

COVID-19: Considerations for Children & School Communities

A Summary of the Evidence and Recommendations for RPS

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Overview

Risk to Children

Risk to Teachers

Risk to Community

How to Mitigate Risk

Number of Cases by Date of Symptom Onset

Number of cases by the day closest to when symptoms began.

Select Region

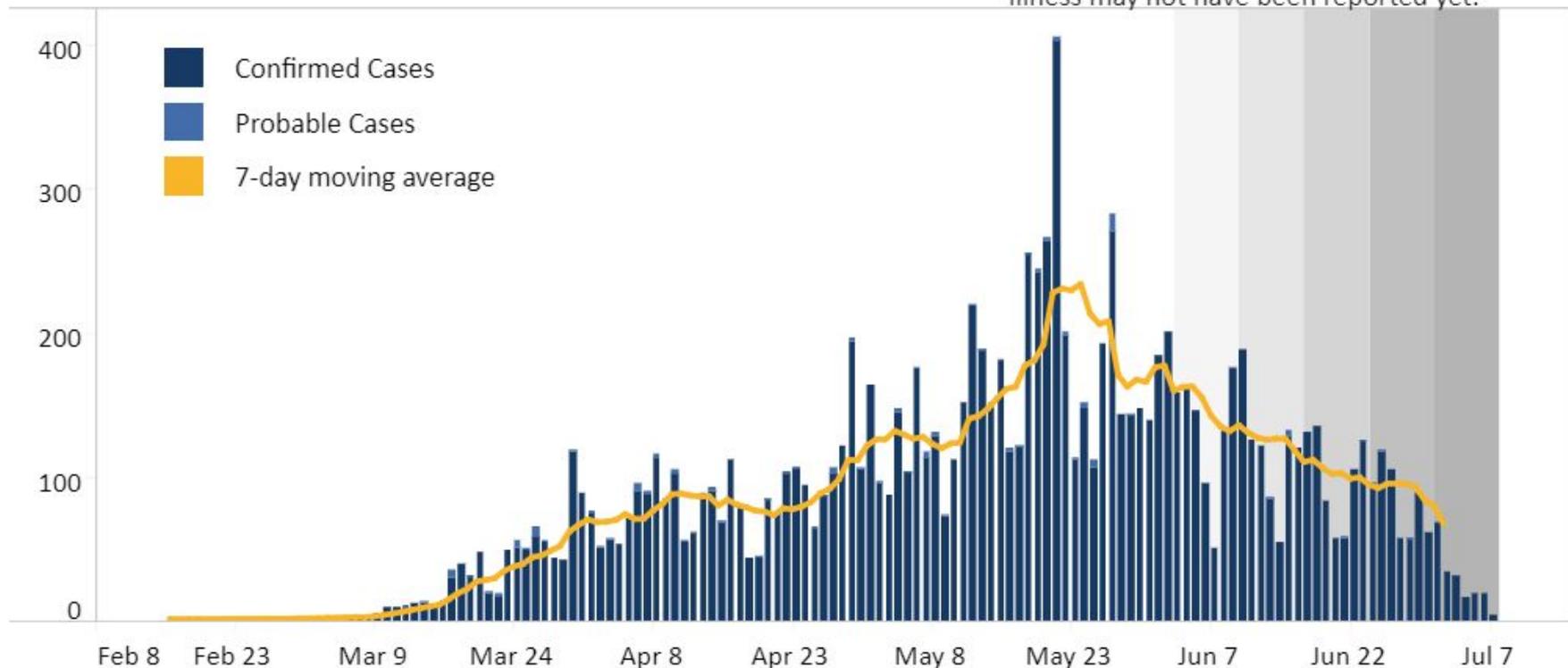
(Affects Bar Chart)



Central

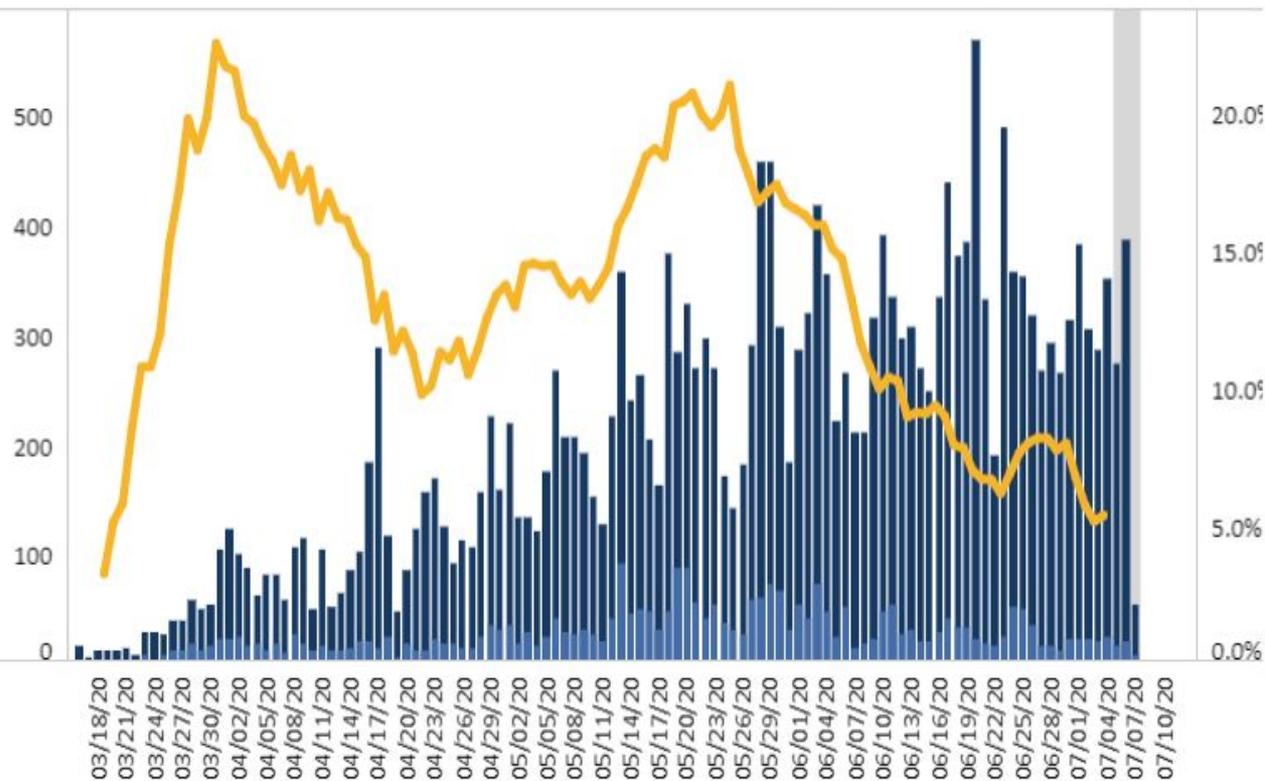


Illness may not have been reported yet.



Number of Testing Encounters, Number of Positive Testing Encounters, and Percent Positivity** by Lab Report Date - Richmond, PCR Only

- Percent Positivity, 7-Day Moving Average
- Positive Testing Encounters
- Number of Testing Encounters



Richmond
Current 7-Day Positivity Rate PCR Only
5.2%

Cases by Age Group (Virginia)

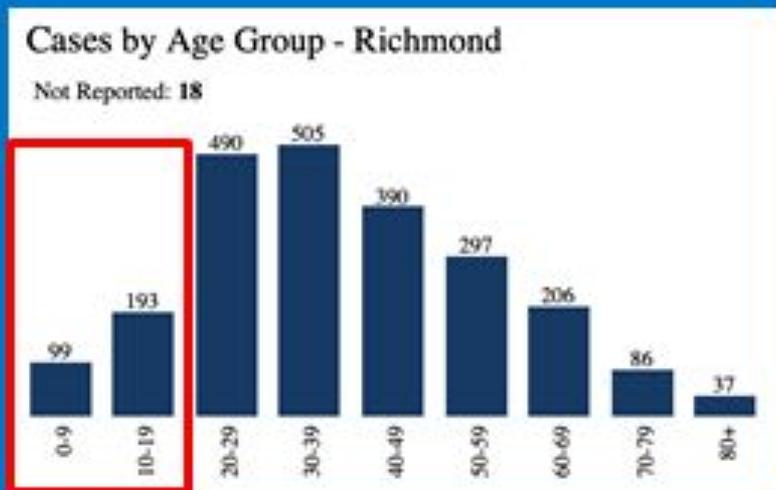
- **Total cases** = 67375
- **Children Ages 0-9:** 3.4% (2261/67375) of COVID-19 cases in state of VA
- **Children Ages 10-19:** 7.3% (4895/67375) of COVID-19 cases in state of VA



<https://www.vdh.virginia.gov/coronavirus/>

Cases by Age Group (Richmond)

- **Total Cases = 2321**
- **Children Ages 0-9:** 4.3% (99/2321) of COVID-19 cases in Richmond, VA
- **Children Ages 10-19:** 8.3% (193/2321) COVID-19 cases in Richmond, VA



<https://www.vdh.virginia.gov/coronavirus/>

Hospitalizations by Age Group (Virginia)

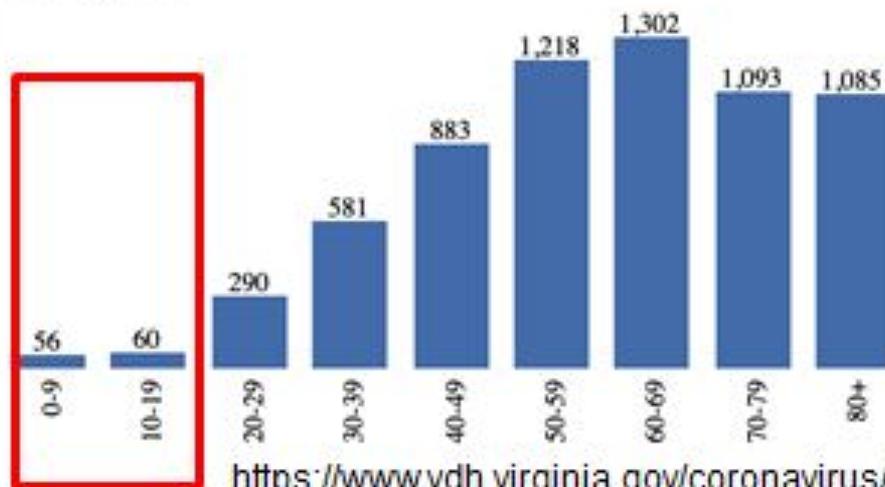
- **Total hospitalizations**
=6577

- **Children Ages 0-9:**
0.9% (56/6577) of all COVID-19 hospitalizations

- **Children Ages 10-19:**
0.9% (60/6577) of all COVID-19 hospitalizations

Hospitalizations by Age Group - Virginia

Not Reported: 9



Hospitalizations by Age Group (Richmond)

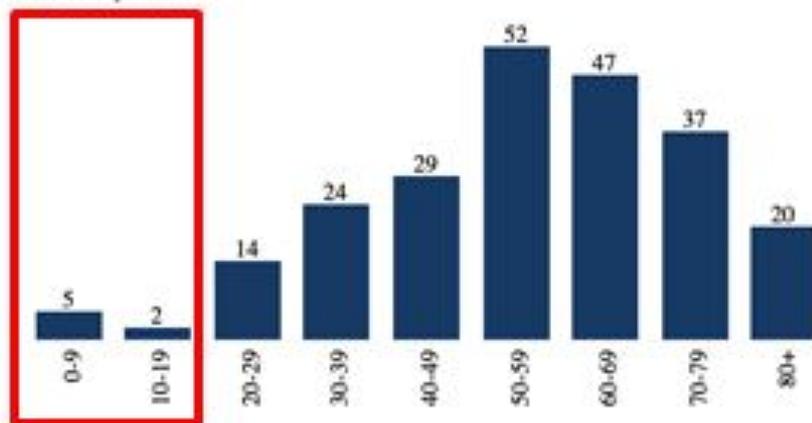
- **Total hospitalizations =2321**

- **Children Ages 0-9:**
0.2% (5/2321) of all COVID-19 hospitalizations

- **Children Ages 10-19:**
0.09% (2/2321) of all COVID-19 hospitalizations

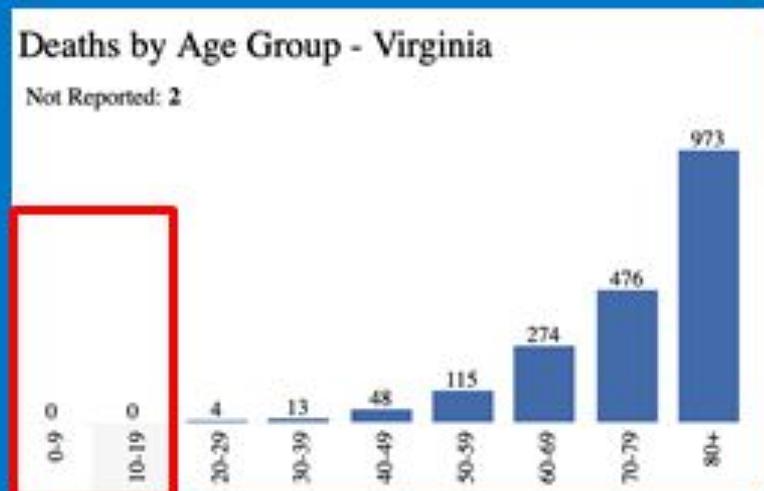
Hospitalizations by Age Group - Richmond

Not Reported: 0



Children 19 years and less only make up 0.3% COVID-19 hospitalizations in Richmond, VA

Deaths by Age Group (Virginia)



<https://www.vdh.virginia.gov/coronavirus/>

- Total number of deaths = 1905
- No pediatric deaths in the state of VA
- A majority of deaths occur in patients who are >80 years of age

A blue-tinted photograph of a young girl in the foreground, smiling and writing in a notebook. She is wearing a dark t-shirt. In the background, other children are visible, also smiling and writing. The text "Risk to Children" is overlaid in white on the left side of the image.

Risk to Children



Do kids get COVID-19?

- Yes, but there is an emerging body of literature that indicates that children are **LESS** likely to get COVID compared to adults
- The rate of infection appears to increase with age (neonates and children < 1 year being an exception)
- **CDC, 4/10/20, Coronavirus Disease in Children - United States**
 - Children < 18 years of age make up 22% US population, they account for less than 2% of all cases of COVID-19
- **Gudbjartsson et al, 6/11/2020, Spread of SARS-CoV-2 in the Icelandic Population, NEJM**
 - Routine surveillance of population
 - Children < 10 years of age were less likely to be infected than those over the age of 10 (6.7% positive vs. 13.7% positive)



Do kids get COVID-19?

- If exposed to COVID-19, children may be less likely to be infected
- In small studies involving clusters, investigators using contact tracing are able to determine how many contacts become positive.
 - This allows us to determine an “attack rate” (how many people get the virus after coming into contact with someone with it).
 - **Children appear to have a LOWER attack rate than adults**
- **Rosenberg et al., 5/8/2020, COVID-19 Testing, Epidemic Features, Hospital Outcomes, and Household Prevalence, NY State - March 2020**
 - In NYC, in households with at least 1 COVID-19 case, infection among household members increased by age
 - Overall: 52%
 - Kids 0-5: 23%
 - Kids 5-18: 32%



If kids get COVID-19, how do they do?

- Most kids with COVID-19 have NO or few symptoms
- Kids are less likely to be hospitalized
 - Risk factors: Infants <1 year, heart/lung disease, obesity (older kids)
- Severe disease and death are RARE
 - Most common in children with underlying comorbidities
 - Medically complex: Kids that dependent on support such as breathing tubes or tracheostomies
- The rare inflammatory syndrome that recently made big news (MIS-C) is RARE
 - There are treatments, and most kids get better
- Shekerdemian et al., 5/11/2020, **Characteristics and Outcomes of Children with Coronavirus Disease 2019 (COVID-19) Infection Admitted to US and Canadian Pediatric Intensive Care Units, JAMA Pediatrics**
 - Severity of illness in infants and children with COVID-19 is far less compared to adults
 - Most intensive care units across the US, report zero children admitted during the study period



COVID-19 vs. Seasonal Flu in Kids

- Overall burden of COVID-19 infection in kids remains relatively LOW compared with seasonal flu
- As of April 28, 2020: The CDC reports 8 deaths in children 14 years of younger related to COVID-19
 - 169 influenza deaths in children 14 years and younger during 2019-2020, with 81 occurring in 2020



Tradeoff risks to child well-being

- Documented reduction in children's mental & socioemotional well-being from continued isolation (disproportionate impact on children from lower-income families); evidence suggests potential increases in abuse & neglect; bigger impacts on younger children than teens
- AAP notes that "Schools ... provide our children and adolescents with academic instruction, social and emotional skills, safety, reliable nutrition, physical/speech and mental health therapy, and opportunities for physical activity, among other benefits."



Risk to Children: Take-Away Points

- Children appear to be less likely to get COVID-19
- Children less likely to get severe disease and less likely to be hospitalized
- Children are less likely to transmit COVID
 - Evidence stronger for younger kids

Risk to Teachers





Risk to Teachers

- **Who is high risk?**
 - **Older age: > 65 years of age**
 - 80% of deaths in the US
 - **Chronic Medical Conditions**
 - High blood pressure, Obesity, Cardiovascular disease, Asthma, COPD, Chronic Kidney or Liver Disease
- **Low likelihood of kids transmitting to adult**
- **We should focus on minimizing adult-adult interaction**

Related Sources:

- CDC
- <https://www.sciencemag.org/news/2020/07/school-openings-across-globe-suggest-ways-keep-coronavirus-bay-despite-outbreaks>



Can kids give COVID-19 to adults?

- Yes, but there is evidence that there is a lower risk that children <12 years of age with COVID-19 will transmit to household members, compared to older kids and adults
 - Small, cluster studies suggest that kids are less likely to infect adults
- Mannheim et al., 6/1/20, Characteristics of Hospitalized Pediatric Coronavirus Disease 2019 Cases in Chicago, Illinois, March-April 2020
 - In a study with information from 15 households, 73% of transmissions were from adult to child
- Brown University Data Set
 - 983 centers, >27,000 students, >9,500 staff
 - 0.15% students, 1.1% staff
- YMCA data during the COVID-19 outbreak
 - Nationally: > 40,000 children at > 1,100 sites
 - NYC: > 10,000 children at > 170 sites

**No record of having more than 1 case at any given site*

Risk to Community





Risk to Community

- Context is important-- decreasing rates in Richmond (and all of VA) are encouraging
- Nationally, modeling shows that schools make a minimal contribution to adverse outcomes
- In total, evidence suggest schools rarely act as significant sources of community transmission for COVID-19

How to Mitigate Risk





Symptom Screening

Watch for symptoms

People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear **2-14 days after exposure to the virus**. People with these symptoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea



Distancing

- 3 ft w/ mask is OK
- Outside better than inside
- Emphasis on adult to adult transmission



Mask Wearing

- Encourage for everyone
- Teachers as much as possible
- Less stringent if >6ft?
- Not while eating



Hand Hygiene

- Need to teach it
- Hand sanitizer and soap everywhere
- Teachers need to incorporate it into daily rhythms



Environmental Cleaning

- Contact transmission is small %
- “Deep cleaning” not necessary
- Regular wiping down of high-contact surfaces (desks, lunch tables, doorknobs, etc)



Rapid Reporting/ Contact Tracing

Need to have a plan to:

- **identify symptomatic individuals**
- **test them quickly**
- **begin isolation/quarantine and contact tracing**



Structure

- Pods/ Bubbling
- In person more important and less risky for younger kids
- Virtual option
- Downside of hybrid-- more contact points, burden to the family, grandparent exposure

Additional Sources & References

- *School openings across globe suggest ways to keep coronavirus at bay, despite outbreaks*
<https://www.sciencemag.org/news/2020/07/school-openings-across-globe-suggest-ways-keep-coronavirus-bay-despite-outbreaks>
- *Johns Hopkins State by State School Reopening Policy Tracker*
<https://equityschoolplus.jhu.edu/reopening-policy-tracker/>
- *Reopening America's Schools: A Public Health Approach*
<https://equityschoolplus.jhu.edu/reopening-policy-tracker/>
- *School closure and management practices during coronavirus outbreaks including COVID-19*
[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(20\)30095-X/fulltext?fbclid=IwAR1Apo6tdTyGfuYphaDI_gxTG01QDoZ-frqYITChfEUKjL7-BOR1_8iXunQ](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(20)30095-X/fulltext?fbclid=IwAR1Apo6tdTyGfuYphaDI_gxTG01QDoZ-frqYITChfEUKjL7-BOR1_8iXunQ)

Overall Takeaways

- Follow the data, constantly reevaluate the data
- Adult to adult transmission a higher risk
- Differing evidence on young children versus adolescents
- Potential increasing transmission in the broader community will impact risks to RPS staff, students, and families
 - If community spread is low, risks within RPS will follow



Q&A

- Clarification and discussion tonight
- Available for additional Q&A or conversation with stakeholders and decision-makers