

Are we ready for extended school
closures?
Evidence from American Community
Survey (2014-2018)

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Background

- Global outbreaks of COVID-19
- On March 13, 2020, White House declared a national emergency.
- Nationwide school closures
 - State governors issued executive orders or made recommendations for all public schools to be closed.
 - Around the end of April, the governors in 48 states ordered or recommended that schools be closed for the remainder of the academic year
 - Nationwide, school closures affect at least 124,000 U.S. public and private schools and at least 55.1 million students

Background

- School closure is necessary
 - Prevent the spread of infections in a short time period.
 - Previous experiences from fighting against the highly pathogenic H5N1 influenza virus
- Extended school closure is costly
 - Disrupts education for schoolchildren
 - Poor nutrition for the recipients of free/reduced meals.
 - Frustrated for school closures when they are suddenly asked to transit from traditional learning to distance learning.
 - Children who stay at home have access to adults who can provide the human capital educational infrastructure necessary for in-home remote learning
 - Impair family finance.

Purpose and significance

- The COVID-19 is an unprecedented pandemic, resulting in 32.7 million people infected and 582,769 deaths in the U.S. by May 16, 2021
- School closure is an option for the 2020-21 school year, with remote education as a mandatory alternative.
- Research questions
 - (a) What is prevalence of PreK-12 students who could not participate in remote education because they lack internet access, hi-speed internet, or computers at home?
 - (b) How much does the prevalence vary across groups of students as a function of free/reduced meal recipients; living in a single-parent family; etc.?

Method

- Data
 - 2014-2018 American Community Survey (ACS)
- Variables
 - PreK-12 student status, family federal poverty level, race/ethnicity group, family structure, and parents' occupations
 - Age, gender, and race
 - Information on internet access, internet subscription, and computer devices

Results

- Demographic and socioeconomic characteristics (unit: student)
 - 51.3 million school-aged children in public schools in the United States.
 - 48.4% in PreK- Grade 5, 21.7% are in Grade 6-8, and 29.9% are in Grade 9-12.
 - Males 51.4% vs. Female 48.6%
 - 48.8% non-Hispanic whites, 14.6% non-Hispanic blacks, 26.6% Hispanic students, 4.7% Asians, 0.8% American Indians or Alaska Natives, and 4.9% others.
 - 27.6% live in households receiving Food Stamp or Supplemental Nutrition Assistance Program (SNAP).

Results (Cont.)

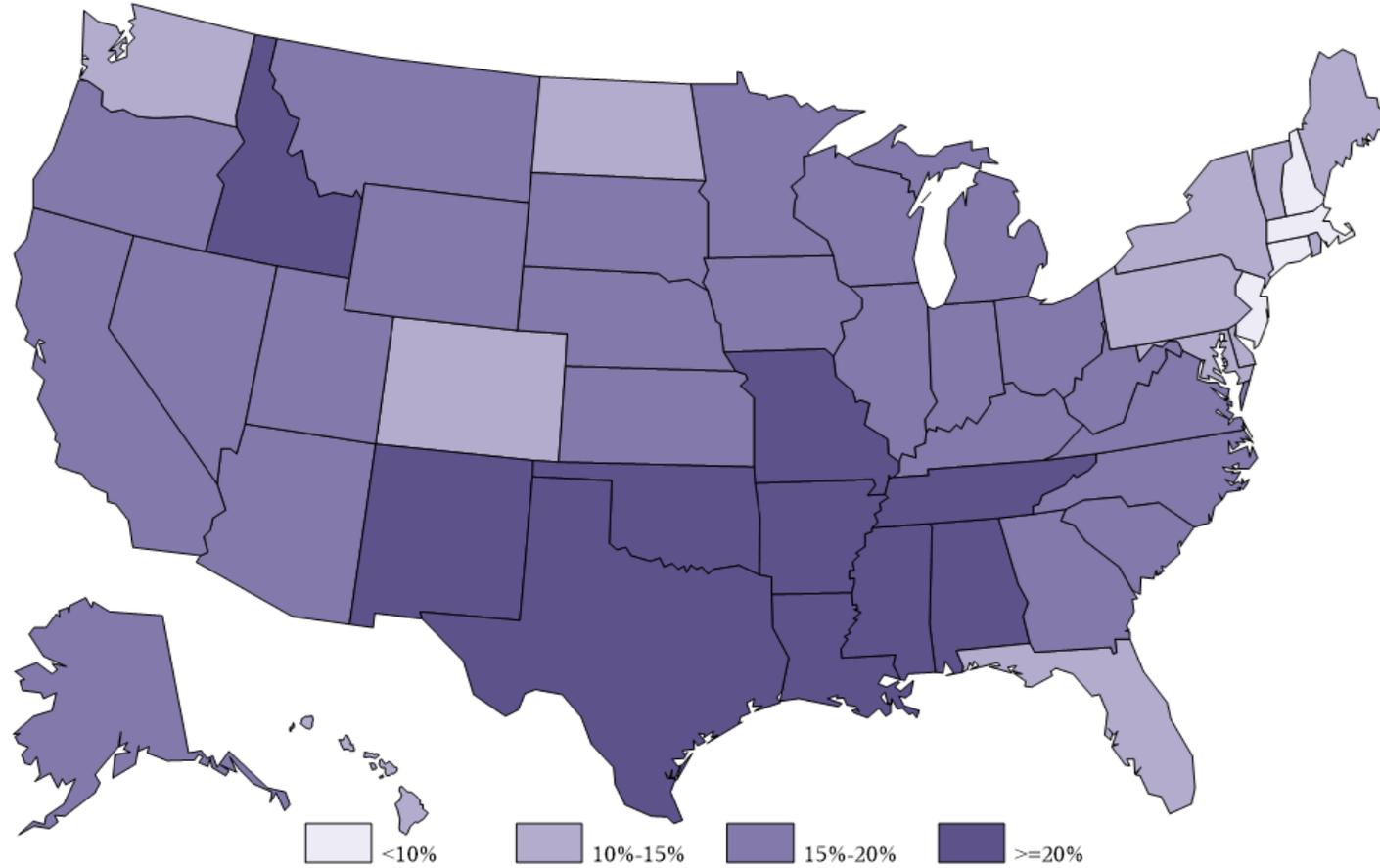
- Childcare-related measures
 - 52% are aged 11 or younger, indicating 26.7 million students cannot stay alone at home.
 - Over one third of students live within a single parent household (36.5%), representing 18.6 million students.
 - Parents of 10 million students work either as healthcare workers or in first-response teams (19.8%).

Results (Cont.)

- Distance-education-related measures
 - 8.8% of the PreK-12 public school students, representing 4.5 million children, live in households without internet access.
 - 12.7% of students (6.5 million) living in households which do not subscribe to an internet service.
 - 9.8% of students (5 million) do not have any computer devices at home (e.g., laptop, desktop, tablet, and other computer devices).
 - A total of 8.6 million students are not able to participate in remote education because they either lack access to internet service or do not have computer devices.

Measures vary across states

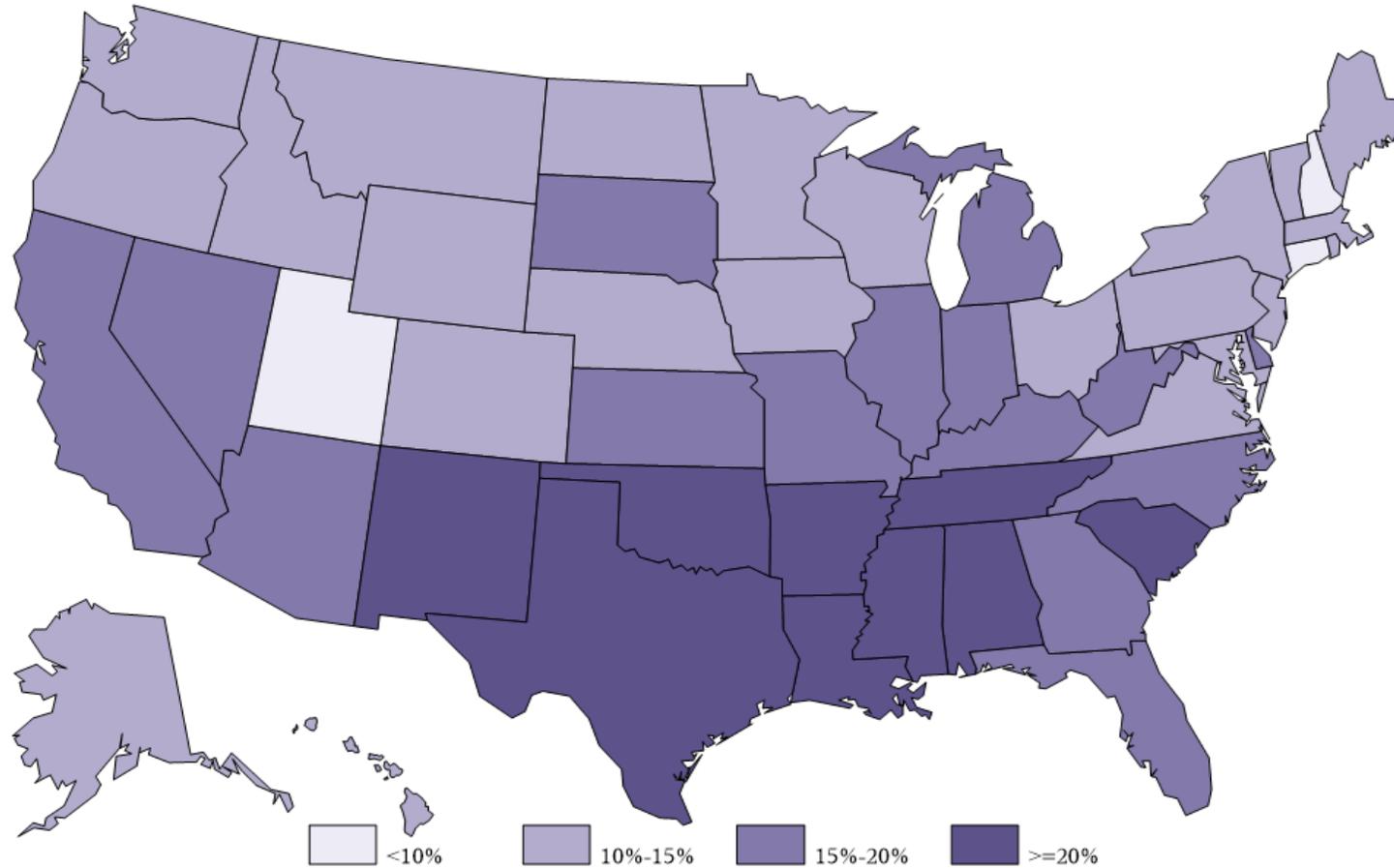
Percent of students living in households without highspeed internet although with internet access



Population: U.S. PreK-12 students (N = 51.3 million)
Source: 5-Year American Community Survey (2014-2018)

Measures vary across states

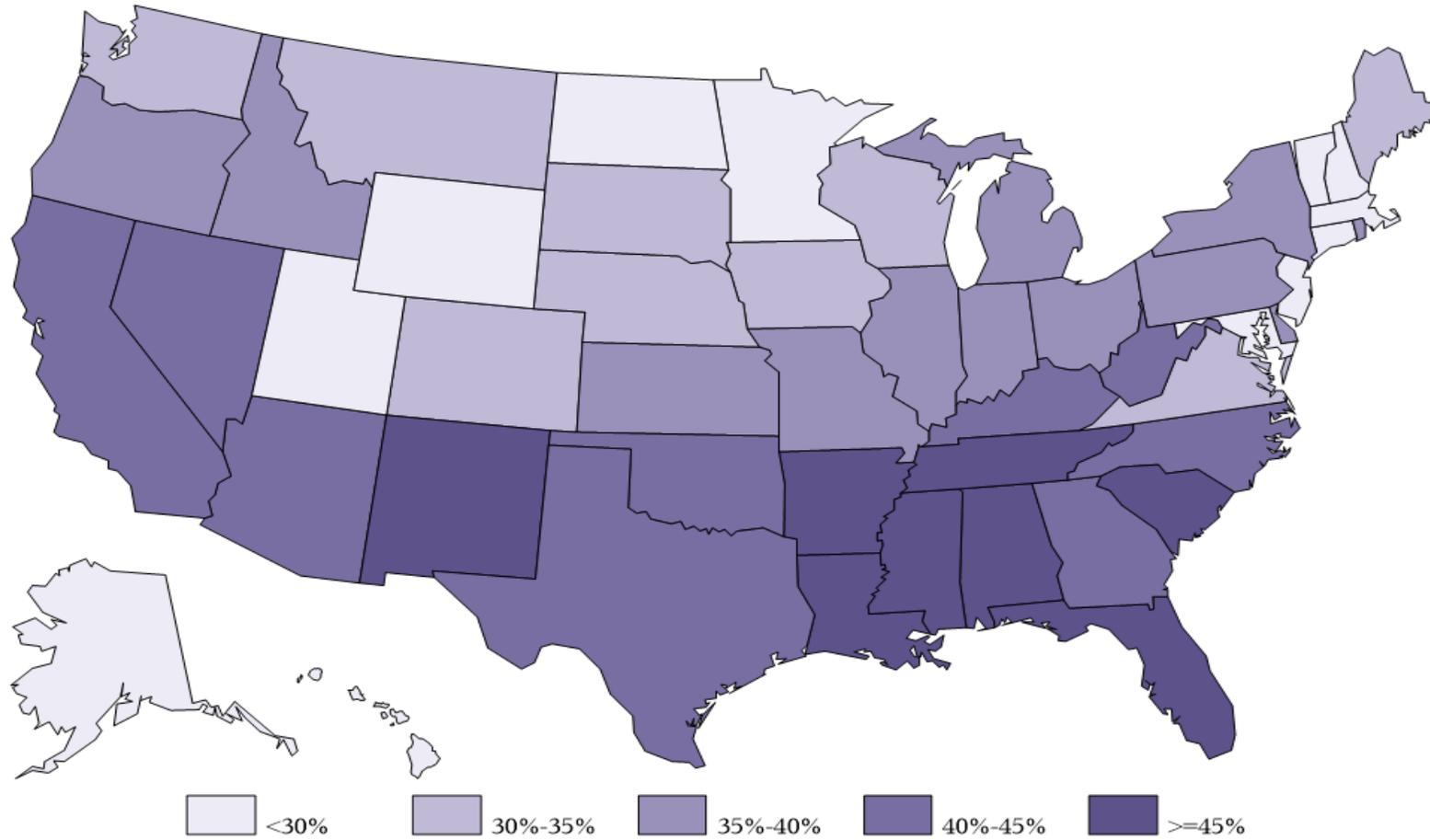
Percent of students living in households without either computer devices or internet subscription



Population: U.S. PreK-12 students (N = 51.3 million)
Source: 5-Year American Community Survey (2014-2018)

Measures vary across states

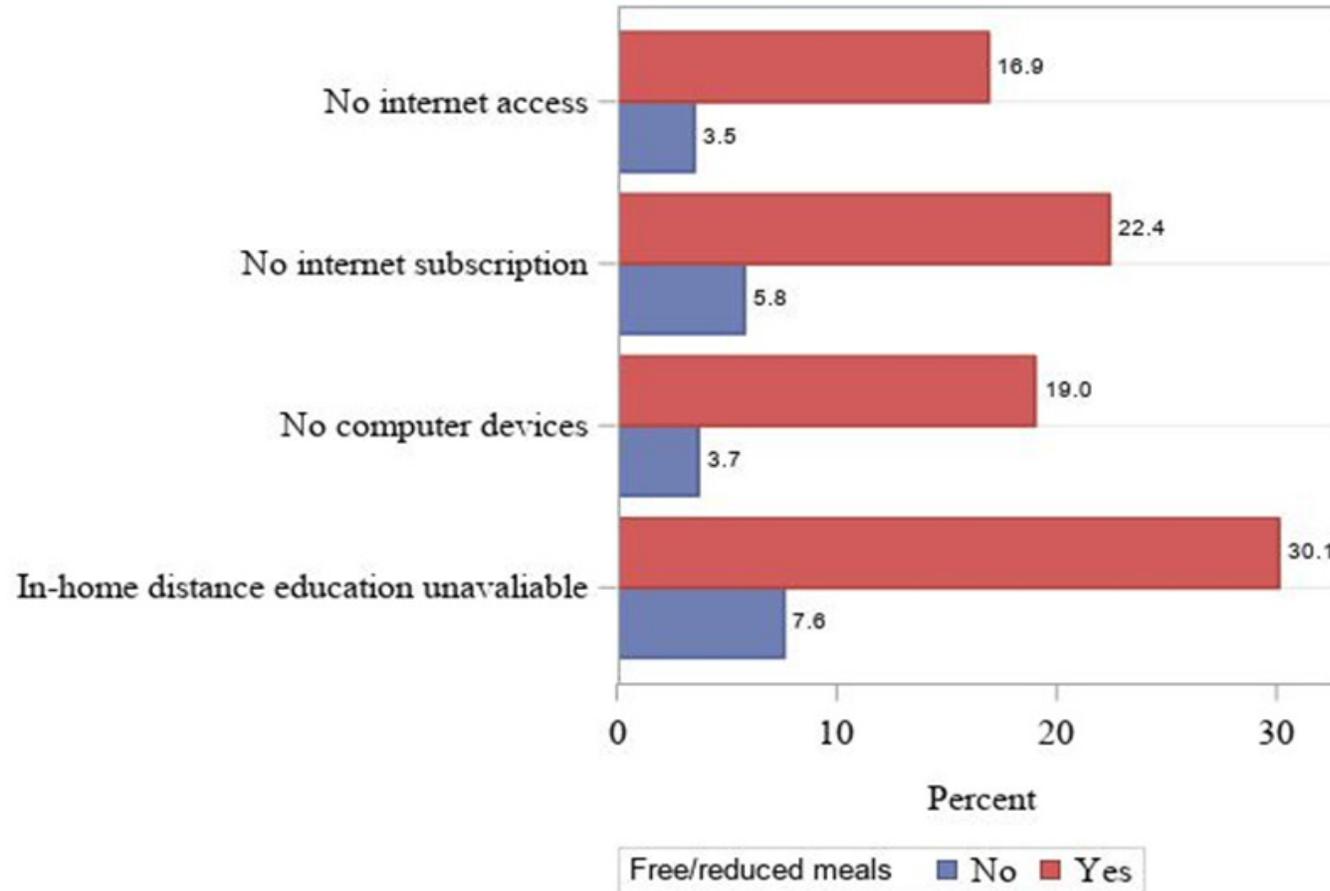
Percent of students in households below 185% federal poverty line



Population: U.S. PreK-12 students (N = 51.3 million)
Source: 5-Year American Community Survey (2014-2018)

Measures vary across states

Comparison between students with and without free/reduced meals in distance-education-related measures



Summary

- 8.6 million students unable to participate in remote education
- Pandemic exacerbates income-based disparities in education
- Measures vary across states

Conclusion

- The United States is not prepared for a long-time school closure.
- We are not ready for distance learning: 6.5 million students live in households without internet subscription and 5 million students have no computer devices at home.
- We are not ready to solve childcare issues for families with working parents: 26.7 million students were under 12 year old and cannot be left home alone.

Policy implications

- Distance learning
 - Provide students and families with computer and internet
- Students qualified for free-reduced-price meal plan
- Childcare
- A great variance in distance-education-related measures across states
 - Each state, or maybe each school district, should make its own decision on how to implement education