Dartmouth Health

# Sally Kraft, MD, MPH

**Vice President of Population Health**

**Dartmouth Health**

Original Investigation | Infectious Diseases

## Racial Disparities in Incidence and Outcomes Among Patients With COVID-19

L. Silvia Muñoz-Price, MD, PhD; Ann B. Nattinger, MD, MPH; Frida Rivera, MD, PhD; Ryan Hanson, MS; Cameron G. Gmehlin, BA; Adriana Perez, MS; Siddhartha Singh, MD, MS, MBA; Blake W. Buchan, PhD; Nathan A. Ledeboer, PhD; Liliana E. Pezzin, PhD, JD

# Who Is Most Likely to Die From the Coronavirus?

By Yaryna SerkezJune 4, 2020

# AN UNEQUAL BLOW

## COVID-19 and Racial/Ethnic Disparities

## In Pursuit of a Deeper Understanding of Racial Justice and Health Equity

John Z. Ayanian, MD, MPP[1,2]; Melinda B. Buntin, PhD[3,4]

Dartmouth Health

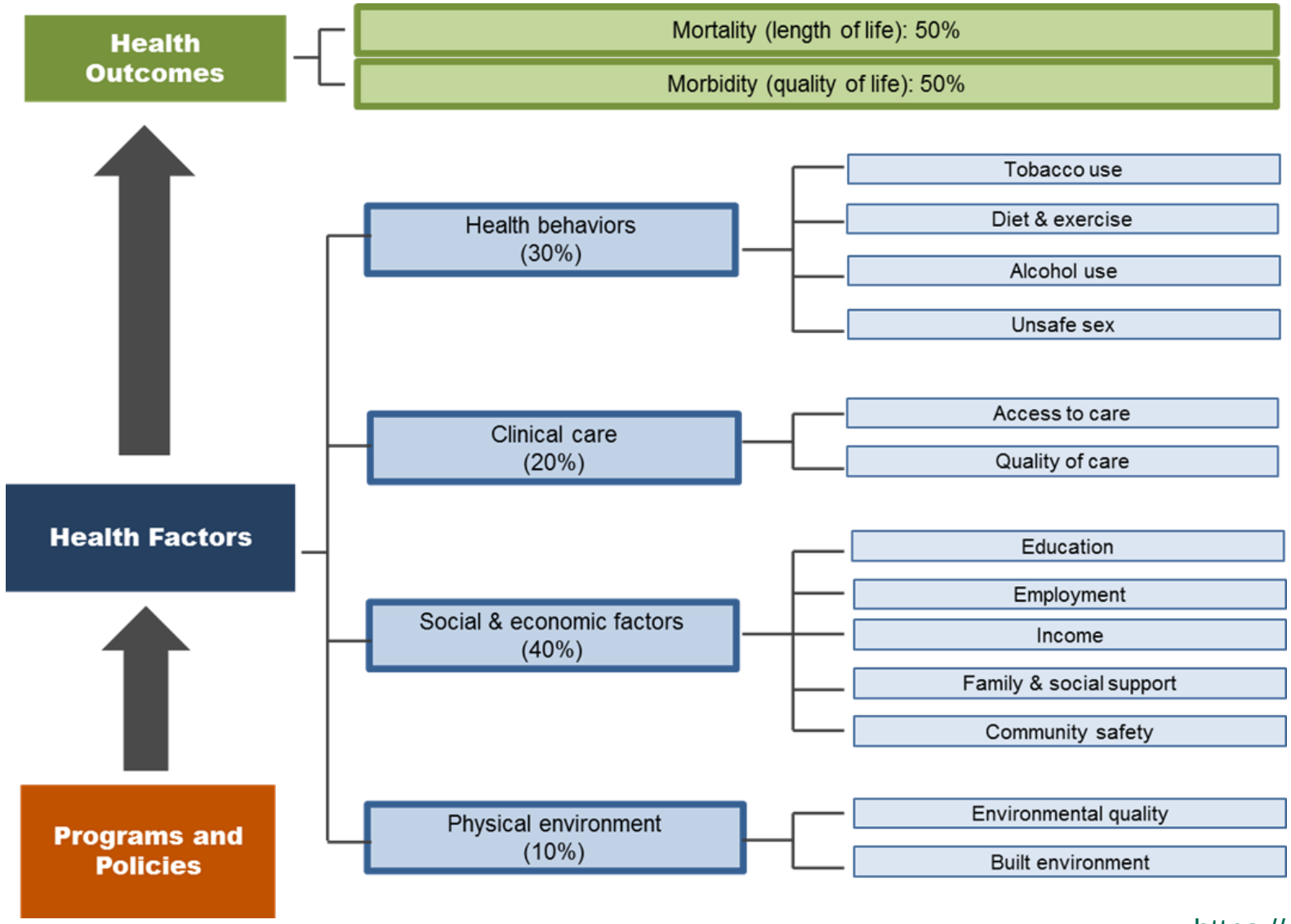
# Social Drivers of Health

The circumstances in which people are born, grow up, live, work and age, as well as the systems put in place to deal with illness. **These circumstances are, in turn, shaped by a wide set of forces: economics, social policies, and politics.**

World Health Organization

Dartmouth Health

# Socioeconomic, environment and behavioral factors drive 80% of Health






https://www.countyhealthrankings.org/

Dartmouth Health

# Your zip code matters more than your genetic code

## HANOVER, NH

86.7 yrs.

life expectancy

$137,344

median household income

## LEBANON, NH

80.7 yrs.

life expectancy

$67,698

median household income

## GRAFTON, NH

78.9 yrs.

life expectancy

$61,429

median household income

## NEWPORT, NH

77.5 yrs.

life expectancy

$54,816

median household income

Sources: NH Wisdom (life expectancy 2016-20); D-H, NLH, MAHHC 2021-22 CHNAs (household income)

Dartmouth Health

# Manchester NH
## *Redlining 1935-1940*

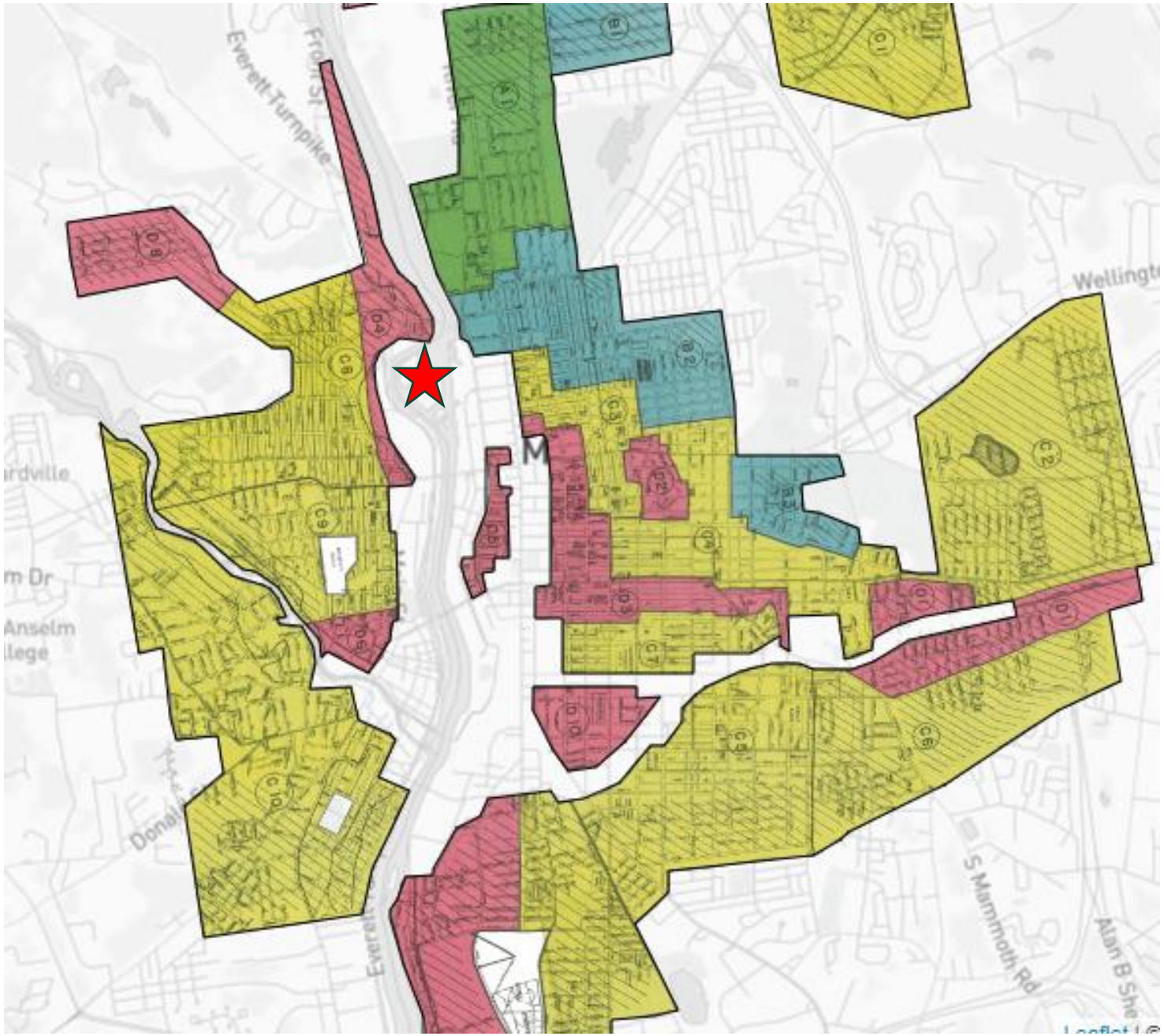
### Manchester, NH

#### Areas by Grade

| Area | Grade |
|---|---|
| 5% | A "Best" |
| 8% | B "Still Desirable" |
| 64% | C "Definitely Declining" |
| 23% | D "Hazardous" |

#### Demographics

| | |
|---|---|
| 77,685 | Total Population (1940) |
| 22.4% | Foreign-born white |




https://dsl.richmond.edu/panorama/redlining

# Manchester NH

Average life expectancy
83.6 years

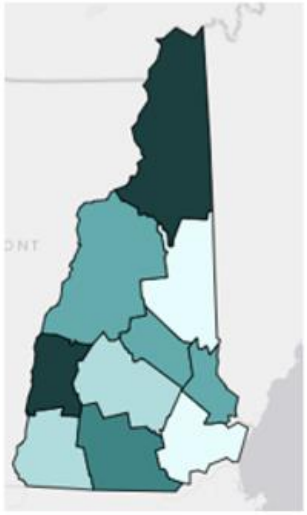
Average life expectancy
71.2 years

https://wisdom.dhhs.nh.gov/wisdom/assets/content/dashboards/LE_map_census_tract_and_county.html. Accessed 12/4/22

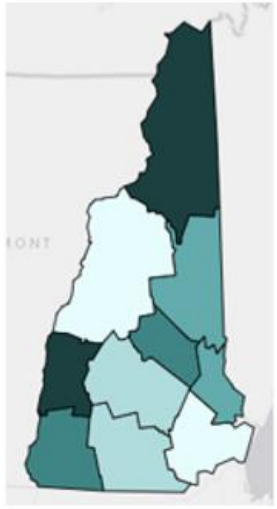
Dartmouth Health

## Socio-Economic Markers

% households with < high school education

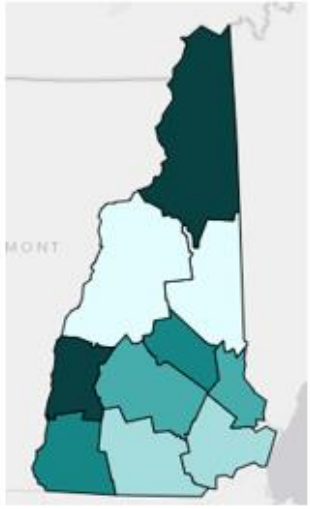


% population receiving food stamps/SNAP

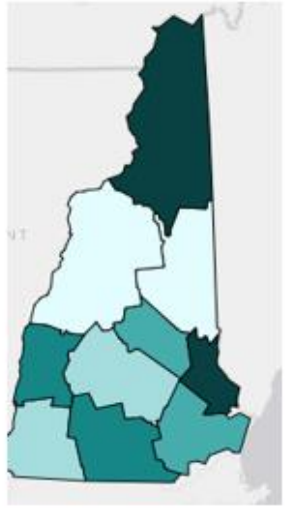


## Chronic Medical Conditions

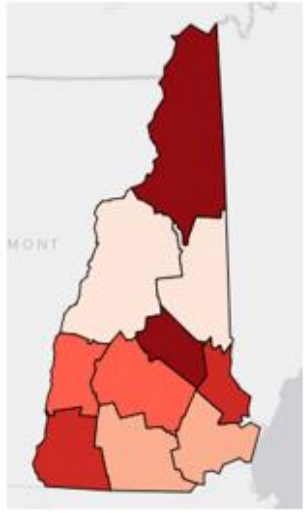
% of adult population with obesity



% of adult population with diagnosed diabetes



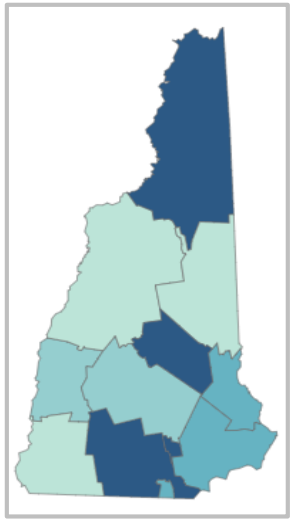
Rate of cardiovascular deaths, age > 35 years



## COVID Outcomes

Age adjusted rates of COVID-19 deaths

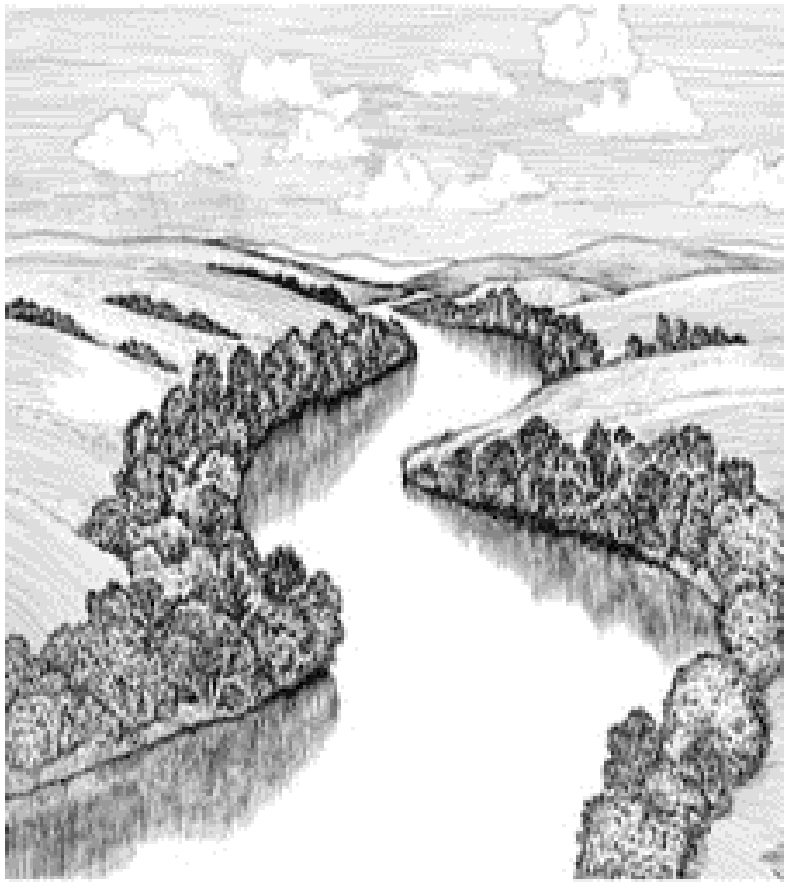
COVID19.nh.gov Accessed 3/8/2022



http://nccd.cdc.gov/DHDSPAtlas. Accessed 2/2020

## Upstream

Improving the socioeconomic and environmental conditions, policies, payment systems that impact the health of our populations



## Midstream

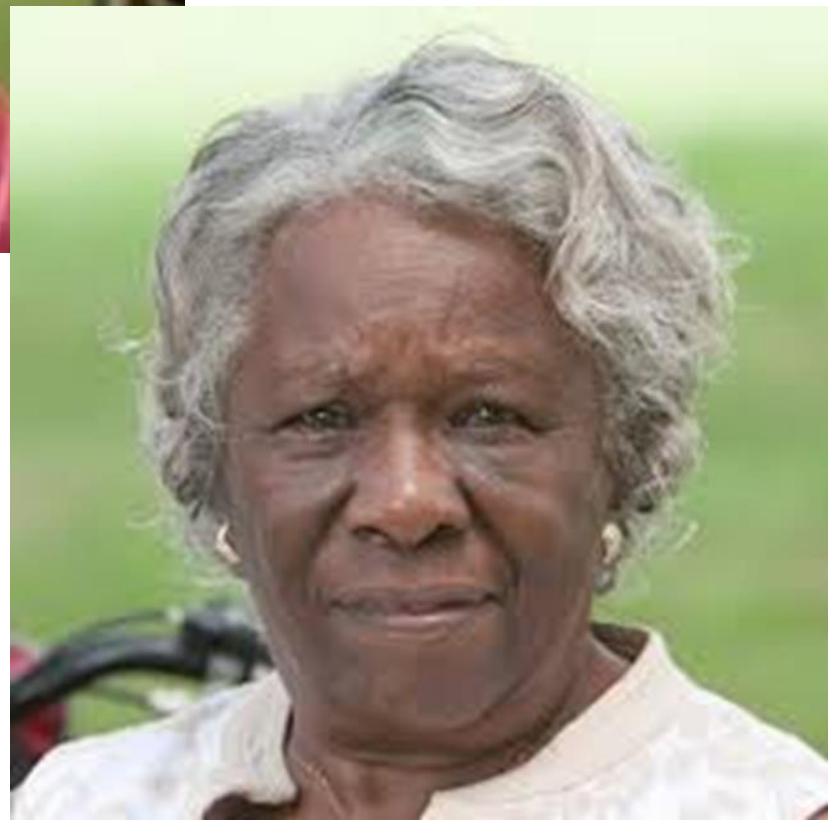
Assisting people in the communities where they live

## Downstream

Caring for patients in our hospitals, clinics

Castrucci and Auerbach[12]
Health Affairs Blog 1/19/2019

Dartmouth Health



Dartmouth Health

# Brandon Wilson, DrPH, MHA

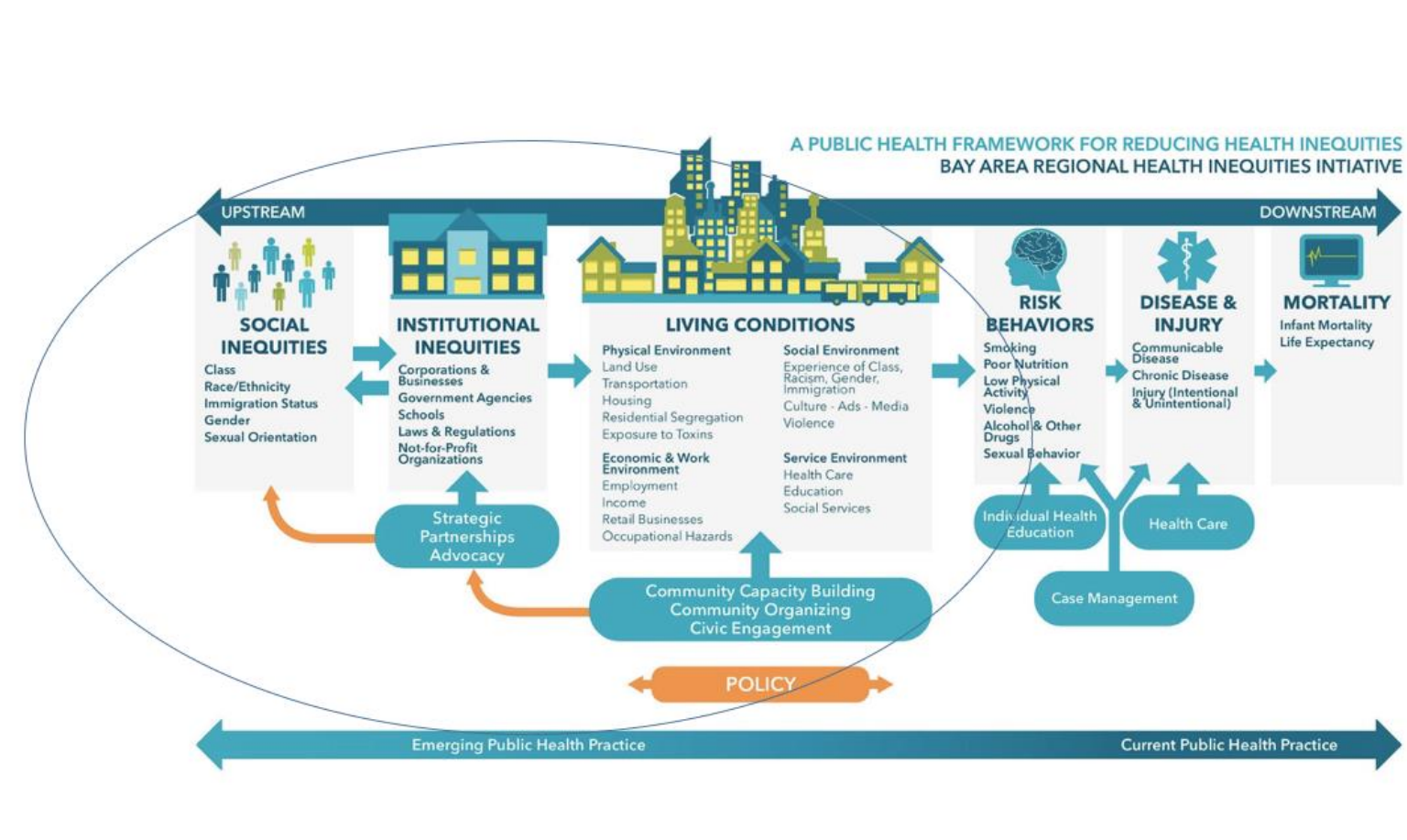
**Director of Center for Consumer Engagement in Health Innovation**

**Community Catalyst**

# The American Experiment

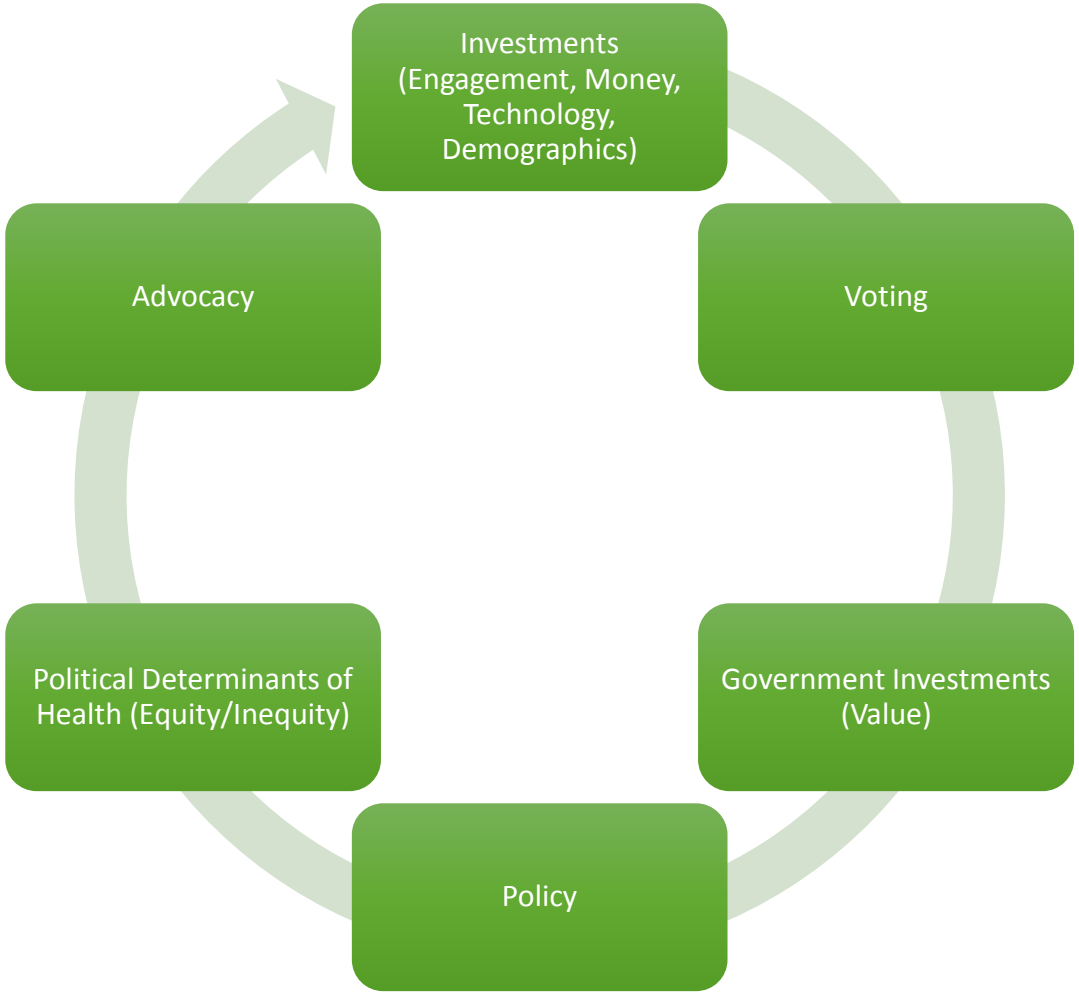


# Social Ecological Framework and Determinants of Health



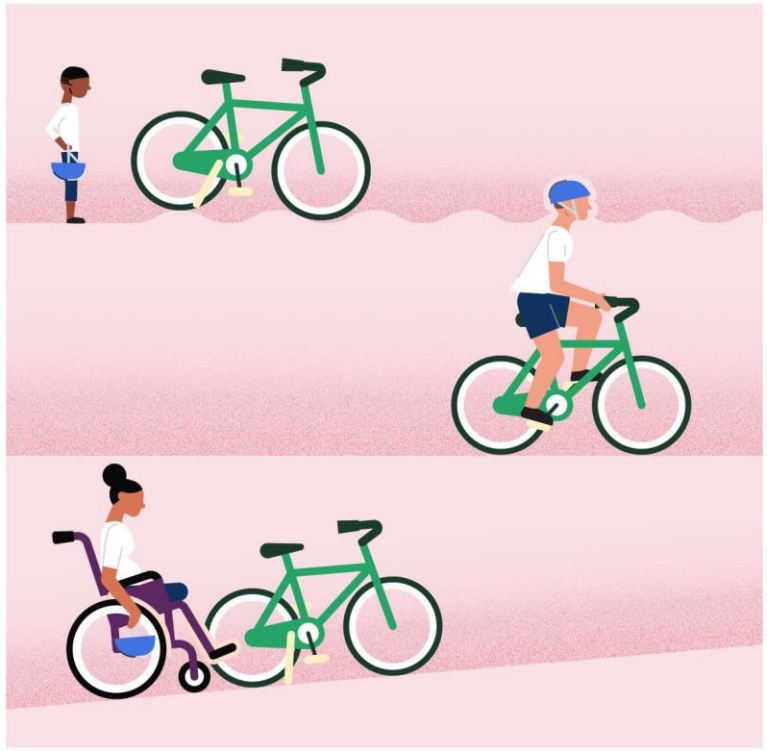
# Health in All Policies

# Political Determinants of Health



# Visualizing Health Equity: One Size Does Not Fit All

**EQUALITY:**
Everyone gets the same–regardless if it's needed or right for them.



**EQUITY:**
Everyone gets what they need–understanding the barriers, circumstances, and conditions.

# Accountable Health Communities Model Background

**The AHC Model has three goals**:

- Help Medicare and Medicaid beneficiaries with unmet HRSNs connect with community resources through screening, referral, and navigation services.
- Optimize community capacity to address HRSNs through quality improvement, data-driven decision making, and coordination and alignment of community-based resources.
- Reduce inpatient and outpatient health care use and total costs by addressing unmet HRSNs through referral and connection to community services.

1+ HRSN

2+

## AHC Model Eligibility Criteria for Navigation

- Noninstitutionalized, community-dwelling child or adult
- Medicare or Medicaid beneficiary, including dually eligible
- One or more core HRSNs
- Two or more self-reported ED visits in the 12 months before screening

**The AHC Model screens for five core HRSNs:**

5

1. Housing instability: homelessness, poor housing quality, inability to pay mortgage/rent
2. Food insecurity: difficulty paying for a sufficient quantity of food
3. Transportation problems: transportation needs beyond medical transportation
4. Utility difficulties: difficulty paying utility bills
5. Interpersonal violence/safety: intimate partner violence, elder abuse, child maltreatment

# A Collaborative Multi-Sector Structure

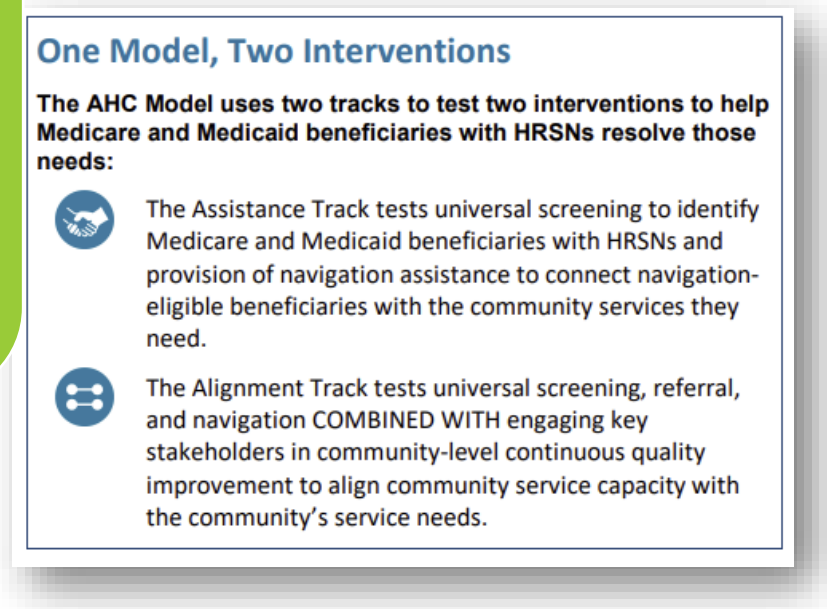
**Exhibit 1-5. Organizational Structure of the AHC Model**

Bridge organizations lead a consortium of CDSs, CSPs, and the state Medicaid agency to implement the AHC Model.

# AHC Model Details

Over a five-year period, the model provided support to community bridge organizations to test promising service delivery approaches aimed at linking beneficiaries with community services that may address HRSN's (i.e., housing instability, food insecurity, utility needs, interpersonal safety). To implement each approach, bridge organizations served as **'hubs' in their communities**, forming and coordinating consortia that will:

- Identify and partner with clinical delivery sites (e.g., physician practices, behavioral health providers, clinics, hospitals) to conduct systematic HRSN screenings of all beneficiaries and make referrals to community services that may be able to address the identified HRSN;
- Coordinate and connect beneficiaries to community service providers through community service navigation; and
- Align model partners to optimize community capacity to address HRSN's



# How Community Advisory Boards Advance SDOH and Health Equity

| | |
|---|---|
| Forming | **Forming an Advisory Board**<br>•Draw on existing relationships<br>•Eliminate barriers for participation<br>•Compensate them for their time<br>•Consider how to include community members (unmet HRSN)<br>•Collaborate with clinical and community providers and commit to DEI |
| Engaging and Retaining | **Engaging and Retaining Ad Boards**<br>•Develop relationships among ad board members<br>•Take advantage of background of ad board members to address HRSN<br>•Share data for opportunities to address community-level QI<br>•Connect with community members and groups facing similar challenges |
| Sustaining | **Sustaining Change**<br>•Focus on directed and flexible funding<br>•Consider other ways to sustain model activities<br>•Work with others who are screening and navigating<br>•Support long-term collaborations |

# Overall Strategies to Increase Equity

To increase cultural humility and responsiveness, some awardees hired directly from minority and underserved populations of focus.

Awardees provided increased training around access to translation and interpretation services. Befittingly, one awardee trained existing staff in a simulation center.

New primary care sites were added to increase reach among older adults, Latinx and Black or African American populations, and rural communities.

One awardee added a clinical delivery site co-located with an emergency homeless shelter. Another added an inpatient heart failure unit to expand reach among elderly, particularly those with chronic disease.

Awardees convened advisory boards that prioritized CMS beneficiaries' and community's needs. One awardee increased diversity within their ad board, whereas another created a vulnerable population workgroup to inform their local area's COVID-19 response

Creating and leveraging partnerships more widely in the community led other awardees to partner with entities ranging from rural health departments to the Public Defender's Office to the African American Affairs Commission of the General Assembly

# Scale and Spread of AHC Innovations

1. Many health care system bridge organizations, such as AMITA Health in Illinois, are working to expand HRSN screening and referral infrastructure to new clinics and patient populations based on best practices ascertained through the model.
2. Allina Health's AHC work facilitated a new payment model trial with Blue Cross and Blue Shield of Minnesota. This partnership supported the development of Allina Health's systemwide HRSNs program, through which more than 45,000 screenings have been completed and more than 2,000 patients have opted-in to navigation services since January 2022
3. The Camden Coalition partnered with NJ Medicaid as a Regional Health Hub and will continue to act as a clinical-community integrator in that role.
4. The partnerships fostered by the model have also supported multisector data integration efforts, such as Dignity Health's ability to survey partnering community service providers to support implementation of a statewide health information exchange that includes a closed-loop referral system.

# Making the Business Case for Addressing Non-Medical Determinants of Health

01

Defining and Assessing ROI for HRSN/SDOH screening, referral, and navigation

02

Communicating the value of addressing SDOH

03

Securing Ongoing funding for HRSN screening, Referral, and Navigation

# Value in Partnerships to Address Political Determinants

## CAREMORE HEALTH

**Factor:** Neighborhood & Physical Environment

**Anthem's CareMore Health partnered with Lyft to provide transportation benefits to Medicare Advantage members in multiple states**

*Partnered with* lyft

**39%** Average ride cost reduction

**45%** Lowered wait times

## WELLCARE HEALTH PLANS

**Factor:** Economic Stability

**Launched WellCare Works to connect Kentucky Medicaid members to employment opportunities, including job preparedness & placement**

WellCare's Community Connections links members with community based public assistance programs

**10%** Overall reduction in medical cost for those connected to their MCO (WellCare)

## AMERIHEALTH

**Factor:** Access to Food

**Amerihealth started "food as medicine" initiative and partnered with Community Based Organizations to improve access to nutritious meals**

Amerihealth also provides vouchers to farmers markets, meal delivery services, and in-home food counseling

**30%** Reduced inpatient admissions

**10%** Decrease in emergency department visits

## CARESOURCE

**Factor:** Education

**Utilize Life Services program and JobConnect platform to provide direct member coaching and access to job and education opportunities**

Provided funds to launch a digital preschool for low-income children

**50%** Cut early childhood education costs for participating members

# Rhode Island Health Equity Measures: Community Resiliency

| Domain | Determinant | Measure | Data Source |
|---|---|---|---|
| Community Resiliency | Civic Engagement | Percentage of registered voters participating in the most recent presidential election | Rhode Island Board of Elections |
| Community Resiliency | Social Vulnerability | Index score that reflects the social vulnerability of communities | Centers for Disease Control and Prevention (CDC) Social Vulnerability Index, Agency for Toxic Substances and Disease Registry (ATSDR) |
| Community Resiliency | Equity in Policy | Ratio: Number of low to moderate-income housing units to number of low to moderate-income households | HousingWorks RI, Comprehensive Housing Affordability Strategy |

Dartmouth Health

# Deborah Birx, MD

**Senior Fellow**

**George W. Bush Presidential Center**

# What I learned from battling pandemics over the past 4 decades

- Pandemics are always **political** – TB, HIV, Zika, COVID, Ebola
- New infectious pathogens that cause and pandemics generate population level **fear** due to what's unknown – its our job to make that known
- Pandemics are always filled with **misinformation** about transmission, about treatments, and cures
- A pandemic response always requires getting on the ground to understand and work with **communities** in order to fully implement
- **Communication** is key but needs to be tailored and adapted to age, race, ethnicity and geography
  - Working through  a trusted community outreach worker with peer to peer interaction with trusted community leaders is essential

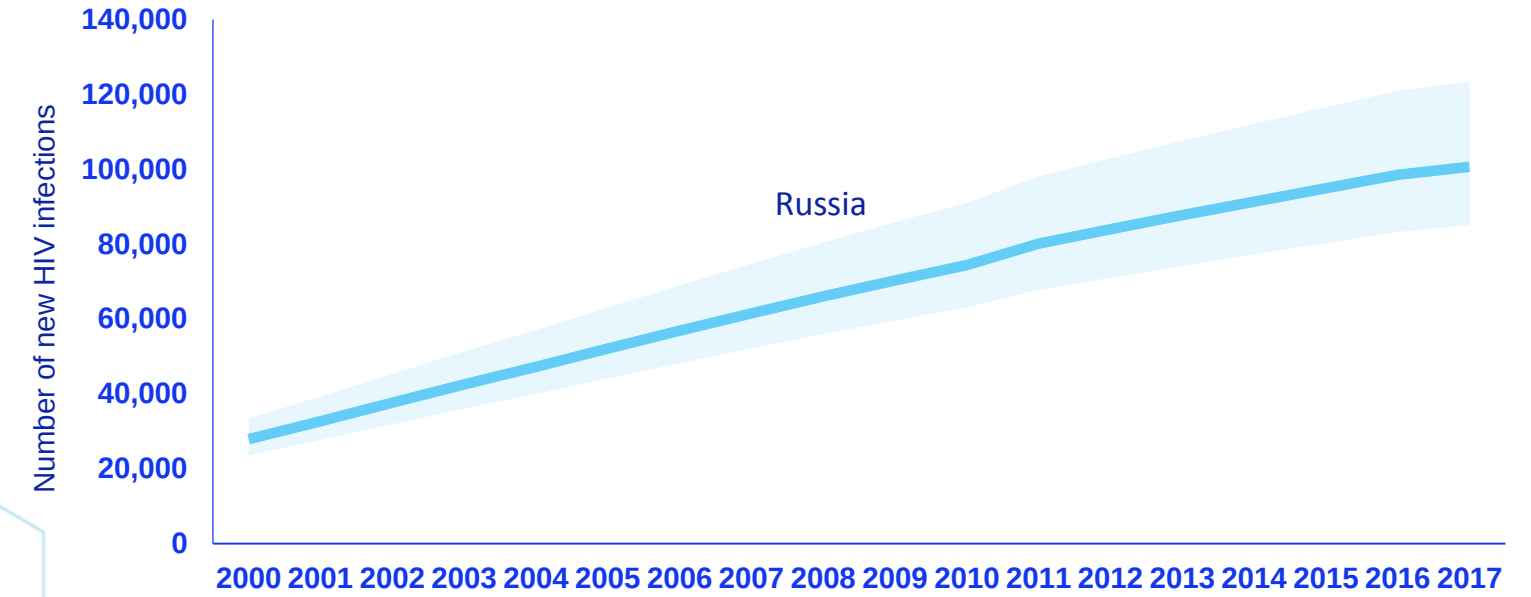
Political Will Matters

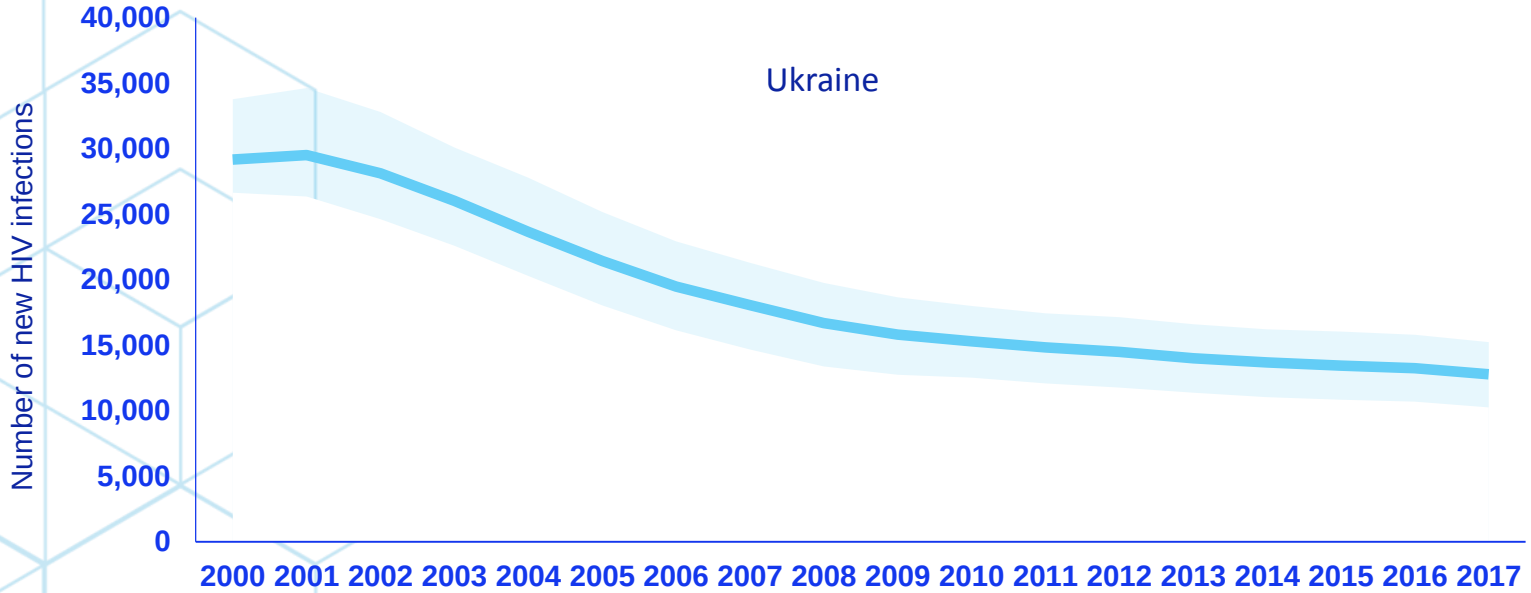
Policies Matter

Data matters - allows us to see past our perceptions and assumptions **to see who we need to reach (who is missing)** and creates the space for an **equity based response** rather than an "equal response"

The Political Will allows countries and states to comprehensively address the epidemic they have not the epidemic they want to have – rapidly adopting KEY policies and ensuring implementation of the new policies at the site level.  AND immediately addressing structural barriers to implementation

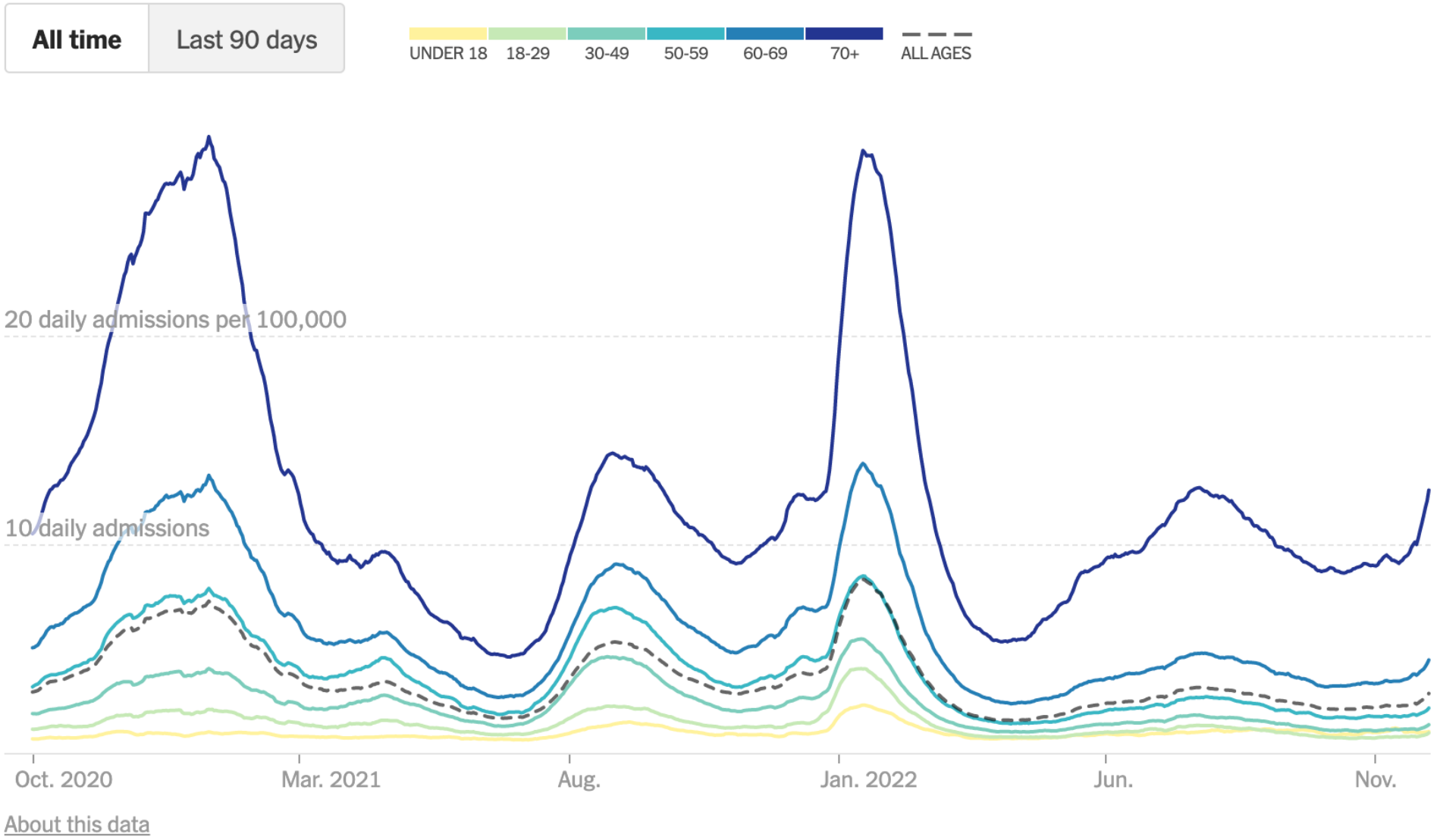
# New Infections in Russia vs Ukraine 2000-2017



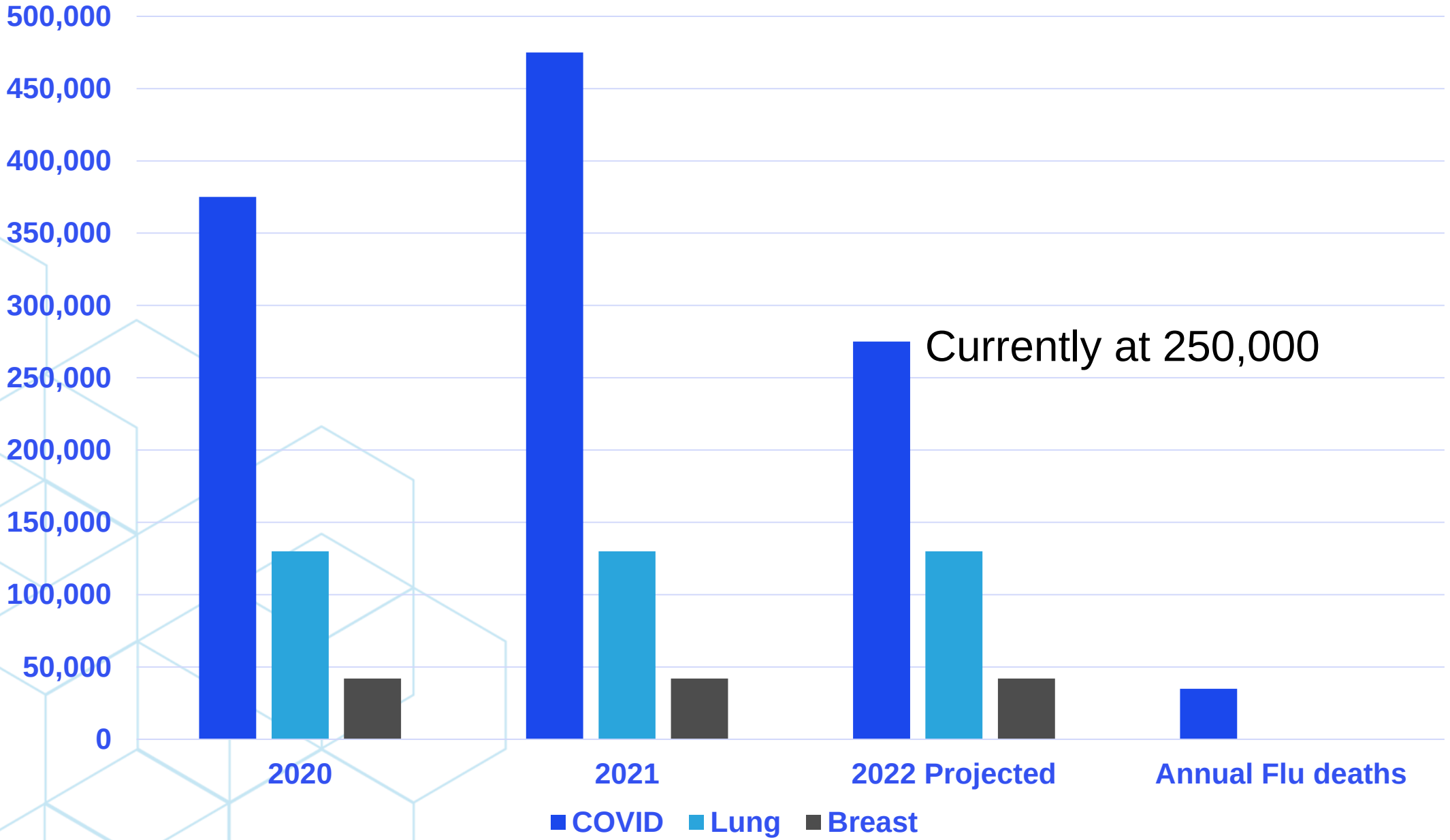



# What about severe disease, hospitalization and death

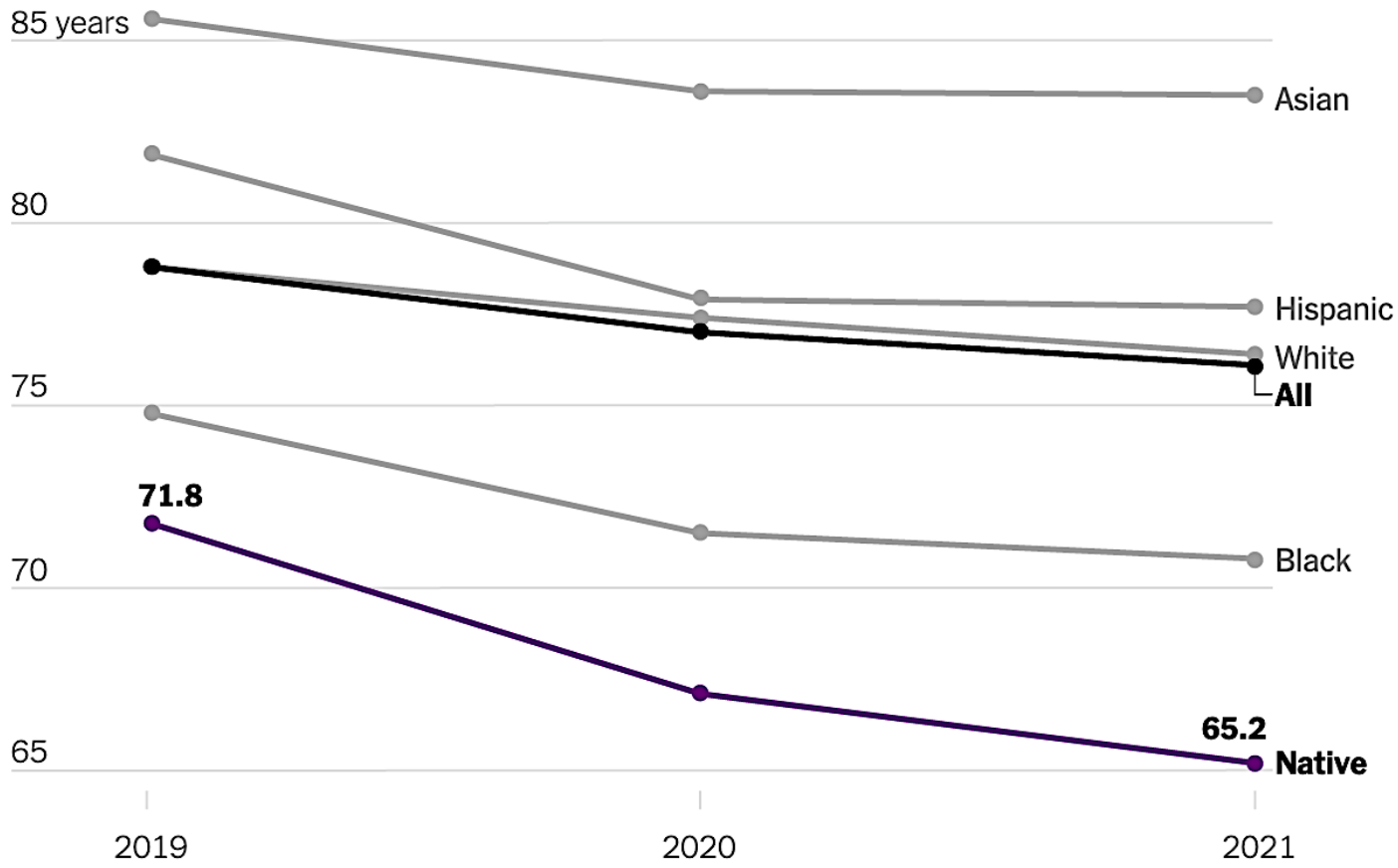
# Moving from magical thinking to reality : using current tools to save lives : first we need to survive then we can thrive -




# Annual Deaths in Americans



## U.S. life expectancy

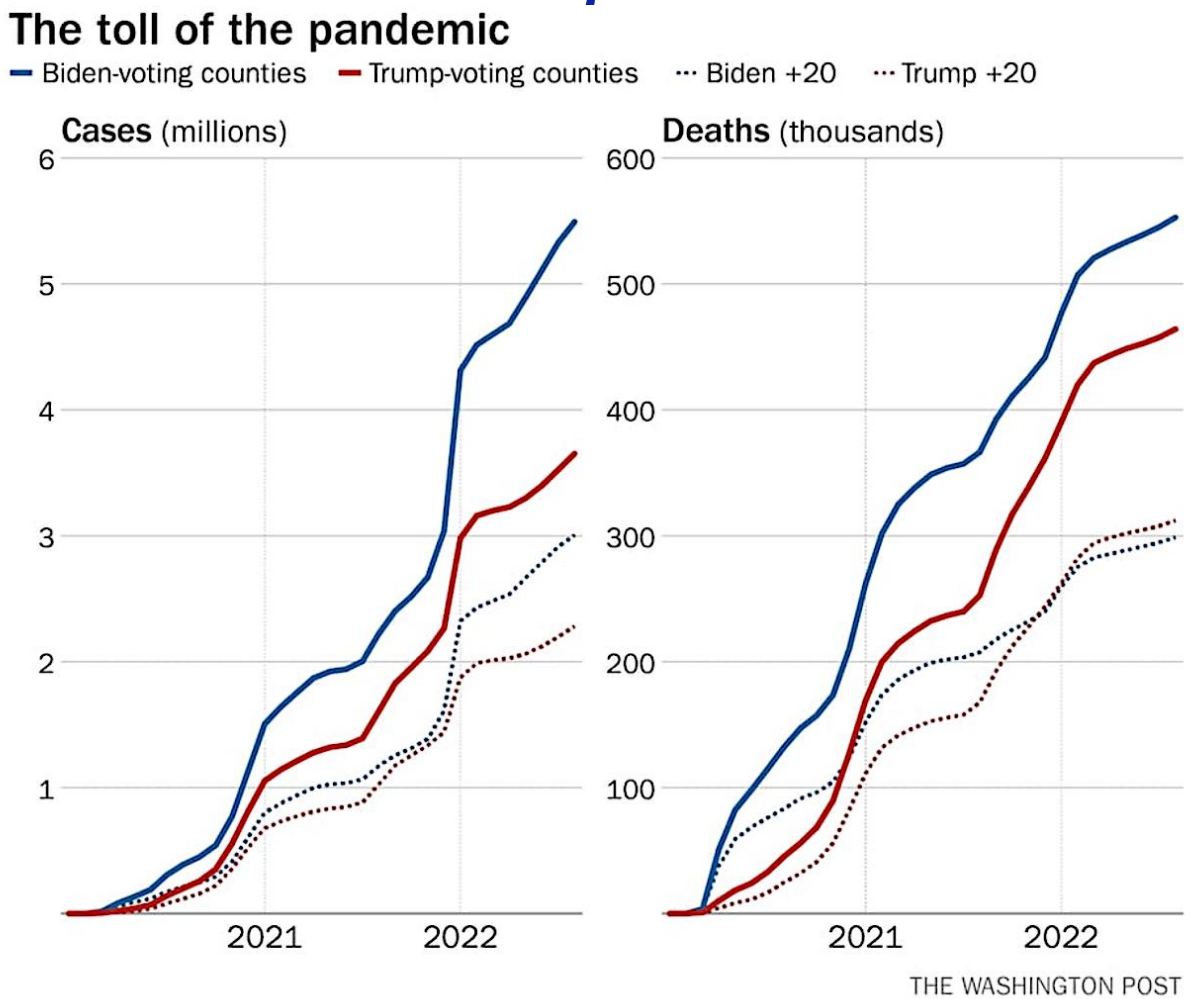


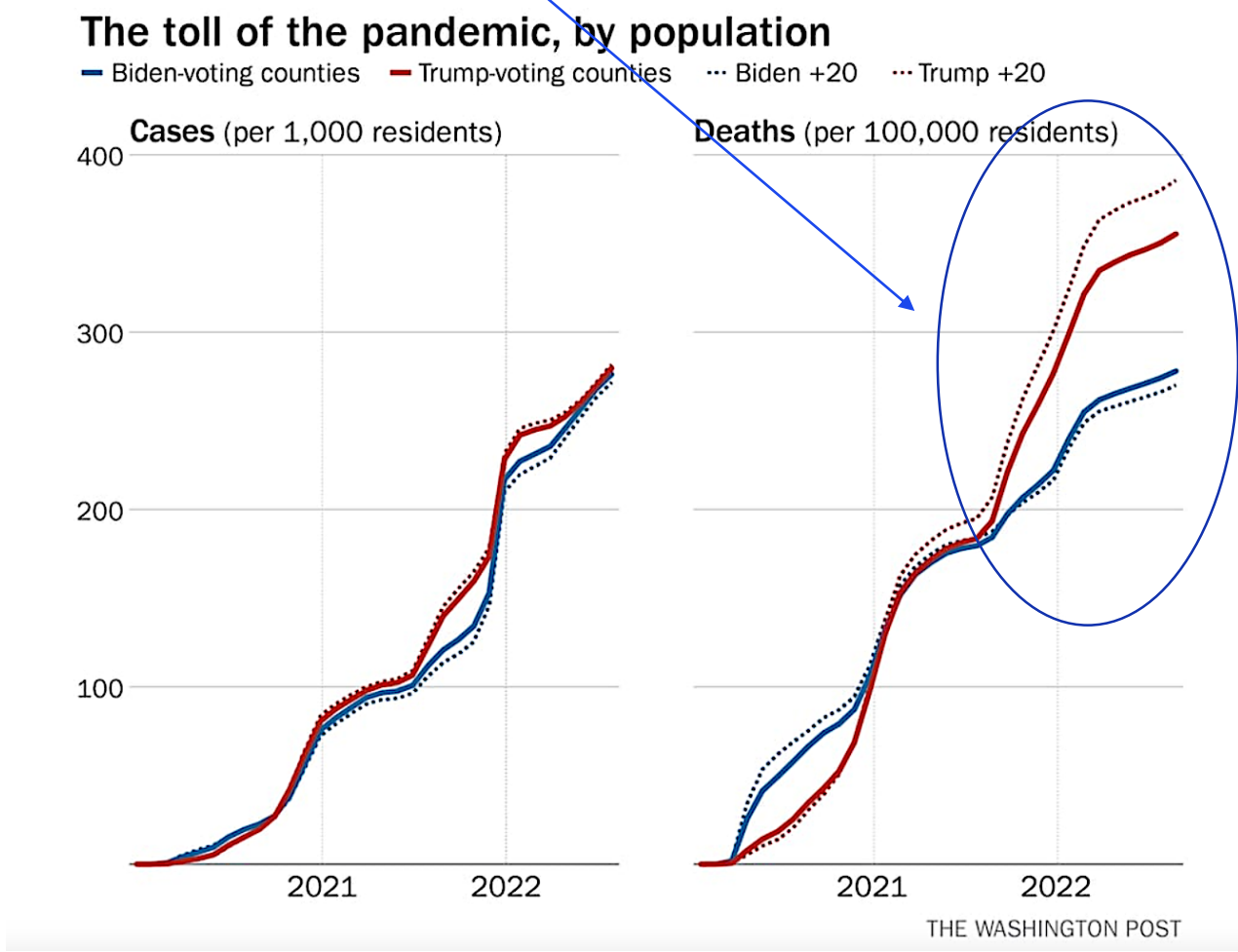

Note: Figures for white, Black, Asian and Native people exclude Hispanic people. • Source: The National Center for Health Statistics

# Pandemics are always political but for public health leaders to maintain credibility and trust must transcend not descend

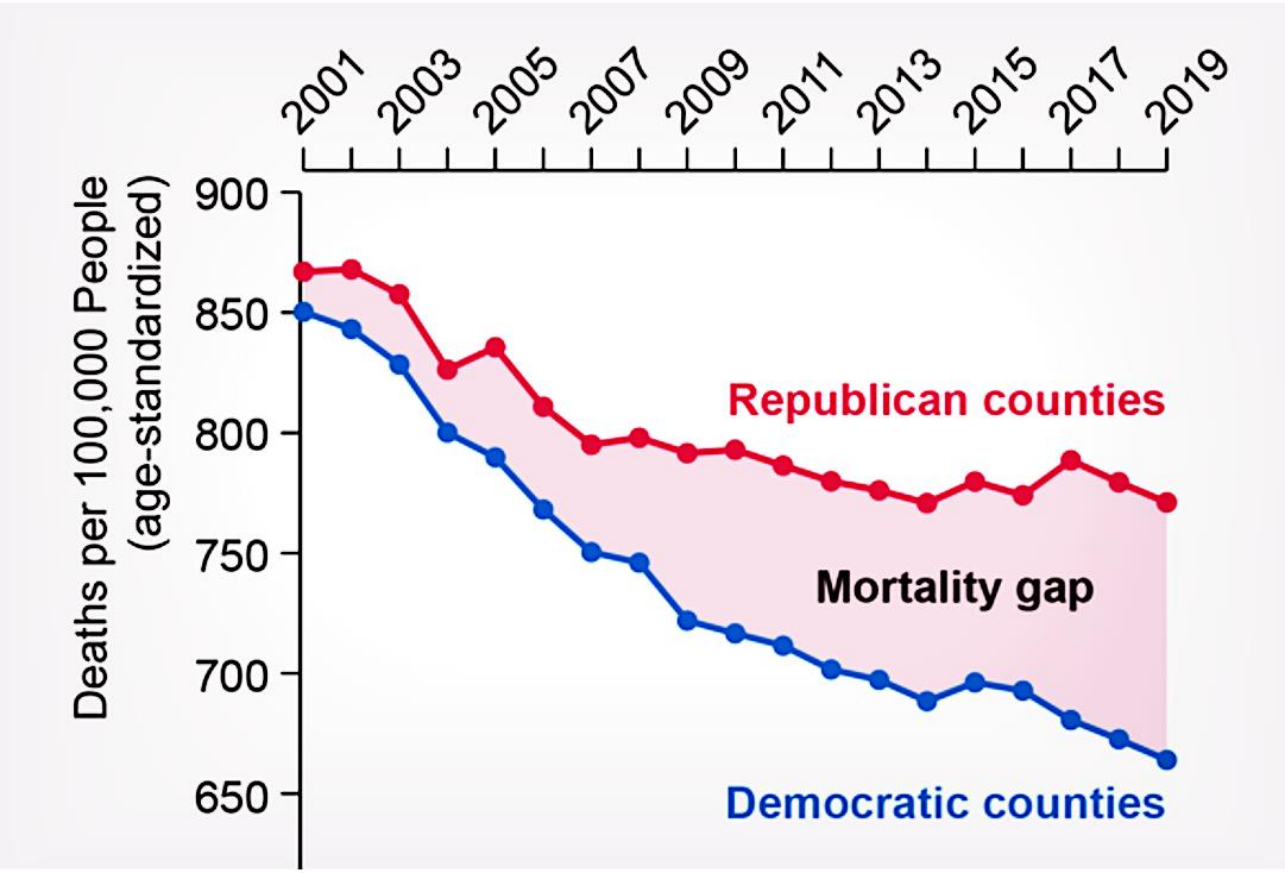
Public health must constantly combat reporting that is oversimplified  or perception based.  Public health must look at both the big picture and the local picture – it must allow itself to be wrong and do the hard work to get the science and data for decision making.  Slogans are not programs.

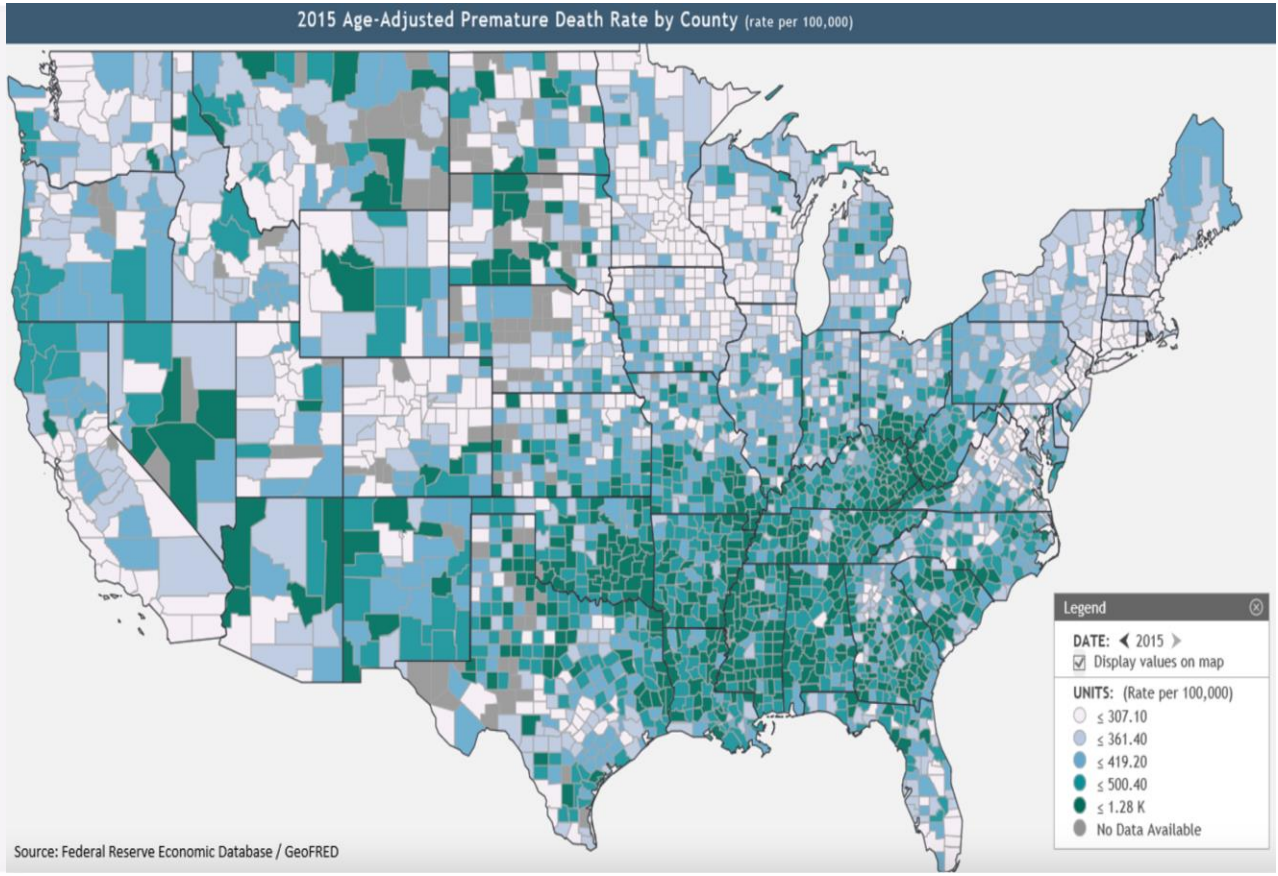
# Polarization of COVID and public health - let's be clear its not how you voted but where you live and whether you have access to PAXLOVID, vaccines and other lifesaving tools



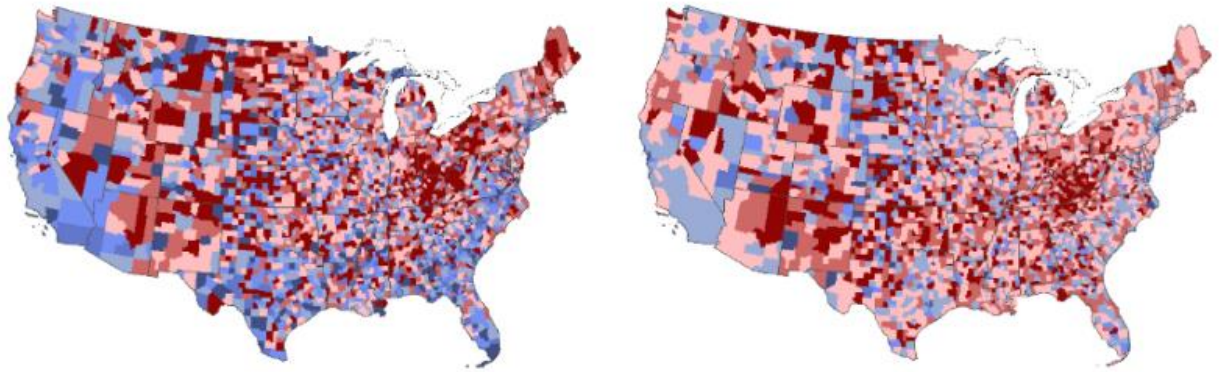
# Why is COVID19 mortality greater in rural Republican Counties : because has been a higher mortality for years



Males

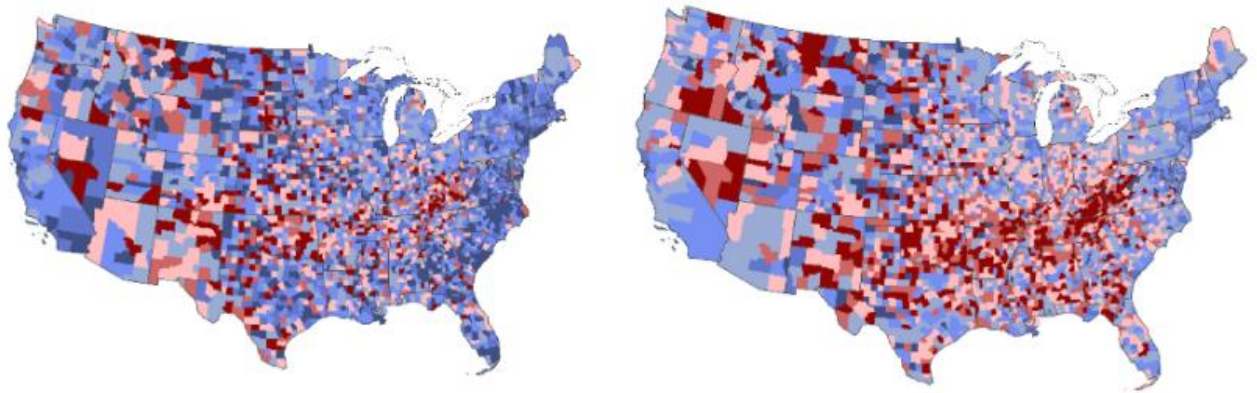
Females



**Absolute Change in Mortality Rate (ages 25-44) 1990-92 to 2015-17**

Deaths per 100,000 Population

<-150 | -150 to -100 | -100 to -50 | -50 to 0 | 0 to 50 | 50 to 100 | >100

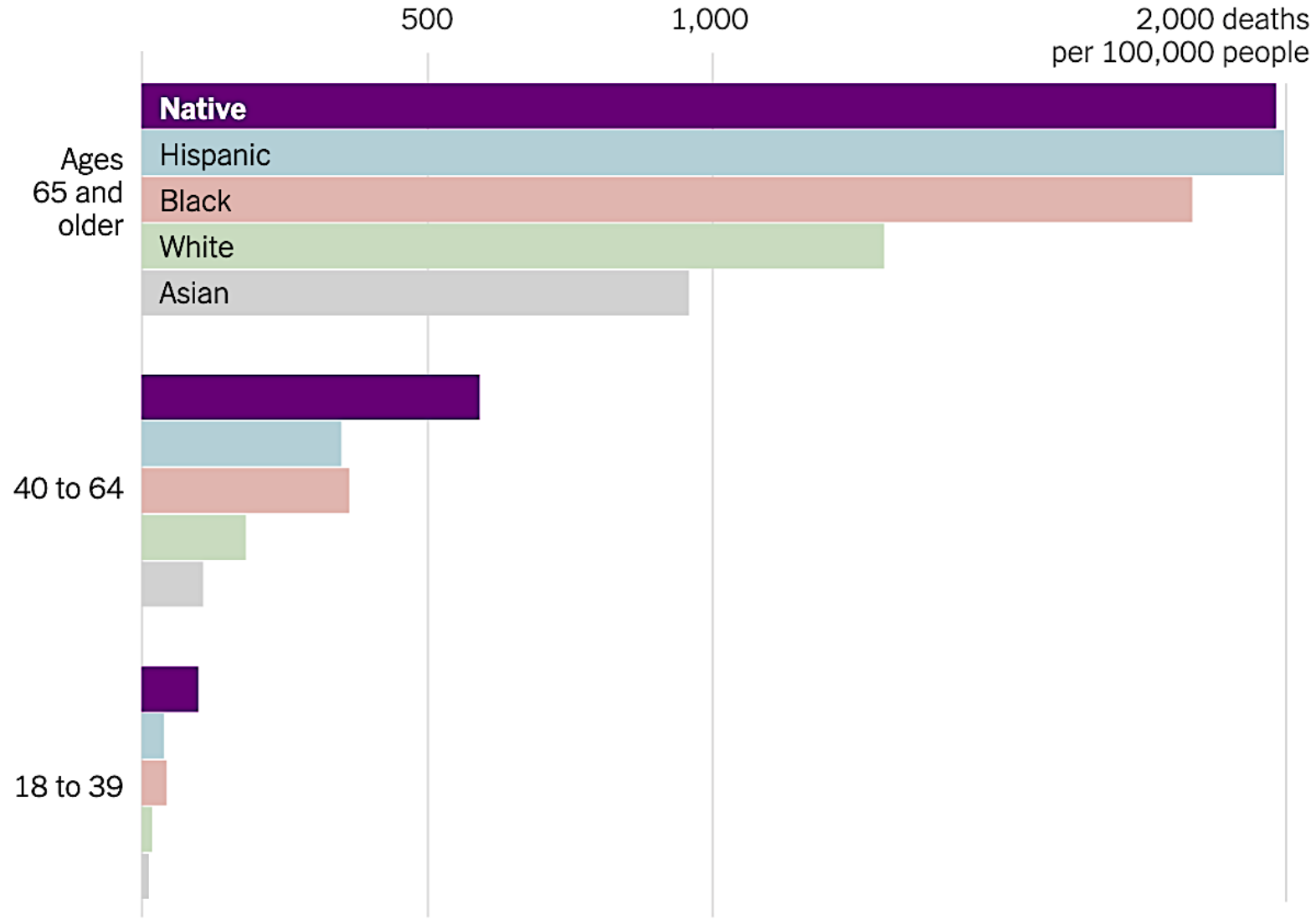


**Absolute Change in Mortality Rate (ages 45-64) 1990-92 to 2015-17**

Deaths per 100,000 Population

<-300 | -300 to -200 | -200 to -100 | -100 to 0 | 0 to 100 | 100 to 200 | >200

# Cumulative U.S. Covid death rates




Note: Data through Aug. 13, 2022. Figures for white, Black, Asian and Native people exclude Hispanic people. • Source: C.D.C.

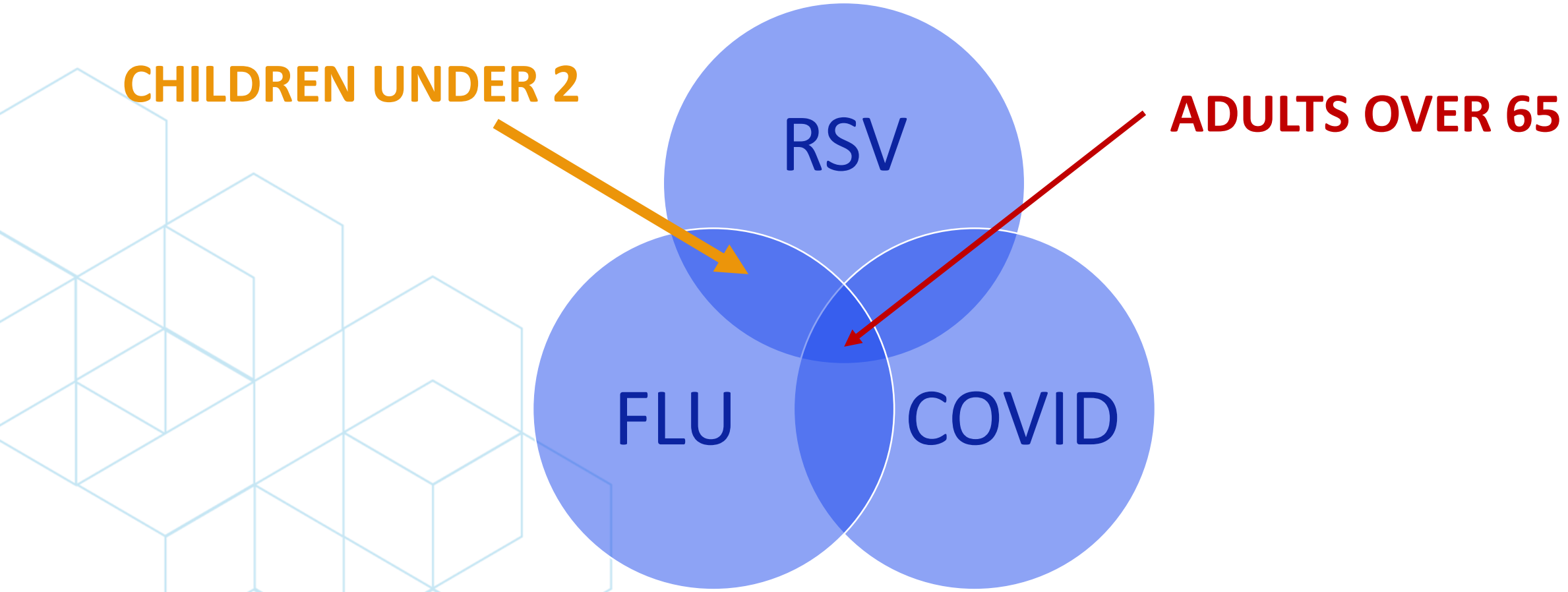
# Bottom line – if you collect the data you morally obligated to use to the data to change policy and program implementation

- Public health should be focused on the health of the public and data collection must be comprehensive across all ages, races, ethnicity and geography.
- Funding must be equitable and need based
- Health cadre roles and responsibilities need to be revisited to ensure increased access to quality primary care in rural and remote areas
- We need to admit that we have failed in the care of indigenous people and change it
- Both WHO and CDC need reform to be data driven but action oriented with data and implementation support in real time with clear accountability and transparency of improvements that actually change outcomes for all
- High income and upper middle income countries need to be able to share pandemic data in real time
- MOVE FROM TRACKING TO ACTING

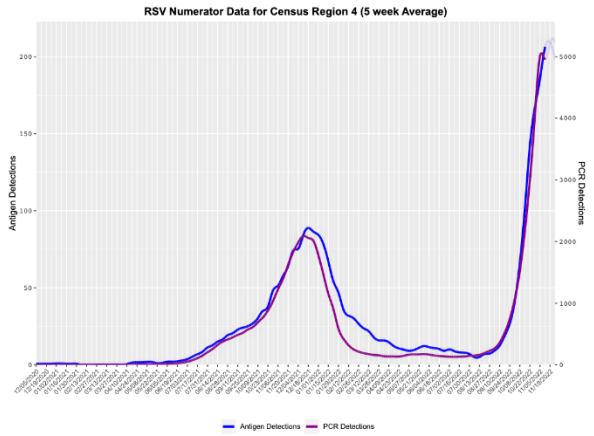
# PSA MOMENT : The problem of serial infectious surges

- **RSV October and November 2022 – impacts children under 2 and elderly severely**
- **FLU November and December 2022 – impacts children under 5, pregnant women and elderly with severe disease**
- **COVID19 December and January 2023 – impacts all age groups due to long and medium COVID and severe disease**
- **The above will lead to continuous absenteeism of workers due to sick children, sick elderly and sick workers for the next 10-12 weeks**
- **Definitive laboratory diagnosis is critical** – you cannot continue to guess by symptoms – testing is the most critical component to a pandemic response
- There has been a clear roadmap to be fully open safely since June 2020

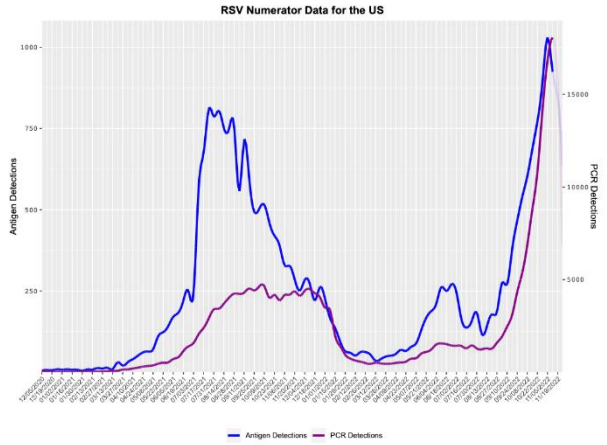
# Overlapping respiratory diseases with overlapping symptoms and severe risk



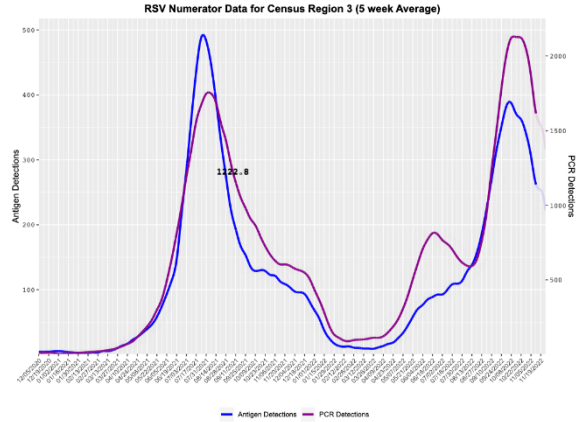
Detections



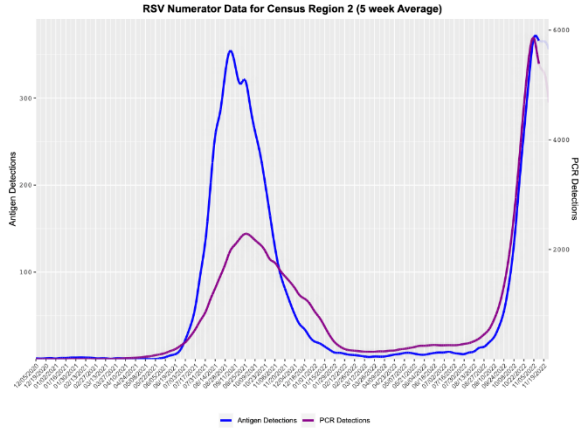

Detections



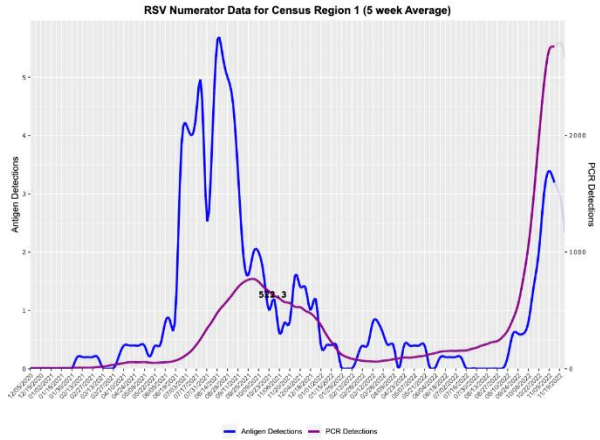

Detections

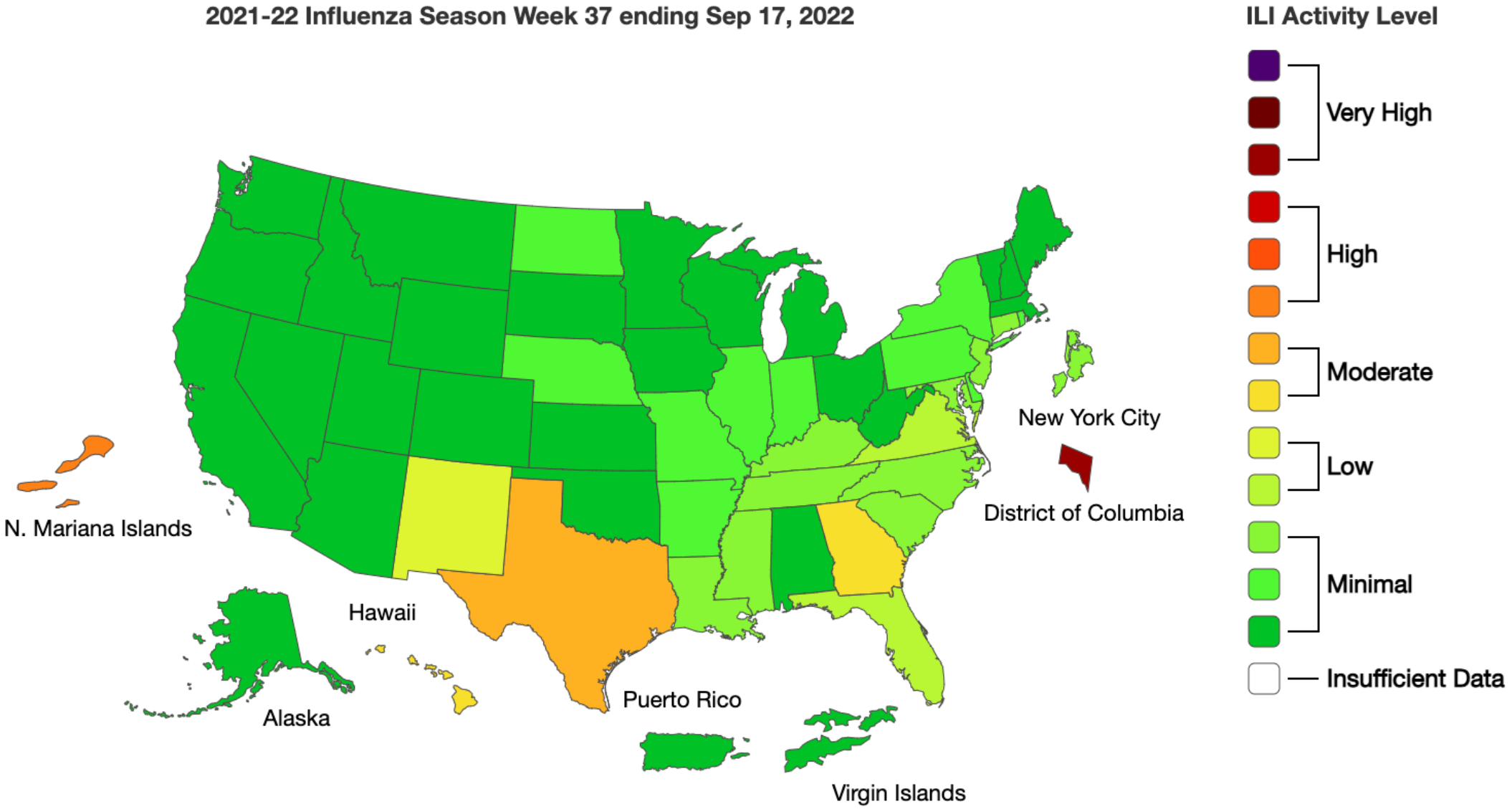



Detections

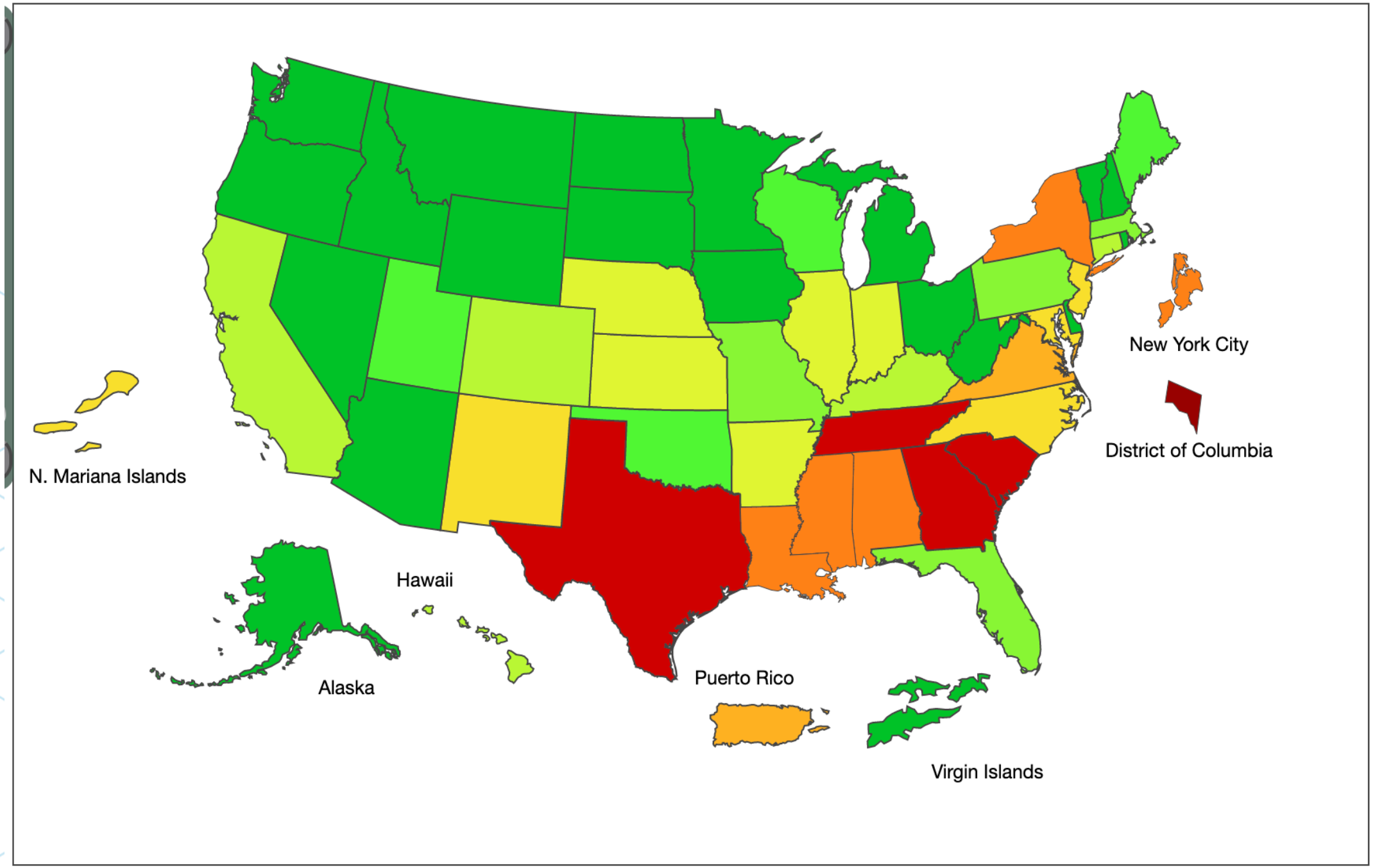



Detections

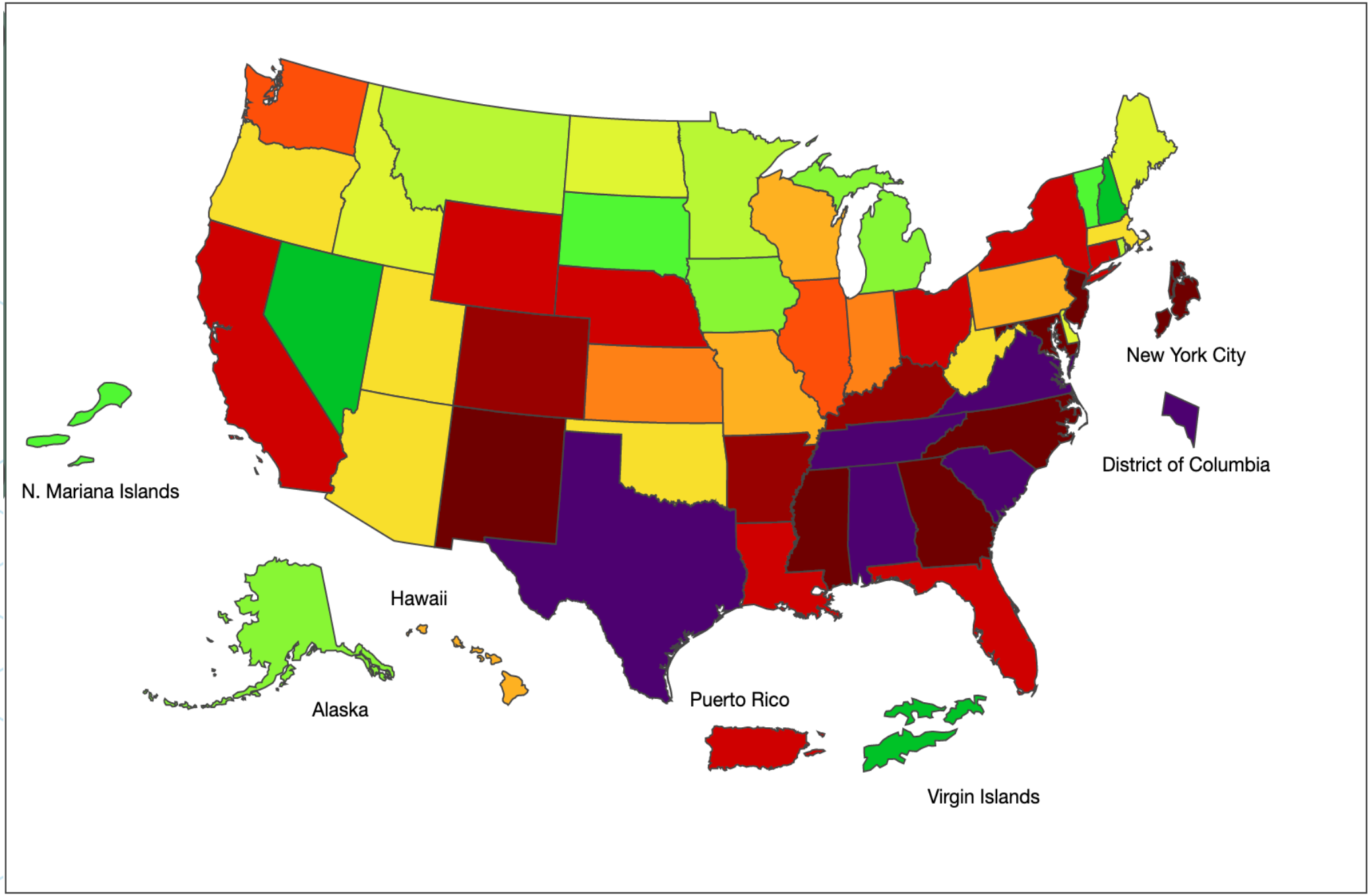


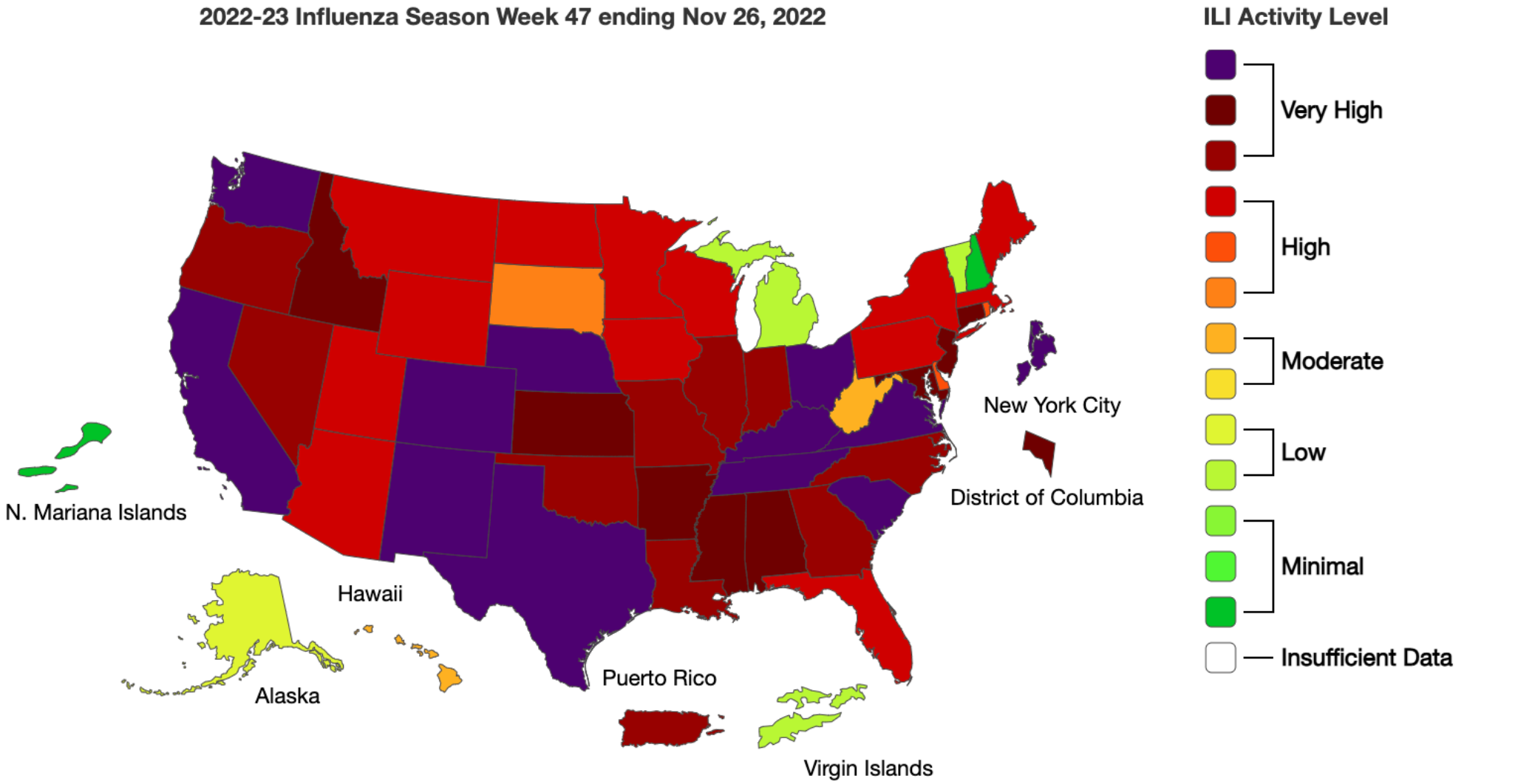

2021-22 Influenza Season Week 37 ending Sep 17, 2022
ILI Activity Level
Very High
High
Moderate
Low
Minimal
Insufficient Data
New York City
District of Columbia
N. Mariana Islands
Hawaii
Alaska
Puerto Rico
Virgin Islands

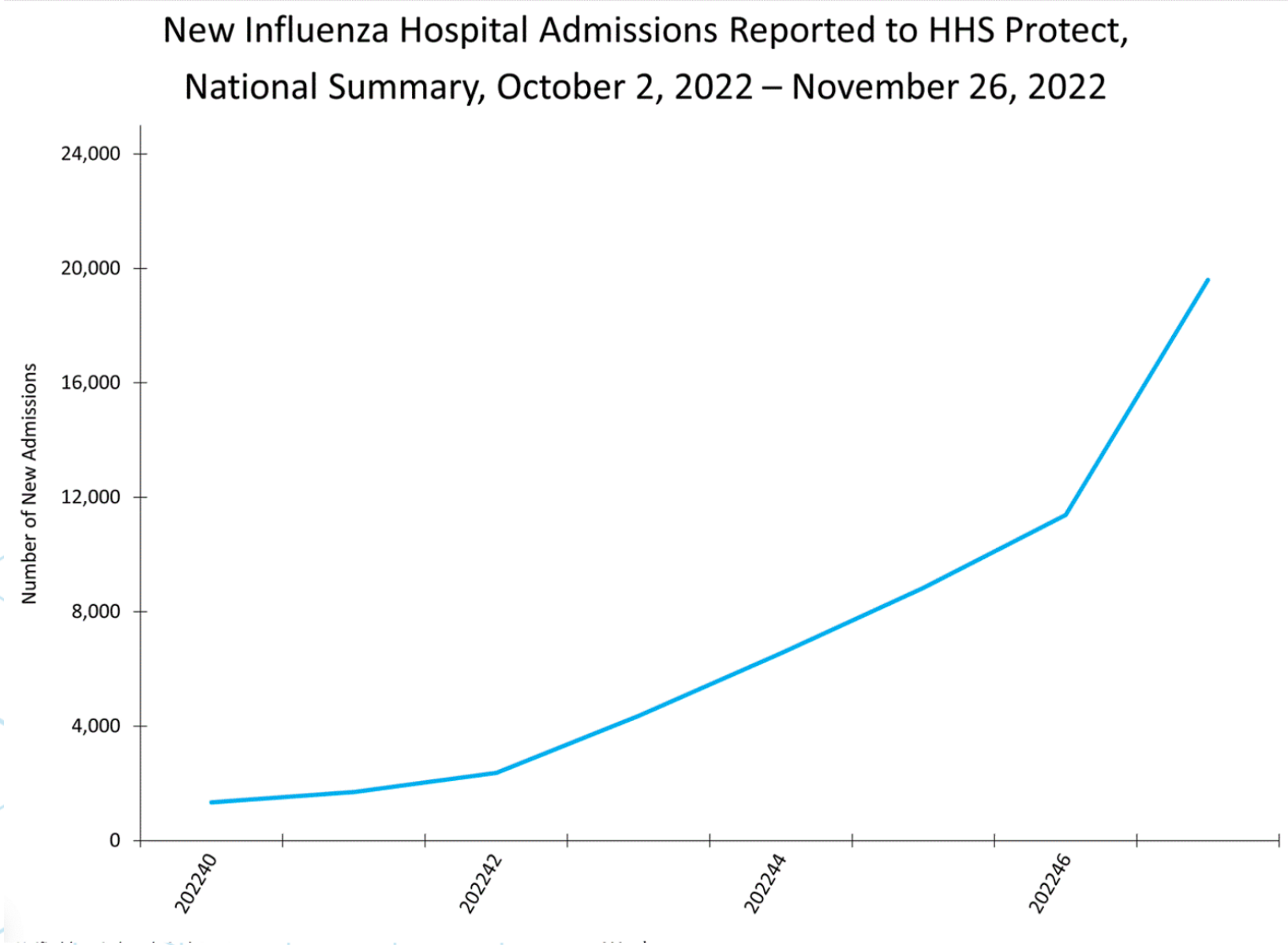
# 2022-23 Influenza Season Week 41 ending Oct 15, 2022



# 2022-23 Influenza Season Week 45 ending Nov 12, 2022

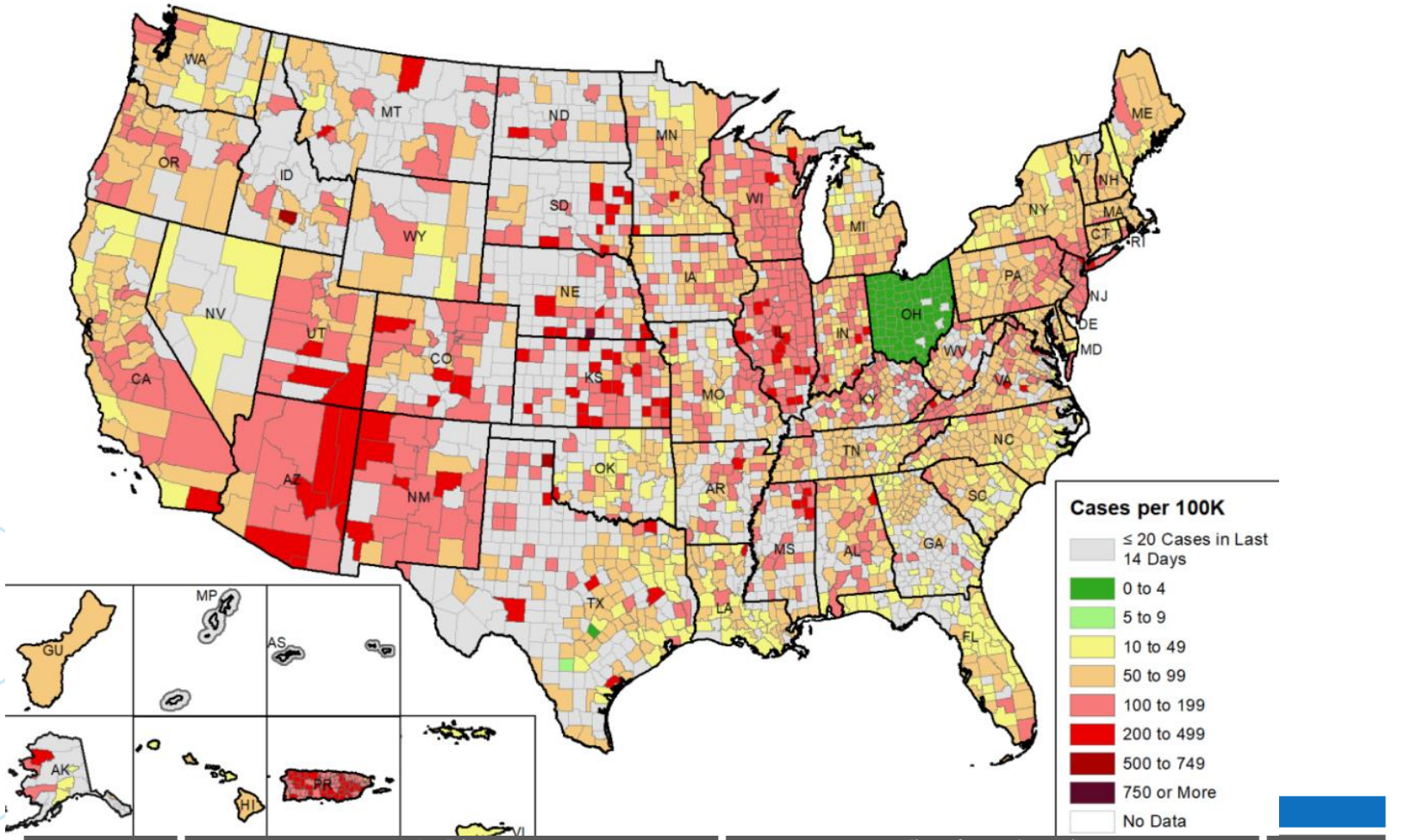



2022-23 Influenza Season Week 47 ending Nov 26, 2022
ILI Activity Level
Very High
High
Moderate
Low
Minimal
Insufficient Data
New York City
District of Columbia
N. Mariana Islands
Hawaii
Alaska
Puerto Rico
Virgin Islands
Season:
2022-23
Download Image
Download Data
View Full Screen


New Influenza Hospital Admissions Reported to HHS Protect,
National Summary, October 2, 2022 – November 26, 2022
Number of New Admissions
24,000
20,000
16,000
12,000
8,000
4,000
0
202240
202242
202244
202246

Date: 12/1/2022
Source: CDC Aggregate County Data, CDC State-Reported Data (Territories)

## Cases per 100K by County in the Week 24NOV2022-30NOV2022




| FEMA Region (Population) | Last 7 days | | | | | Change from previous week | | | | | Daily case trend - last 8 weeks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases (per 100k) | NAAT positivity | Confirmed admissions (per 100k) | ICU COVID-19 utilization | Deaths (per 100k) | Pct change in cases | Absolute change in NAAT pos. | Pct change in confirmed admissions | Absolute change in ICU COVID-19 util. | Pct change in deaths | |
| Region 9 (51,554,700) | 56,719 (110) | 22.0% | 5,565 (10.8) | 5% | 148 (0.3) | -3% | +12.8% | +28% | 1% | -52% | |
| Region 2 (31,635,735) | 51,448 (163) | 11.2% | 3,977 (12.6) | 5% | 279 (0.9) | +10% | +1.9% | +11% | 0% | -6% | |
| Region 4 (66,908,139) | 44,765 (67) | 9.8% | 4,075 (6.1) | 3% | 381 (0.6) | +13% | +2.5% | +23% | 0% | -23% | |
| Region 5 (52,542,063) | 43,831 (83) | 9.8% | 5,278 (10.0) | 4% | 268 (0.5) | -29% | +1.6% | +11% | 0% | -62% | |
| Region 6 (42,716,279) | 29,339 (69) | 11.5% | 2,863 (6.7) | 4% | 106 (0.2) | +4% | +2.3% | +31% | 1% | -20% | |
| Region 3 (30,854,848) | 25,148 (82) | 9.2% | 2,361 (7.7) | 4% | 263 (0.9) | +9% | +1.1% | +2% | 0% | -15% | |
| Region 8 (12,258,952) | 14,561 (119) | 14.7% | 1,526 (12.4) | 4% | 71 (0.6) | -5% | +0.4% | +18% | 0% | +29% | |
| Region 7 (14,140,220) | 13,989 (99) | 20.0% | 1,424 (10.1) | 4% | 87 (0.6) | +12% | +1.9% | +24% | 1% | -14% | |
| Region 1 (14,845,063) | 11,717 (79) | 7.7% | 1,446 (9.7) | 5% | 117 (0.8) | +8% | +1.5% | +13% | 0% | -22% | |
| Region 10 (14,351,240) | 11,442 (80) | 8.5% | 892 (6.2) | 5% | 57 (0.4) | +5% | +1.4% | +17% | 1% | -31% | |

# Moving from magical thinking to reality : using current tools to save lives : first we need to survive then we can thrive -