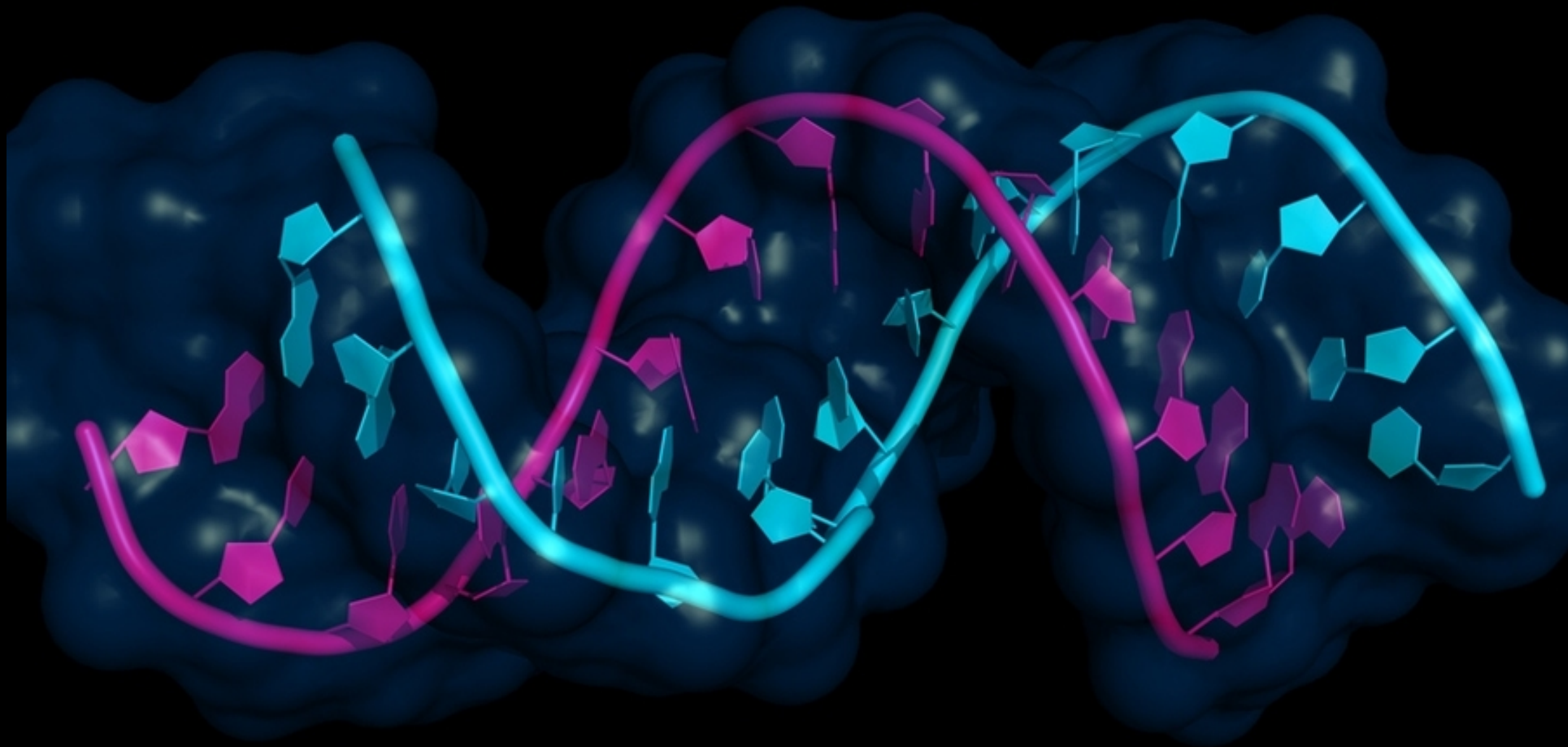
<u>Vaccine</u>	<u>Platform</u>	<u>Dosage</u>	<u>Storage</u>
• Pfizer	mRNA	2-dose	-60 to -80C
• Moderna	mRNA	2-dose	-20C
• AstraZeneca	viral vector	2-dose	0 to -10C
• J & J	viral vector	1-dose	0 to -10C





Spike protein  
(‘S’ protein)



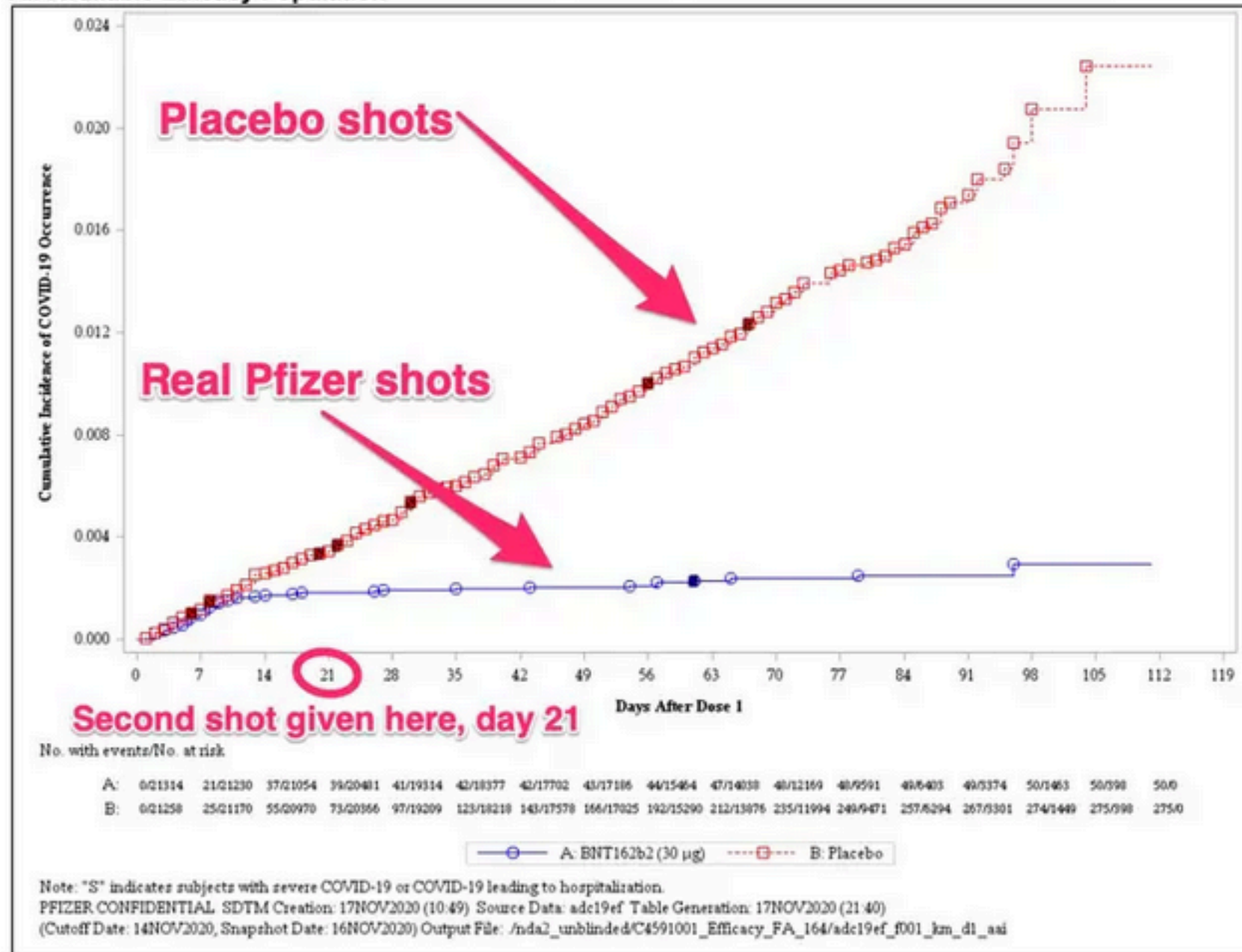


# Time From Vaccination to Protection

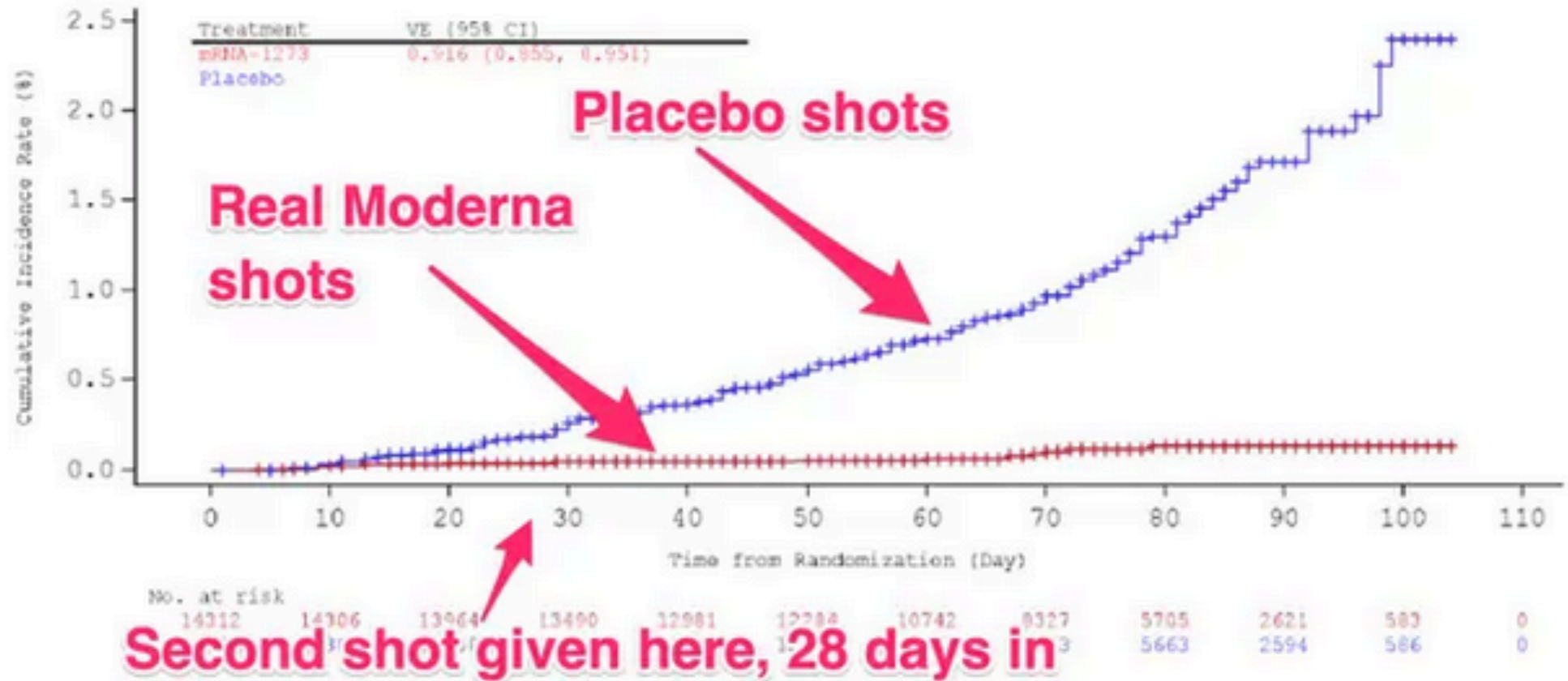
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- Estimated to be 10 to 14 days
  - Pfizer clinical trial data = 10 days
  - Moderna clinical trial data = 14 days
- Protection appears to be complete after the first dose

**Figure 2. Cumulative Incidence Curves for the First COVID-19 Occurrence After Dose 1, Dose 1 All-Available Efficacy Population**



**Figure 2. Cumulative Incidence Curves for the First COVID-19 Occurrence After Randomization, mITT Set**



# Can People Shed Virus After Vaccination?

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- Theoretically possible
- No evidence that it is happening or that it would be important if it did happen
- Still, it's a good excuse to continue to require masks and social distancing until the outbreak is over

# Will Delayed Second Dose Still Work?

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- Some of the vaccine trials had variable time between doses, with the maximum being 7 weeks
- No data beyond that point
- Science dictates that we stick to the approved times
- BUT a delay could save lives and end the pandemic sooner
- It won't be long until we have a surplus of vaccine



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Questions?

Comments?

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