COVID-19 Update: Georgia is on Fire

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Georgia Municipal Association

04Jan2021

Agenda

- New resource for local data
- Georgia's recent trends
- Vaccine rollout

HHS Community Profile Reports

- https://beta.healthdata.gov/National/COVID-19-Community-Profile-Report/gqxm-d9w9

- Each date has a PDF (executive summary) and an Excel file (loads of local/regional data)

- This is the data source for the White House Coronavirus Task Force reports, updated daily (except federal holidays)

- DOES use Georgia's antigen cases for disease rate calculations

- Georgia is in FEMA Region 4

HHS Community Profile Reports

- Excel spreadsheet can be overwhelming, prioritize the following tabs:
  - States: each column can be sorted, filtered, etc
    - Case rate, death rate, test positivity, test turnaround time, hospital admission rate, % of inpatients who are there for COVID-19, % of ICU beds occupied by a COVID-19 patient, % of ventilators occupied by a COVID-19 patient
  - CBSAs: filter state column to only include Georgia
    - Covers 37 Georgia cities, ranging from Fitzgerald (16,700 population) to Atlanta
    - Does not provide local hospital data
    - Social Vulnerability Index (SVI) and COVID-19 Community Vulnerability Index (CCVI), estimates a community's vulnerability for coping with stress. Highest risk = 1.
  - Counties: filter state column to only include Georgia
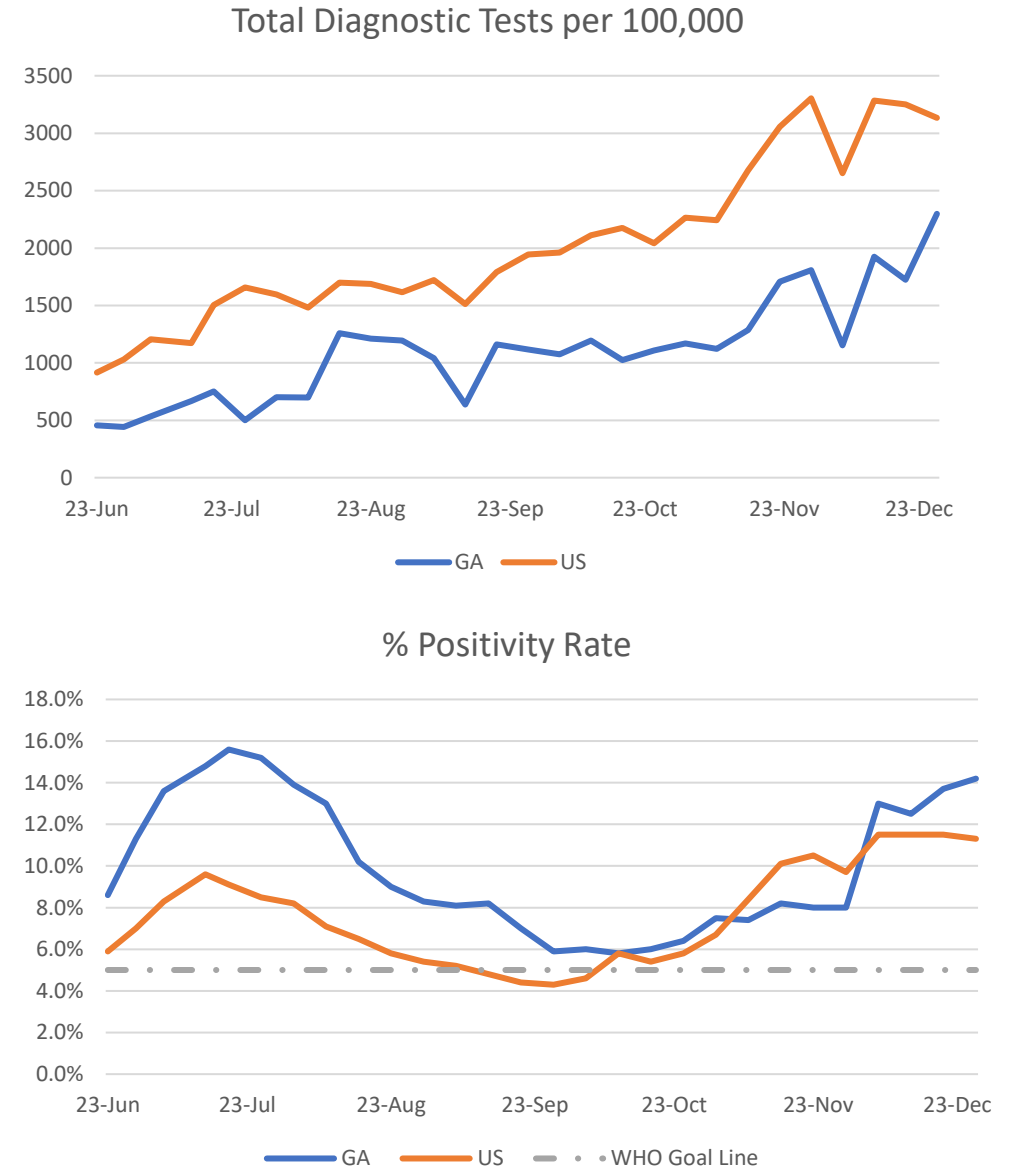   - Features many of the same details as CBSAs

Testing

#10 in nation for test positivity
#35 in nation for tests per 100,000
#47 in nation for tests reported <3 days

Weekly PCR Testing, Georgia

DPH data

Total Diagnostic Tests per 100,000

% Positivity Rate
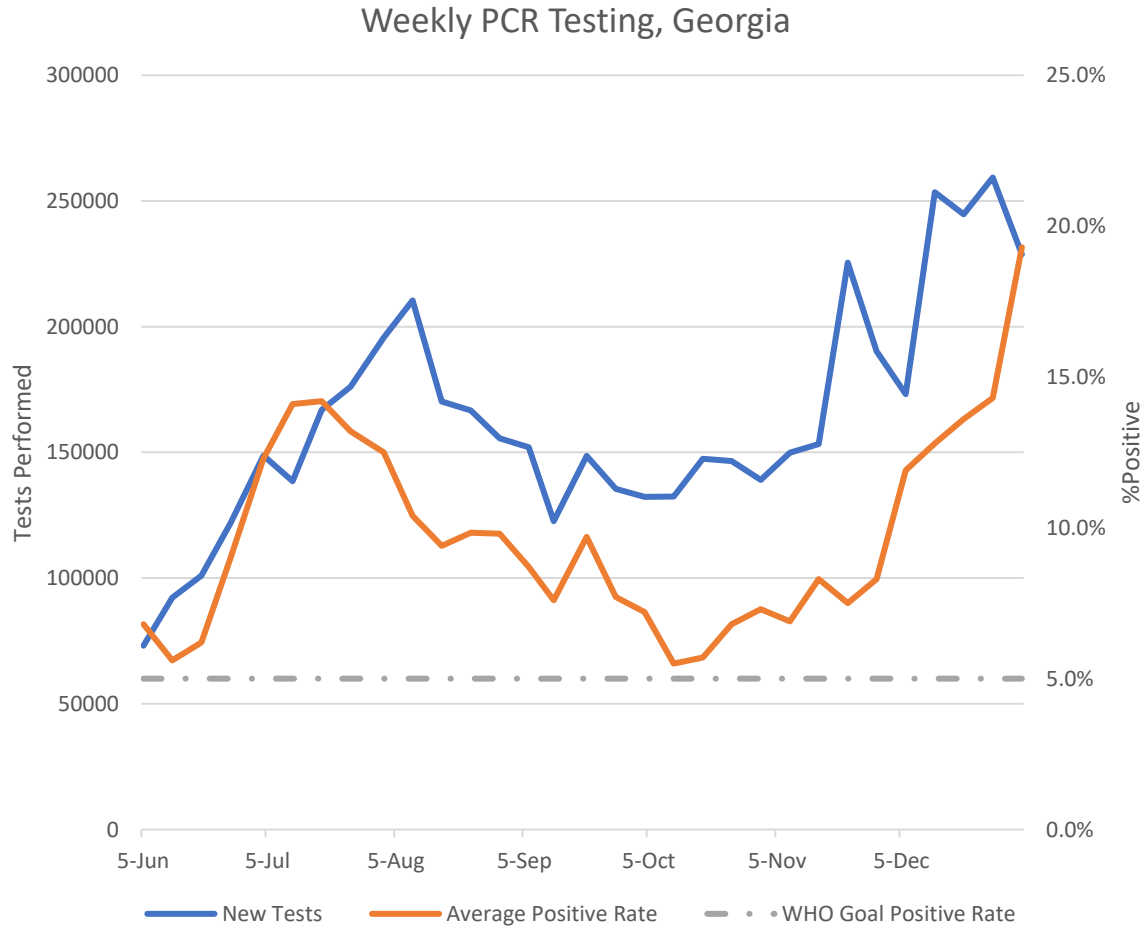
WHCTF data

Cases

- All of the DPH graphs and maps are only using PCR-identified case data
  - Also, no demographic data on antigen cases

- CDC, HHS, NYT, Johns Hopkins, etc are using PCR *and* Antigen test cases
- Antigen cases represent 20-30% of cases each week
- Beware that the DPH 14 day case rate per 100,000 for your county is an undercount
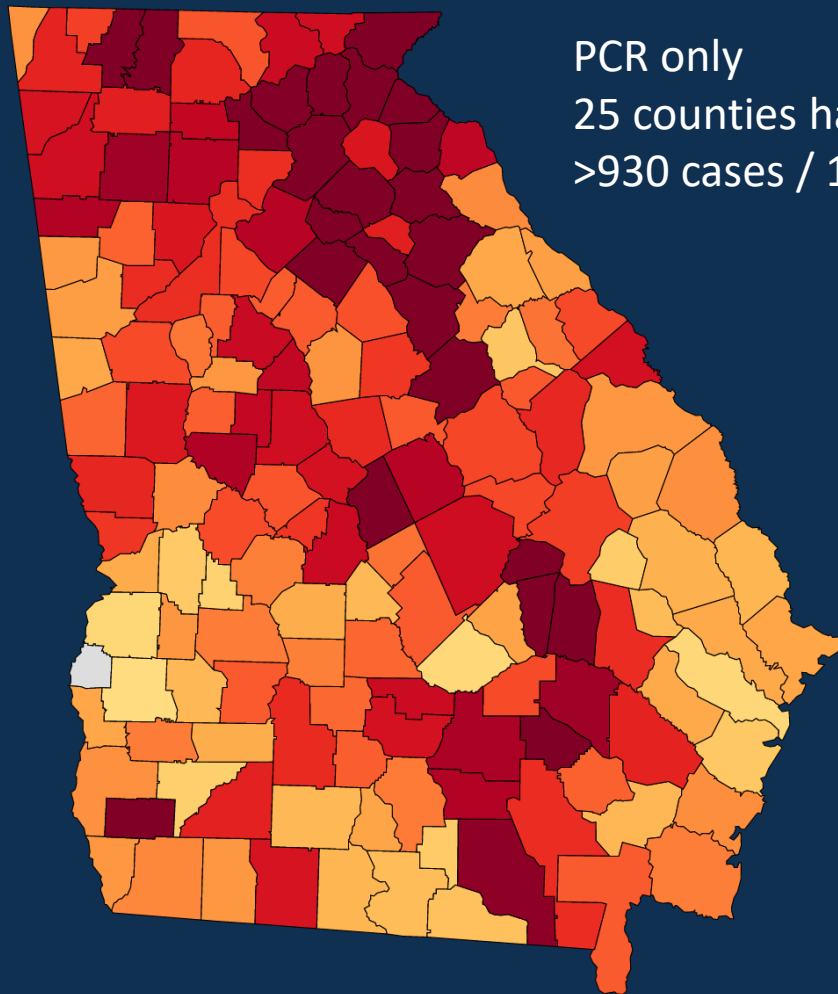
COVID-19 By County
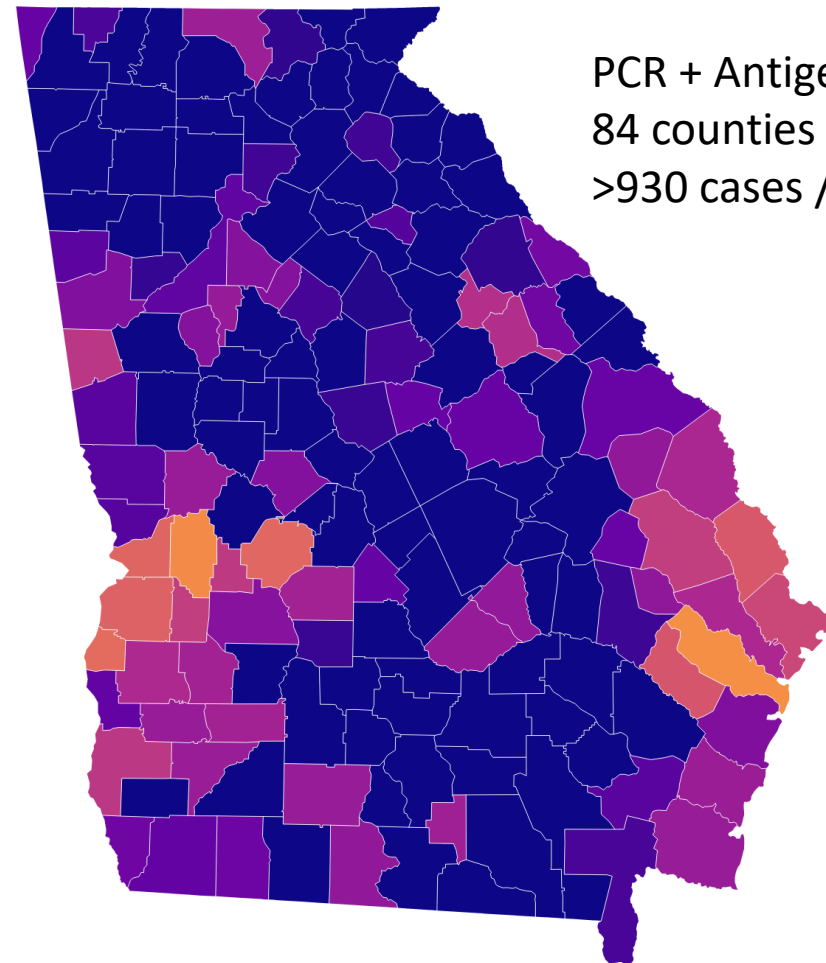
Cases · Testing · Deaths

Last 2 weeks ▾

January 4th

Reported cases per 100,000 people last 14 days

0/NA* 200 400 600 800 >930

PCR only
25 counties have
>930 cases / 100k

Live image: https://datawrapper.dwcdn.net/v38hv/1/

14d Case Rate per 100,000 (PCR & Ag, 04Jan21)

1   450   930
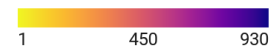
PCR + Antigen
84 counties have
>930 cases / 100k

Map: Amber Schmidtke • Source: Georgia DPH • Created with Datawrapper

Cases

Case rate now 121% higher than our previous peak

Most intense in rural counties (<50,000 residents)

Least intense in Atlanta (Fulton & DeKalb)

Weekly cases by age

PCR data only

Legend:
- 08 - 14Nov
- 15 - 21Nov
- 22 - 28Nov
- 29Nov - 05Dec
- 06 - 12Dec
- 13 - 19Dec
- 20 - 26Dec
- 27Dec - 02Jan
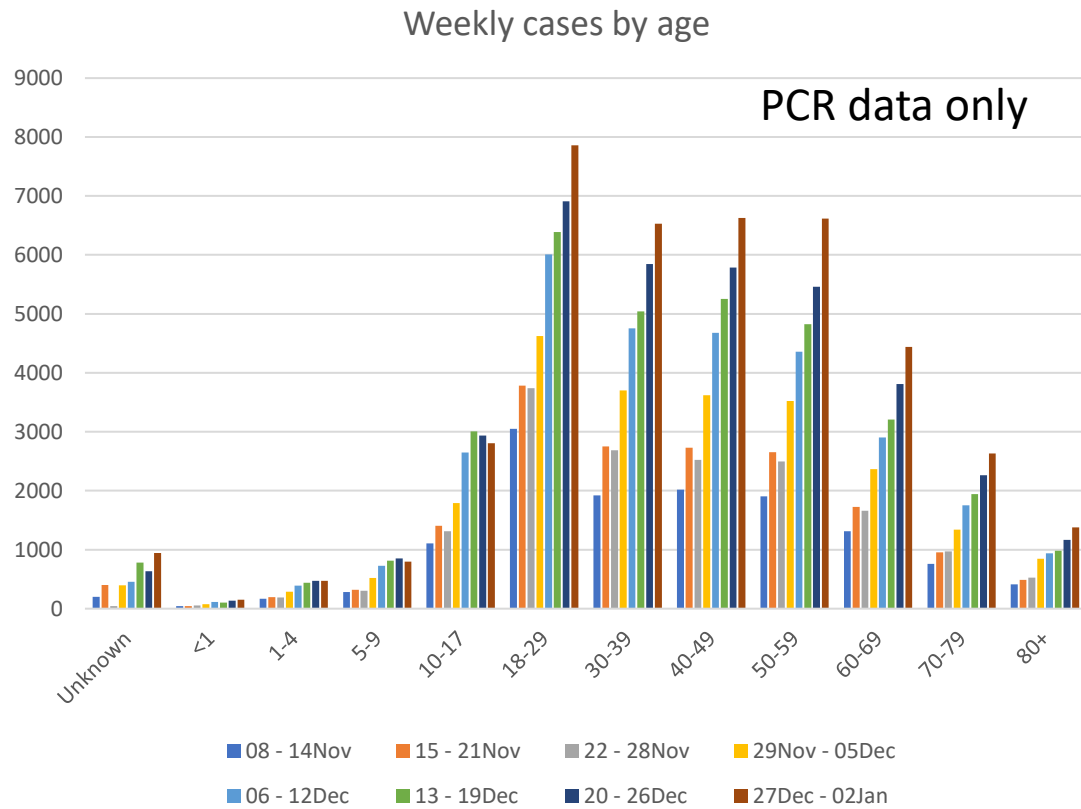
#10 in nation for new case rate per 100,000 past week

7-day Case rate per 100,000

PCR + Ag data

Legend: Total ATL — Total ATL-Suburbs — Total Nonrural — Total Rural — Georgia
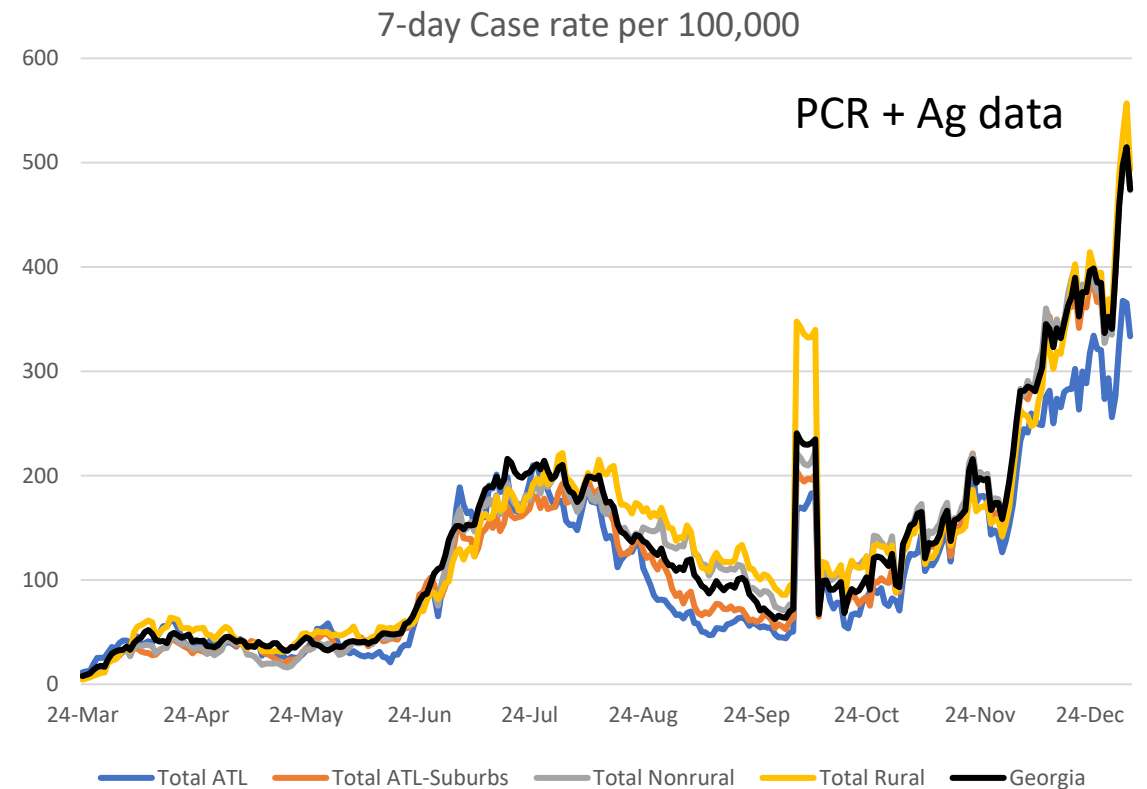
Hospitalizations

New COVID-19 Hospital Admissions - Georgia

New Hospitalizations   •••••• 7 per. Mov. Avg. (New Hospitalizations)
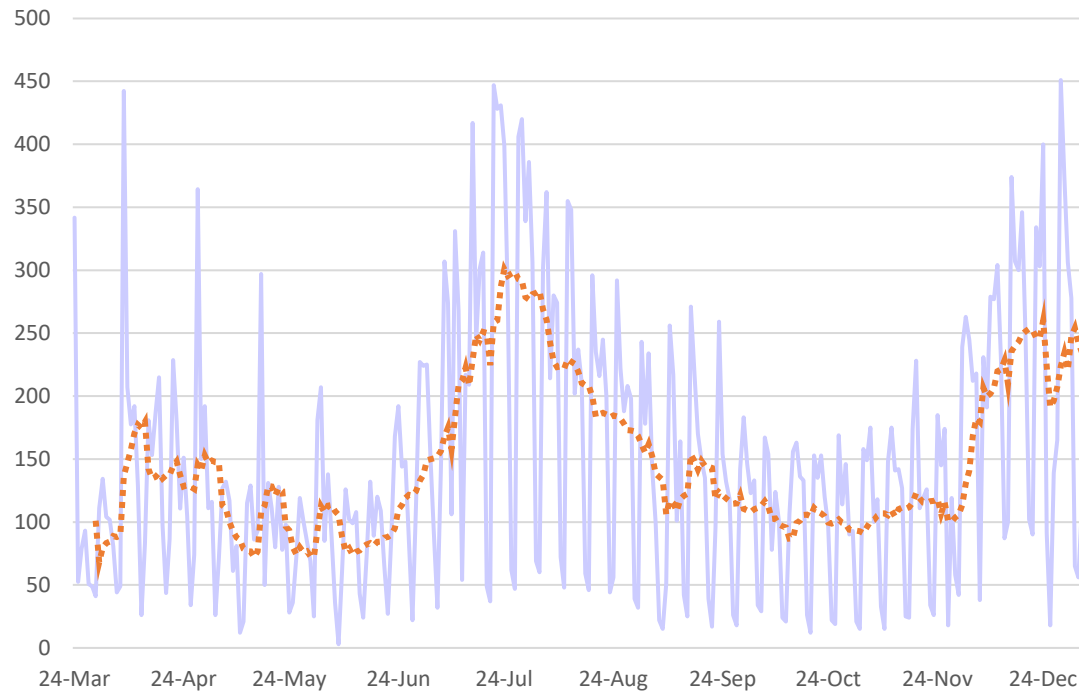
Current COVID-19 Hospitalizations, Georgia

60% higher than previous peak
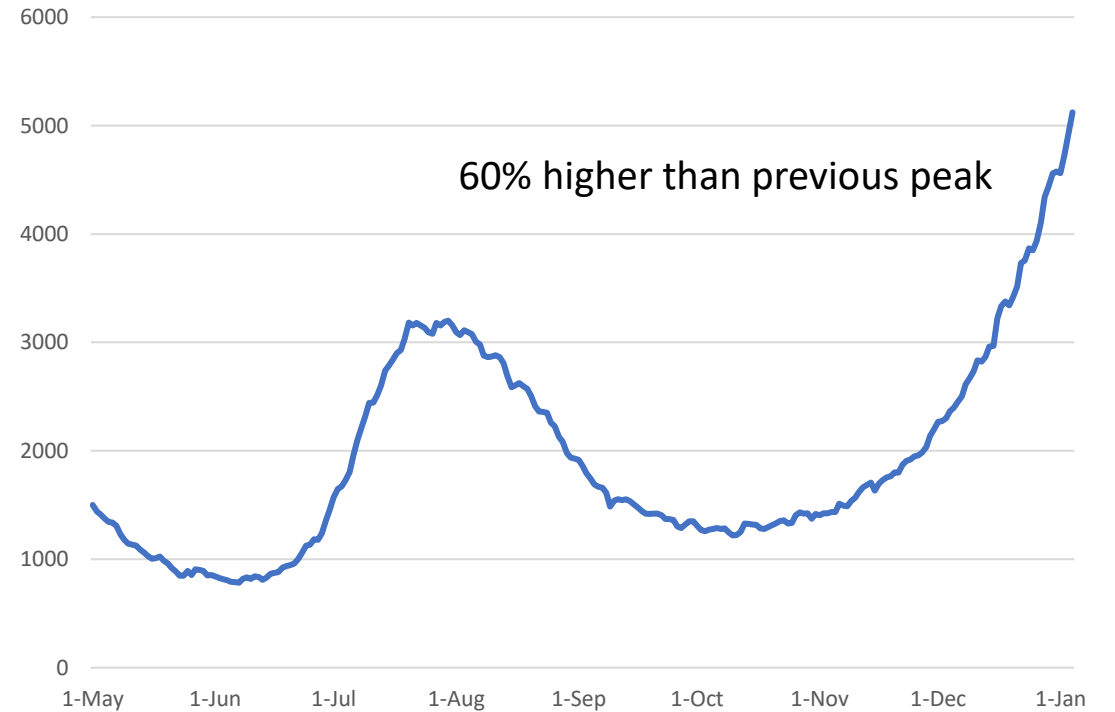
18 days to go from 2000 – 3000
10 days to go from 3000 – 4000
8 days to go from 4000 – 5000

RCH Regions

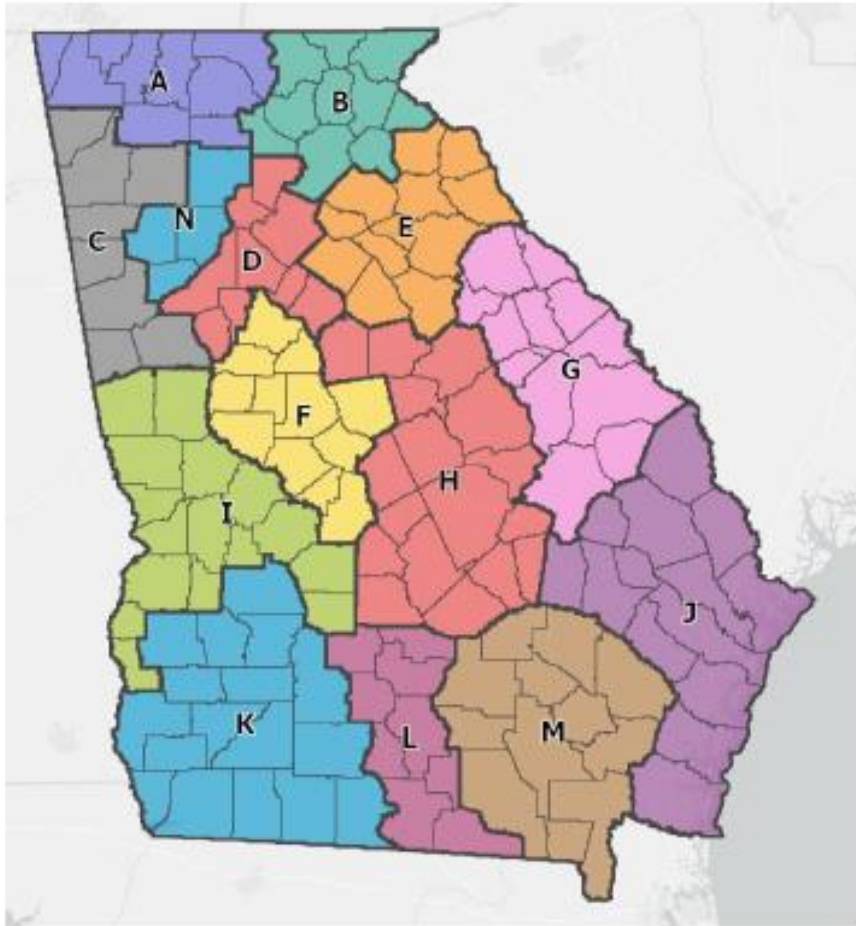| 1/4/2021		
Region	% of ICU Capacity in use	COVID-19 Patient Census (of all inpatients)[1]
A	90.5%	42.4%
B	100.7%	36.9%
C	96.8%	37.5%
D	85.2%	27.0%
E	95.9%	42.8%
F	89.3%	39.7%
G	101.6%	27.5%
H	92.7%	36.7%
I	89.1%	23.2%
J	87.2%	20.7%
K	98.1%	25.2%
L	91.8%	38.8%
M	80.8%	42.6%
N	96.9%	38.5%
State	90.2%	31.2%

[1]Color designations set by HHS Community Profile Report

90.2% of state's ICU beds occupied
42% occupied by COVID-19 (HHS)

42% of state's ventilators in use
15% in use by COVID-19 patients (HHS)

We are risking total healthcare system collapse

Deaths
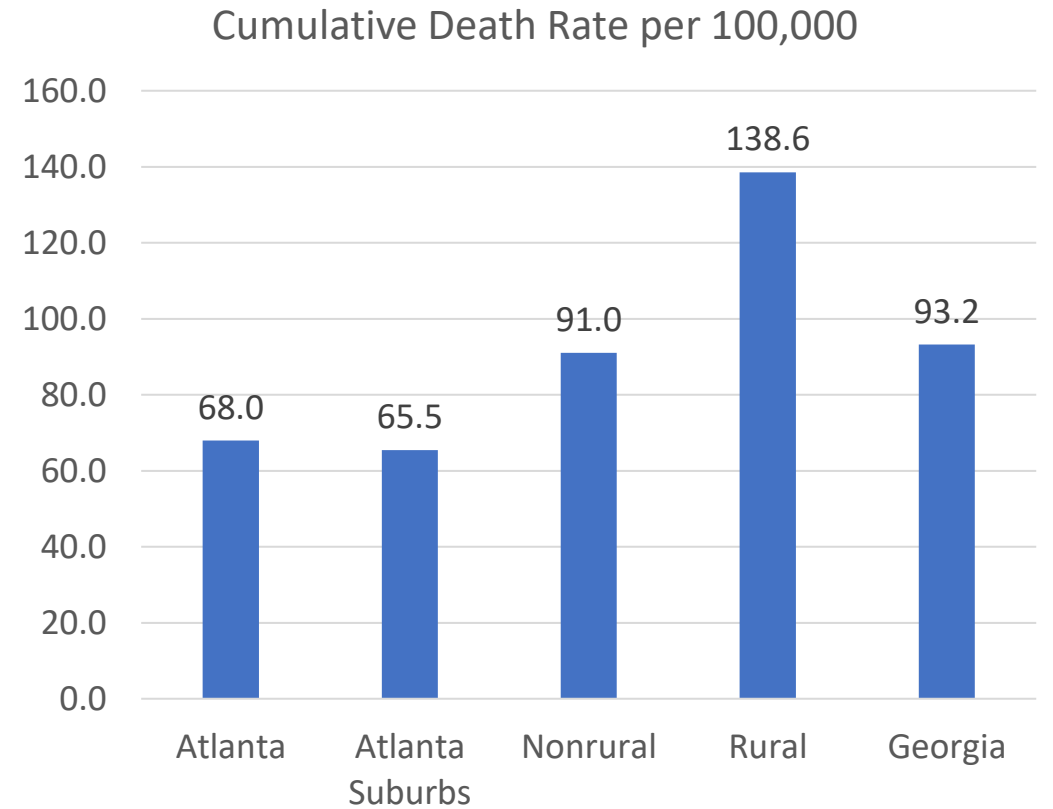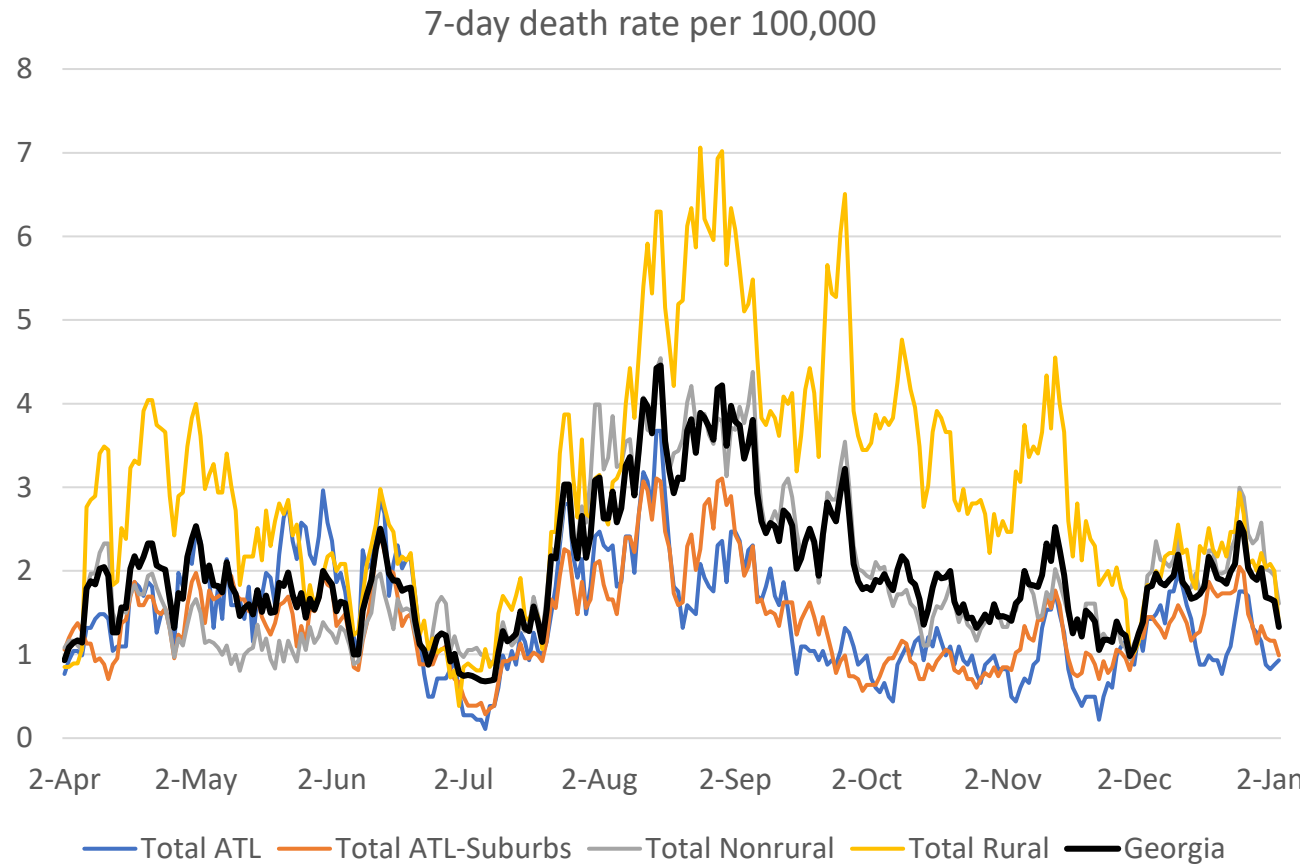
Vaccines

- Earliest vaccines were deployed last month

- So far, all are 2-dose series
  - 3 weeks to mount full immune response, 2w to reach peak antibody concentration
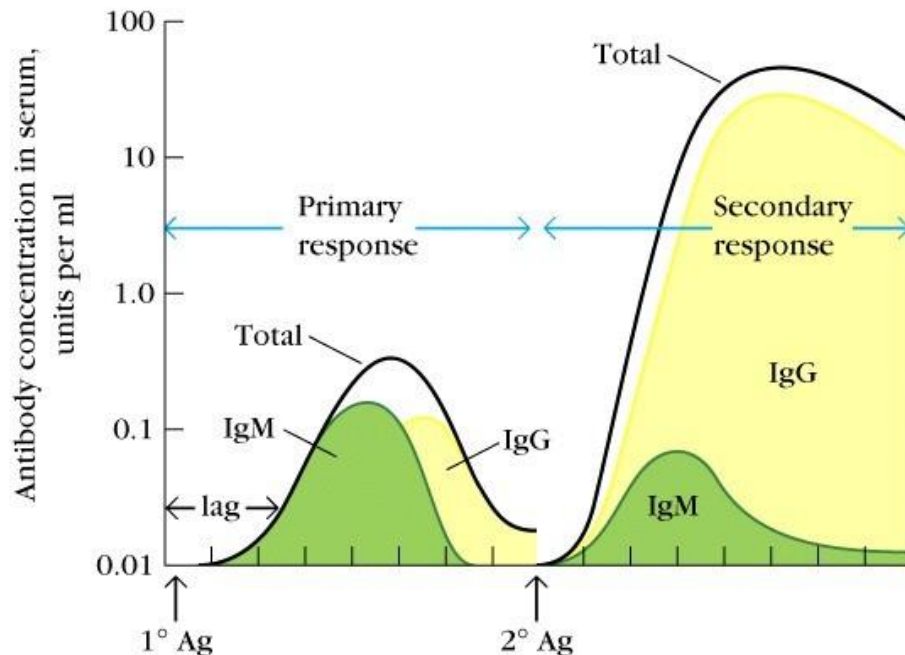
The Pfizer/BioNTech Vaccination Process

Vaccination process for the Pfizer/BioNTech Covid-19 BNT162b2 vaccine

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
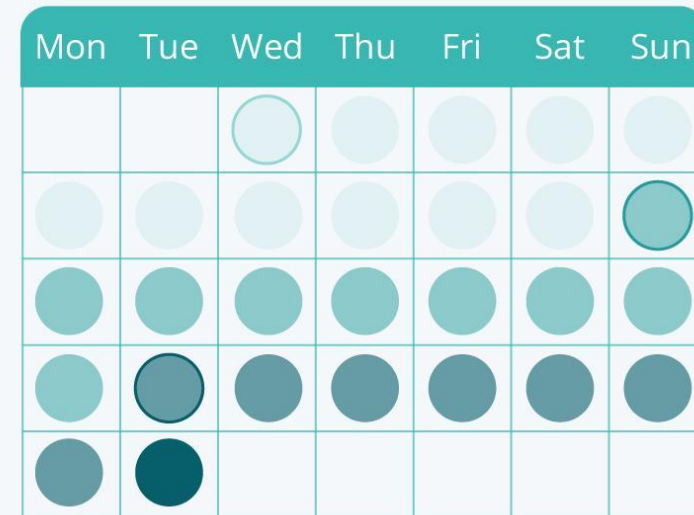
Day 1 1st dose

Day 12 Start to build immunity

Day 21 2nd dose

Day 28 Full immunity

Source: Pfizer/BioNTech via BBC

statista

The vaccines work

- But we will still need to wear masks and social distance for a while

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

Table 17. Final Scheduled Efficacy Analysis, Primary Endpoint, COVID-19 Starting 14 Days After the Second Dose per Adjudication Committee Assessments, Per-Protocol Set

Primary Endpoint: COVID-19 (per adjudication committee assessment)	Vaccine Group N=13934 Cases n (%) (Incidence Rate per 1,000 person-years)*	Placebo Group N=13883 Cases n (%) (Incidence Rate per 1,000 person-years)*	Vaccine Efficacy (VE) % (95% CI)**	Met Predefined Success Criterion***
All participants	11 (<0.1) 3.328	185 (1.3) 56.510	94.1% (89.3%, 96.8%)	Yes
18 to <65 years[1]	7/10551 (<0.1) 2.875	156/10521 (1.5) 64.625	95.6%; (90.6%, 97.9%)	NA
65 years and older[2]	4/3583 (0.1); 4.595	29/3552 (0.8); 33.728	86.4%; (61.4%, 95.5%)	NA

Moderna vaccine

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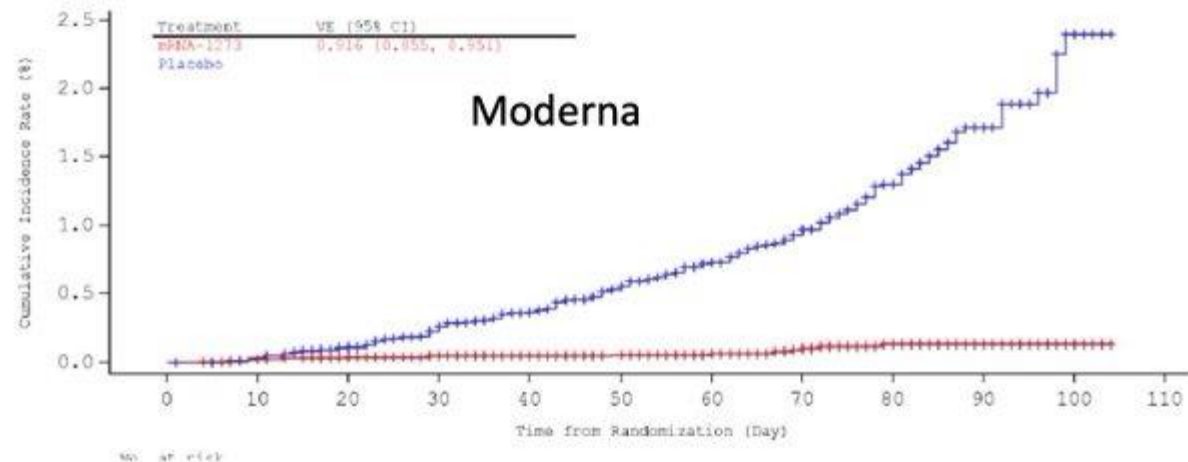
The Vaccines

- Short-lived set of instructions (called mRNA) to make one viral protein (the spike protein)

- Your cells make the protein, your cells degrade the mRNA, your immune system responds and will recognize the spike protein next time it sees it

- Similar side effects as the flu shot

Nuclear envelope

TRANSCRIPTION DNA

Pre-mRNA

RNA PROCESSING

NUCLEUS mRNA

CYTOPLASM

TRANSLATION

Ribosome

Polypeptide
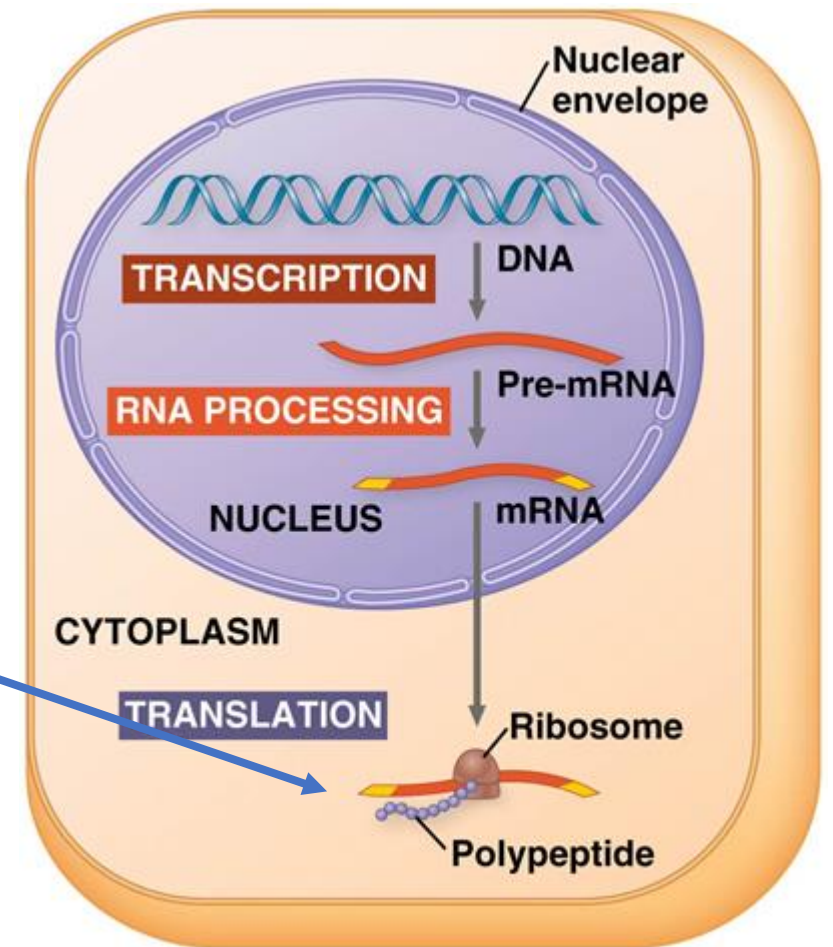
(b) Eukaryotic cell

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Vaccine roll out – not a success story (YET!)

- GA is ranked 49th in nation for doses administered per 100,000 residents
- Governor recently announced deviation from ACIP guidance, prioritizing 65+
  - No details on appointments or doses available
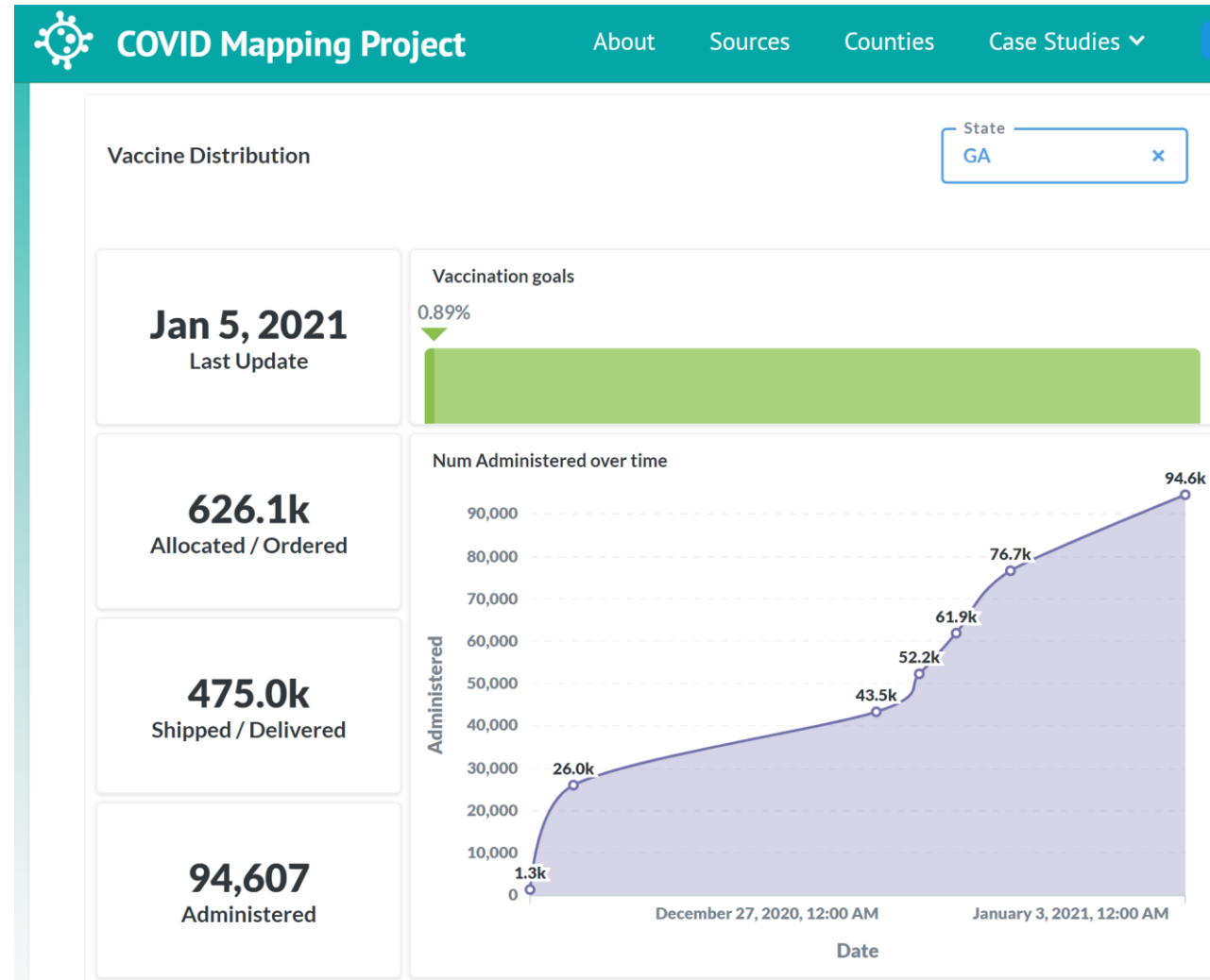
You are vaccine influencers

- Model the behaviors you want to see in your community

- If you plan to get the vaccine, tell your communities and tell them why it matters to you

Family, Dr. Fauci Most Likely to Sway Americans to Get a COVID-19 Vaccine

Adults were asked whether the encouragement of the following people would make them more or less likely to get vaccinated:

■ More likely　■ No change　■ Don't know / No opinion　■ Less likely

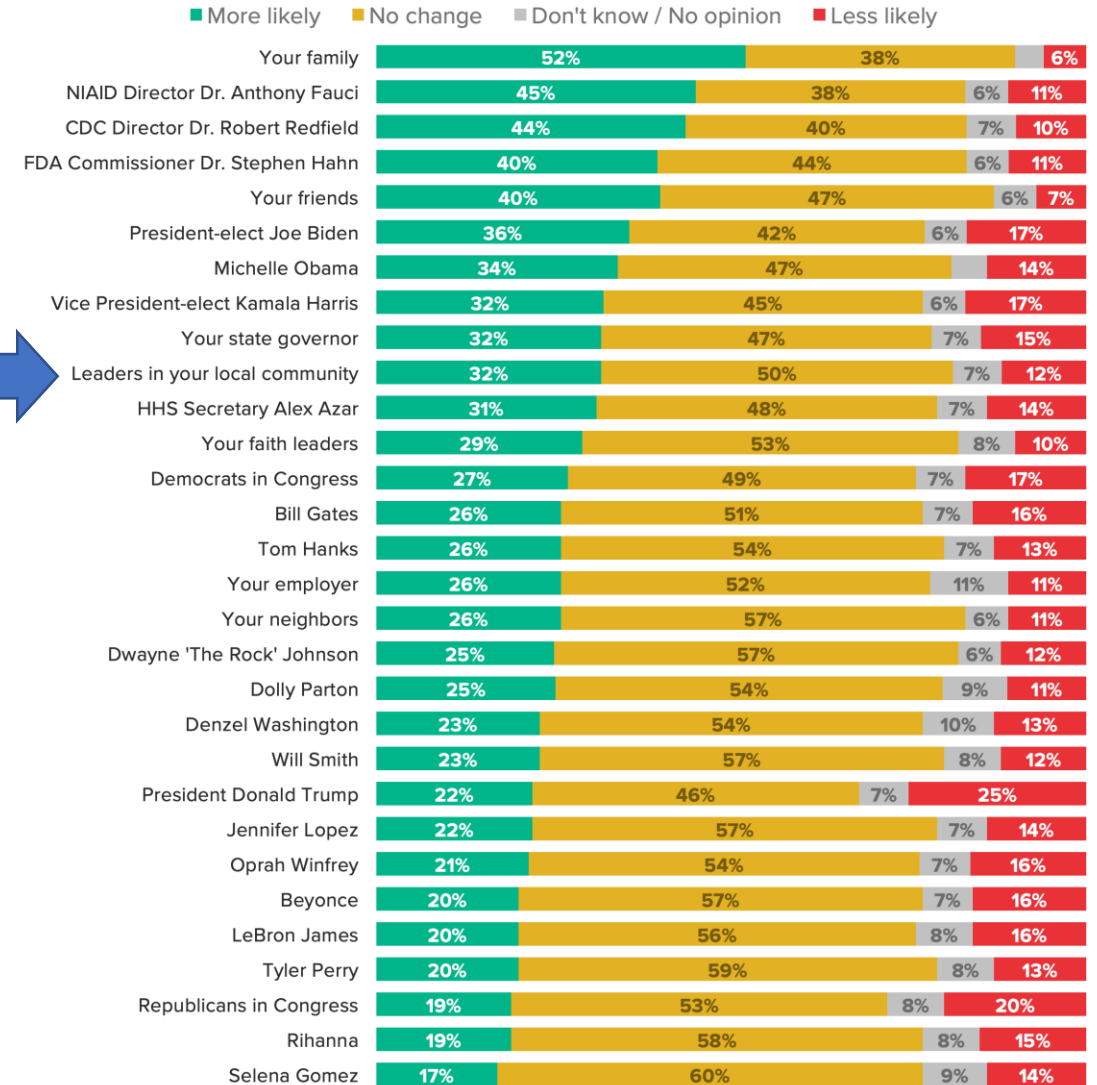|	More likely	No change	Don't know	Less likely
Your family	52%	38%		6%
NIAID Director Dr. Anthony Fauci	45%	38%	6%	11%
CDC Director Dr. Robert Redfield	44%	40%	7%	10%
FDA Commissioner Dr. Stephen Hahn	40%	44%	6%	11%
Your friends	40%	47%	6%	7%
President-elect Joe Biden	36%	42%	6%	17%
Michelle Obama	34%	47%		14%
Vice President-elect Kamala Harris	32%	45%	6%	17%
Your state governor	32%	47%	7%	15%
Leaders in your local community	32%	50%	7%	12%
HHS Secretary Alex Azar	31%	48%	7%	14%
Your faith leaders	29%	53%	8%	10%
Democrats in Congress	27%	49%	7%	17%
Bill Gates	26%	51%	7%	16%
Tom Hanks	26%	54%	7%	13%
Your employer	26%	52%	11%	11%
Your neighbors	26%	57%	6%	11%
Dwayne 'The Rock' Johnson	25%	57%	6%	12%
Dolly Parton	25%	54%	9%	11%
Denzel Washington	23%	54%	10%	13%
Will Smith	23%	57%	8%	12%
President Donald Trump	22%	46%	7%	25%
Jennifer Lopez	22%	57%	7%	14%
Oprah Winfrey	21%	54%	7%	16%
Beyonce	20%	57%	7%	16%
LeBron James	20%	56%	8%	16%
Tyler Perry	20%	59%	8%	13%
Republicans in Congress	19%	53%	8%	20%
Rihanna	19%	58%	8%	15%
Selena Gomez	17%	60%	9%	14%

MORNING CONSULT

Poll conducted Dec. 10-15, 2020, among 6,000 U.S. adults, with a margin of error of +/-1%.
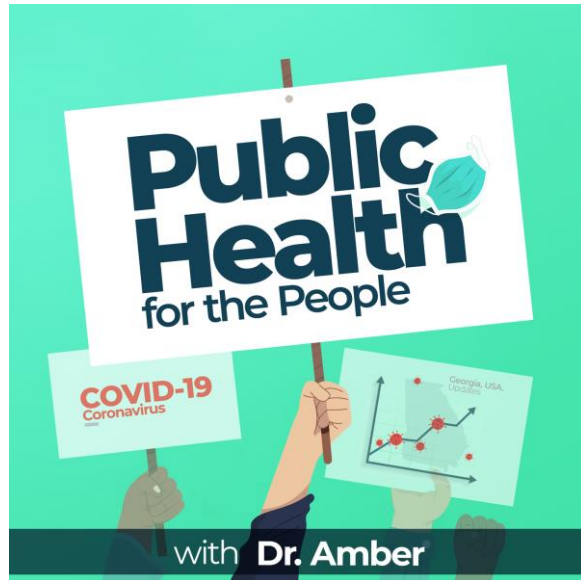
Our marching orders

- Limit disease transmission and preserve hospital capacity as much as possible until 70-90% of the population is immunized.
  - Consequences of overwhelming our healthcare infrastructure.
  - Logistical challenges of mass vaccination campaign.

Continue the conversation

Georgia COVID-19 Updates
www.amberschmidtkephd.substack.com

iTunes, Google Podcasts, Spotify

Email: amberschmidtke.phd@gmail.com

ACIP phase recommendations

Proposed Phase 1 & 2 allocation, December 2020

Phase	Groups recommended for vaccination	Number of persons in each group (millions)	Number of unique* persons in each group (millions)	Total* (millions)
1a	Health care personnel Long-term care facility residents	21 3	21 3	24
1b	Frontline essential workers Persons aged 75 years and older	30 21	30 19	49
1c	Persons aged 65-74 years Persons aged 16-64 years with high-risk conditions Essential workers not recommended in Phase 1b	32 110 57	28 81 20	129
2	All people aged 16 years and older not in Phase 1, who are recommended for vaccination			

*Accounts for persons recommended in prior phases or overlap within a phase