The number of COVID-19 confirmed cases, related deaths, and total tests reported for State and County

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Last Updated</th>
<th>COVID-19 cases in Texas</th>
<th>COVID-19 related deaths in Texas</th>
<th>COVID-19 related deaths in Harris County</th>
<th>Total tests performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Texas DSHS a</td>
<td>Aug 23, 2020, 3:05 PM</td>
<td>577,537 (Estimated active cases: 114,391)</td>
<td>97,745 (Estimated active cases: 27,770)</td>
<td>11,370</td>
<td>2,028</td>
</tr>
<tr>
<td>2. Johns Hopkins b</td>
<td>Aug 24, 2020, 3:27 PM</td>
<td>594,695 (Estimated active cases: 142,919)</td>
<td>98,506 (Estimated active cases: 30,024)</td>
<td>11,709</td>
<td>N/A</td>
</tr>
</tbody>
</table>

a Texas DSHS daily case count now includes all cases reported publicly by local health departments around the state.
b Data sources from WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, BNO, state and national government health departments, and local media reports.

c Data represents total viral tests performed (positive and negative) at private and public labs in Texas. N/A = not available

Source: County health authorities, Texas CSHS
In the News:

      i. No control group used in this study, compared administration within 3 days of diagnosis vs > 4 days after diagnosis and found 7-day mortality rate 8.7% vs 11.9%. Gradient of mortality was seen in relation to IgG antibody levels in transfused plasma

Articles:


Introduction: National assessment of the impact of school closures was performed in this study to evaluate COVID-19 incidence and mortality based on the exact timing of closure.

Methods:
- **Study:** Population-based time series analysis of 50 states.
- **Timeline:** March 9, 2020-May 7, 2020.
- **Data Collection:** Data obtained via the Johns Hopkins University School of Public Health, with aggregative data from the CDC and state/local health departments.
- **Definitions:**
  - Cumulative COVID-19 incidence and mortality = total number of cases per 100,000 residents, performed in quartiles based on dates.
  - SARS-CoV-2 testing = daily cumulative number of tests per 1000 residents.
- **Analysis:** interrupted time series for evaluation of COVID-19 incidence and mortality before and after school closures, with data particularly comparing schools that closed when COVID was at its lowest incidence versus schools that closed when COVID was at its highest incidence. Linear and exponential assumptions were made to show hypothetical data of incidence and mortality if schools had remained open.

Results:
- **School closures:** March 12, 2020-March 23, 2020.
  - Incidence of COVID-19 at time of school closure: 0-14.75 cases per 100,000 residents.
  - the relative change in incidence of COVID-19 per week was -62%.
 States that closed early relative change in incidence -72%.
 States that closed late relative change in incidence of -49%.
 If schools had remained open, approximately 638.7 cases per 100,000 could have occurred, in comparison to the 214.8 cases per 100,000 with school closures

• COVID-19 related mortality:
  o Adjusted analysis after school closure: the relative weekly change in mortality was 2%, versus the increase in mortality to 186% prior to effects of school closure.
  o if schools had remained open, approximately 19.4 deaths per 100,000 could have occurred, in comparison to the 6.8 deaths per 100,000 with school closures

Discussion:
• School closures decreased both COVID-19 incidence and mortality, with early closure associated with decreased incidence and mortality in comparison to later school closure.
• Approximately 1.37 million fewer cases of COVID-19 as well as 40,600 fewer deaths were prevented with school closures.

Limitations:
• States had additional interventions to help prevent the spread of COVID-19 other than school closures, which may have affected this data.
• Analyses did not account for travel between states.
• Inadequate COVID-19 testing could have delayed diagnoses.
• There may have been inconsistencies in reporting when data was gathered from the Johns Hopkins University database.

Commentary: COVID-19 and School Closures (in response to Auger et al study)
Donohue et al. COVID-19 and School Closures. JAMA. Published online July 29th, 2020.
• Auger study: all US schools closed within a 10-day period in March 2020. A nation-wide study was performed in response to school closing evaluating the implications on the SARS-CoV-2 outbreak
• Limitations to the Auger study included concurrent interventions, such as stay-at-home orders that were enacted. Such interventions make the direct correlation between school closures and COVID-19 incidence and mortality unknown. Additionally, viral transmission’s effects from school closures was not identified, resulting in an inability to determine causation.
• With such limited information, school officials are left to balance the risks and benefits of the school closures with academic, health, and economic impacts.
• Impact of online school: many students experienced lost learning, with limited resources available to transition to completely online learning, lack of access to nutrition provided by school meals and extra special education needs. Furthermore, school closures accounted for an approximately $2.5 trillion loss of future earnings as well as an estimated $128 billion loss in productivity (for 12 weeks of school closure) for parental jobs.
• Encouragement of health officials to collaborate with schools in guidance for reopening, as well as federal financial support should be made to ensure education protection for children.

Commentary:
Buntin et al. Safely Reopening Schools—Learning Amid a Pandemic. JAMA Health Forum, 1(8).

• The American Academy of Pediatrics, the National Academies of Sciences, Engineering, and Medicine, and the Centers for Disease Control and Prevention encourage resumption of in-person
classroom teaching in the setting of the COVID-19 pandemic, due to the overall perceived benefits versus risks, including improved mental health, access to nutrition, and better academic gains in children.

- The exact transmission rate of SARS-CoV-2 amongst children is relatively unknown
- Overall recommendations to implement simple interventions such as masking for teachers and students and cohorting students should be performed when considering reopening schools.
- At minimum, in-person instruction is highly recommended for the following populations, given their increased vulnerability to decreased access to learning: K-5 students, students with learning disabilities, students with no access to online learning, and students struggling at their current grade level.


Background:
- Obesity, race/ethnicity, and other correlated characteristics have emerged as high-profile risk factors for adverse coronavirus disease 2019 (COVID-19)–associated outcomes, yet studies have not adequately disentangled their effects.
- The authors determined the adjusted effect of body mass index (BMI), associated comorbidities, time, neighborhood-level sociodemographic factors, and other factors on risk for death due to COVID-19.

Methods:
- Retrospective study involving Kaiser Permanente Southern California (a large integrated health care organization) members (n=6916) diagnosed with COVID-19 from 13 February to 2 May 2020.
- Multivariable Poisson regression estimated the adjusted effect of BMI and other factors on risk for death at 21 days; models were also stratified by age and sex.

Results:
- Among 6916 patients with COVID-19, there was a J-shaped association between BMI and risk for death, even after adjustment for obesity-related comorbidities.
- Compared with patients with a BMI of 18.5 to 24 kg/m2, those with BMIs of 40 to 44 kg/m2 and greater than 45 kg/m2 had relative risks of 2.68 (95% CI, 1.43 to 5.04) and 4.18 (CI, 2.12 to 8.26), respectively. This risk was most striking among those aged 60 years or younger and men.
- Increased risk for death associated with Black or Latino race/ethnicity or other sociodemographic characteristics was not detected. The comorbidities with elevated risk in adjusted analyses included prior myocardial infarction, prior organ transplant, and hyperlipidemia.
Conclusion:

• Obesity plays a profound role in risk for death from COVID-19, particularly in male patients and younger populations. Their data highlight the leading role of severe obesity over correlated risk factors, providing a target for early intervention. Their capitated system with more equalized health care access may explain the absence of effect of racial/ethnic and socioeconomic disparities on death.

• Limitation: Retrospective study. Deaths occurring outside a health care setting and not captured in membership files may have been missed.