Have School Attendance Rates This Year Varied by "Hardest-hit" Covid-19 Neighborhoods and Grade Levels?
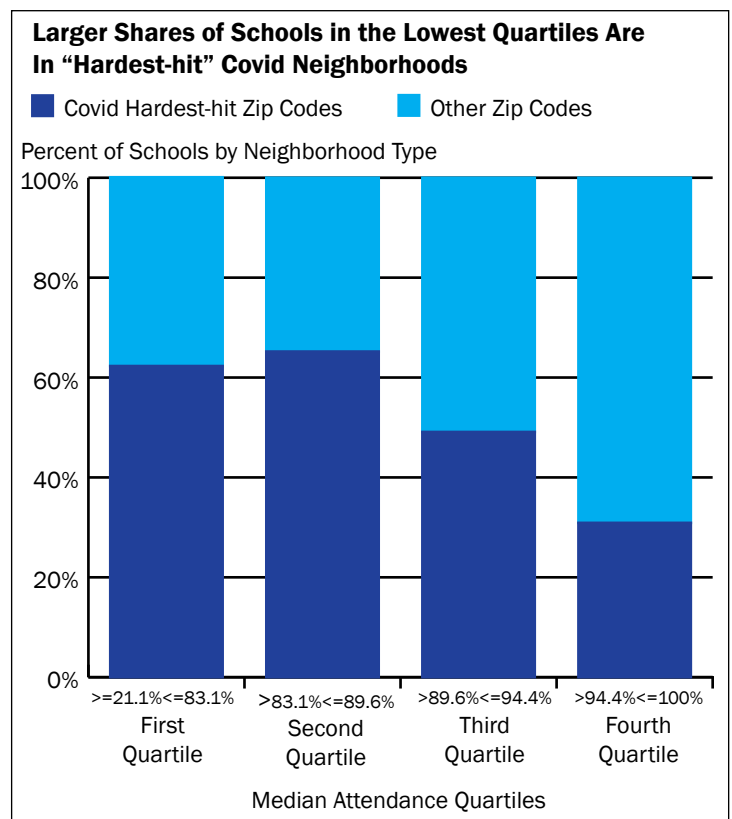
After a spring of school shutdowns in the midst of the Covid-19 pandemic and a summer of tense political debates around plans for reopening, the Department of Education reopened schools in fall 2020, with options for families to select either full-time remote or hybrid instruction plans. The education department began reporting daily rates for in-person and online attendance in October 2020. At the request of WNYC, IBO looked at the overall attendance rates by school level and by whether a school was located in a neighborhood that the city designated as one of those "hardest-hit" by Covid-19. These 28 neighborhoods (across 62 zip codes) were defined by the city as the zip codes most affected by Covid-19 as well as those that have a high percentage of other health and socioeconomic disparities.

Using school level attendance rates (including both in-person and remote attendance) published by the education department, IBO calculated the median overall attendance rate for each school using daily data from October 30, 2020 to January 29, 2021—a period we refer to as this year. Using median attendance rates, rather than arithmetic means, ensures that outliers in attendance did not skew the overall rates for schools. We then sorted schools by median attendance rate and split them into four equal groups (quartiles), with about 400 schools in each quartile.

- Looking at all 1,598 schools, median attendance was roughly 90 percent over the three months of this school year (2020-2021) compared with the median rate of about 92 percent for last school year (2019-2020) through March. Three quarters of all schools this year had attendance rates of roughly 83 percent or more. The quartile of schools with the lowest attendance rates had the widest range—attendance rates between 21.1 percent and 83.1 percent.

Separately, IBO also grouped the 1,598 schools by grade level into five mutually exclusive categories: elementary and K-8 schools (49.7 percent of all schools); middle schools and 6-12 schools (21.1 percent); high schools (21.2 percent); transfer schools, which serve under-credited and overage high school students (3.1 percent); and District 75 schools in the citywide special education district (3.7 percent). A small number of K-12 schools and Pre-K Centers were included in the larger analysis, but excluded when comparing different school types. IBO created this map for data on individual schools.
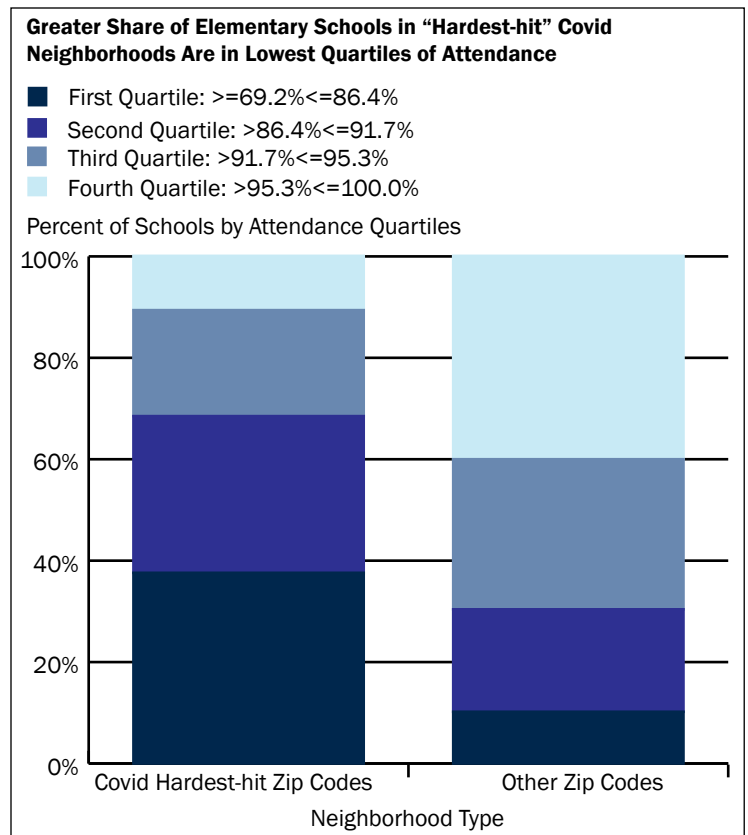
- When looking at the distribution for all schools, high schools, transfer schools, and District 75 schools generally had the lowest median attendance rates, with 51.2 percent, 89.8 percent, and 66.1 percent of those schools, respectively, in the lowest quartile. In contrast, a much smaller share of elementary and middle schools, 11.1 percent and 15.0 percent, were in the lowest quartile for median attendance rates.

- Of 173 zip codes in the sample, the city classified 62 as neighborhoods that were "hardest-hit" by the pandemic. While 62.3 percent of schools in the lowest attendance quartile are in "hardest-hit" neighborhoods, just 30.9 percent of schools in the highest attendance quartile are in those neighborhoods.

- By school level, differences across neighborhoods are most pronounced for elementary schools, a category we have defined to include schools serving K-8 students. Dividing elementary schools into quartiles based on their median attendance rates, 30.4 percent of elementary schools in zip codes that were not hit as hard are in the two lowest attendance quartiles compared with 68.5 percent of elementary schools in the "hardest-hit" zip codes. Conversely, 40.1 percent of elementary schools in non-hard hit

Larger Shares of Schools in the Lowest Quartiles Are In "Hardest-hit" Covid Neighborhoods

■ Covid Hardest-hit Zip Codes ■ Other Zip Codes

Percent of Schools by Neighborhood Type

Median Attendance Quartiles			
>=21.1%<=83.1% First Quartile	>83.1%<=89.6% Second Quartile	>89.6%<=94.4% Third Quartile	>94.4%<=100% Fourth Quartile

zip codes are in the highest attendance quartile compared with only 10.7 percent of elementary schools in "hardest-hit" neighborhoods.

IBO also examined attendance rates from last school year (2019-2020) to test whether attendance rates from this school year (2020-2021) were significantly different. School attendance rates for 2019-2020 were calculated as weighted averages of student in-person attendance rates from September 2019 to March 2020, prior to Covid-related shutdowns. Although an imperfect comparison with this year's data, which includes both in-person and remote attendance, the analysis allowed IBO to determine if similar patterns of attendance across neighborhoods existed pre-Covid.

- We found that most schools have lower median attendance rates this year compared with last year, but schools in the "hardest-hit" neighborhoods generally experienced larger declines than schools not in those neighborhoods, therefore increasing gaps that existed prior to Covid.
- One exception was among elementary schools—those not in hard-hit neighborhoods did not experience a significant decrease in attendance rates between years.

Greater Share of Elementary Schools in "Hardest-hit" Covid Neighborhoods Are in Lowest Quartiles of Attendance

- ■ First Quartile: >=69.2%<=86.4%
- ■ Second Quartile: >86.4%<=91.7%
- ■ Third Quartile: >91.7%<=95.3%
- ■ Fourth Quartile: >95.3%<=100.0%

Percent of Schools by Attendance Quartiles

Elementary Schools in "Hardest-hit" Neighborhoods Had Significantly Lower Attendance Rates This Year Compared With Elementary Schools in Other Neighborhoods			
	2019-2020	**2020-2021**	**Percentage Point Difference**
"Hardest-hit" Covid Neighborhoods	91.70%	88.20%	3.5*
Other Neighborhoods	93.70%	93.30%	0.4
Percentage Point Difference	2.0*	5.1*	
NOTE:: *Significant at the p<0.0001 level.			

Prepared by Jeannie Kim
New York City Independent Budget Office