

The District's COVID-19 Data Reporting is Strong but Opportunities Exist for Improvement and Increased Transparency

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A report by the Office of the District of Columbia Auditor



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A pandemic is a communications emergency as much as a medical crisis.¹

Introduction

To contribute to the D.C. Department of Health's (DC Health)² efforts to inform the public of the COVID-19 pandemic's impact on District residents and the District's efforts to contain the spread of the virus, the Office of the D.C. Auditor (ODCA) has compiled the following report, "The District's COVID-19 Data Reporting is Strong but Opportunities Exist for Improvement and Increased Transparency." The government's dissemination of accurate, real-time data is essential to control the spread of COVID-19, as described by the public health organization, Resolve to Save Lives:

In the ongoing COVID-19 pandemic, there is an overwhelming amount of data, including many indicators that can be misleading if not considered correctly. Unlike many other countries such as Germany, Senegal, South Korea, and Uganda, the United States does not have standard, national data on the virus and its control. The US also lacks standards for state-, county-, and city- level public reporting of this life-and-death information.³

In the absence of national guidance of what data states should report, ODCA used best practices for state data reporting and compared best practice indicators with what the District is reporting on its <https://coronavirus.dc.gov/data> webpage, referred to as the COVID-19 data webpage in this report.

We note that the original version of this report has been edited as DC Health has updated its data and refined its website; these updates and refinements resolved several of the issues we would have identified. We also note that when we state that data should be reported, in most cases DC Health is already collecting this data but is not yet reporting it publicly on the COVID-19 data webpage. The following report was drafted, reviewed, and approved in accordance with the standards outlined in ODCA's Audit Policies and Procedures.

In addition to this report, ODCA will be conducting an audit of the District's data collection, data reporting, and data monitoring as part of a national effort by state auditors to assess state COVID-19 data quality. This effort was initiated by the Delaware State Auditor to promote a more consistent approach for comparing results nationwide. That audit will be published in 2021.

1 Epidemic Intelligence Service Core Principle as reported in *The New Yorker*, See: <https://www.newyorker.com/magazine/2020/05/04/seattles-leaders-let-scientists-take-the-lead-new-yorks-did-not>

2 DC Health, the District of Columbia's Department of Health, is leading the District's public health response to the pandemic.

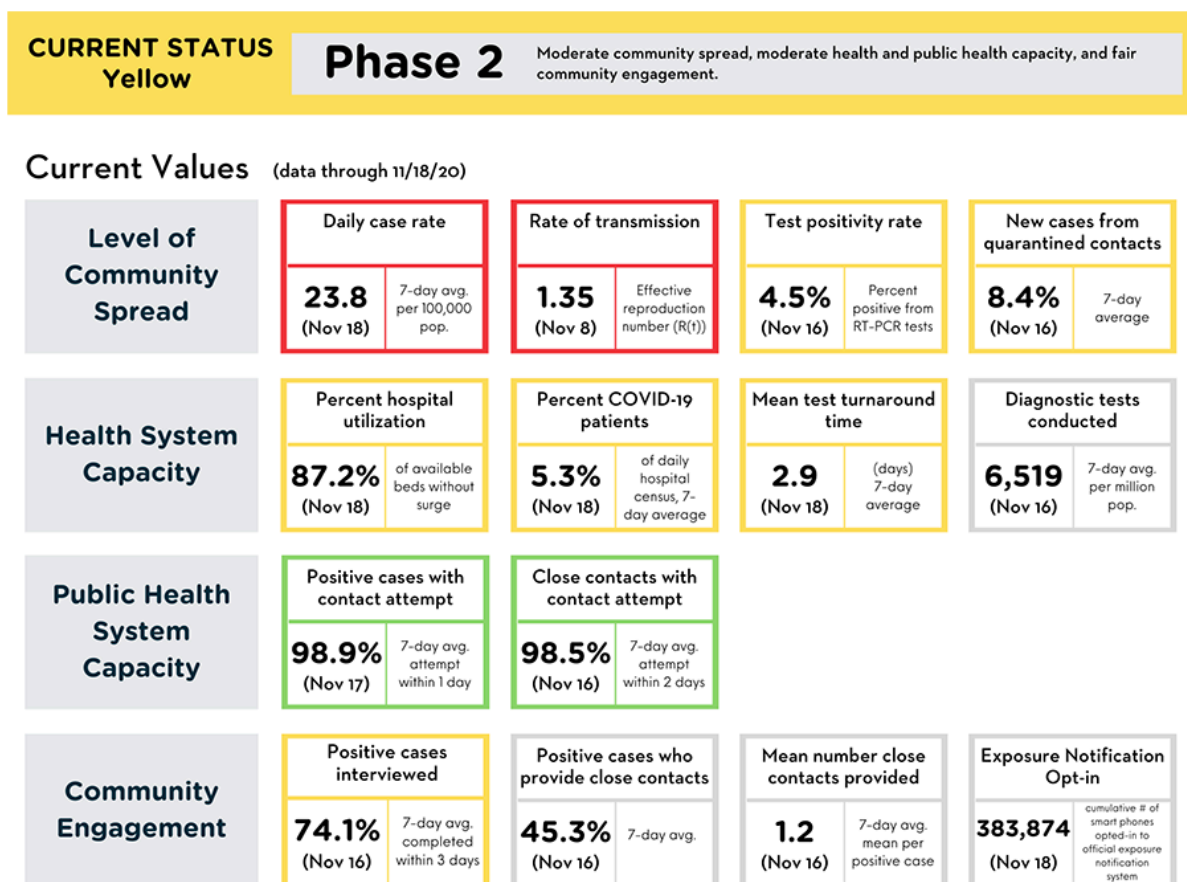
3 *Tracking COVID-19 in the United States: From Information Catastrophe to Empowered Communities*, Resolve to Save Lives and Vital Strategies, July 2020, page 2, See: https://preventepidemics.org/wp-content/uploads/2020/07/RTSL_Tracking-COVID-19-in-the-United-States_-7-23-2020.pdf.

Overview of the District's Available COVID-19 Data

At the time of writing, the District publishes COVID-19 data on its COVID-19 data webpage at <https://coronavirus.dc.gov/data> and updates the information daily by 10 a.m. For a more detailed overview of available data, please see Appendix A.

On September 21, 2020, the District revamped its COVID-19 data webpage by adding a [Reopening Metrics](#) page.⁴ This addition provided a modified, expanded list of reopening metrics that gives a clearer overview of the current status of the COVID-19 pandemic in the District. The District is also publishing datasets on the District's [Open Data page](#) that are not linked from the COVID-19 website. However, as of November 9, 2020, the reopening metrics datasets on the Open Data page were not updated. At the time of this report, the District was in Phase 2 of the phased reopening plan and published the following reopening metrics, as seen in Figure 1.

Figure 1: The District's Revised Reopening Metrics



Source: Screenshot of Reopening Metrics page on 11/20/2020: <https://coronavirus.dc.gov/page/reopening-metrics>

⁴ <https://coronavirus.dc.gov/page/reopening-metrics>. The District had already been reporting reopening metrics throughout the summer but created this page when it released the modified, expanded list of reopening metrics.

Resolve to Save Lives 15 Essential Indicators: Filling a Gap in Data Reporting Standards

The United States lacks national standards on what COVID-19 data to report and how to report it.⁵

To fill this gap, Resolve to Save Lives through its Prevent Epidemics project developed a list of 15 essential indicators for an effective COVID-19 response.⁶ [Resolve to Save Lives](https://resolvetosavelives.org/about) is an initiative of the global public health organization Vital Strategies⁷ and is led by Dr. Tom Frieden, a former director of the Centers for Disease Control and Prevention.⁸ The 15 indicators were endorsed by the Association of Schools and Programs of Public Health and the American Public Health Association.⁹ According to Resolve to Save Lives, DC Health participated in conversations to determine which indicators Resolve to Save Lives should include. We selected these standards because they provide a clear list for states and have expert public health backing, but we realize that they are not the only best practice recommendations available. Resolve to Save Lives analyzed the COVID-19 data dashboards of all states, D.C., and Puerto Rico in late June/early July 2020 and then in mid-October 2020, issuing an updated report on November 16, 2020. Resolve to Save Lives found that most states were not reporting about half of the essential COVID-19 data points.¹⁰

15 Essential Indicators for Effective COVID-19 Response¹¹

1. New confirmed and probable cases and per capita rates by date with 7-day moving average*†
2. Percentage of new cases epidemiologically linked to at least one other case, by date* †
3. New screening (e.g. antigen) and diagnostic (e.g. PCR) testing per capita rates (per 1,000 people) by date with 7-day moving average*
4. Percent of individuals testing positive on PCR, antigen and combined tests by date, with thresholds, with the 7-day moving average*
5. COVID-19-like illness (CLI) and influenza-like illness (ILI) trends from emergency departments

5 *Tracking COVID-19 in the United States: From Information Catastrophe to Empowered Communities*, Resolve to Save Lives and Vital Strategies, July 2020, page 2, See: https://preventepidemics.org/wp-content/uploads/2020/07/RTSL_Tracking-COVID-19-in-the-United-States_-7-23-2020.pdf.

6 *Tracking COVID-19 in the United States*, page 4.

7 <https://resolvetosavelives.org/about>

8 <https://resolvetosavelives.org/about/team>.

9 <https://preventepidemics.org/covid19/resources/indicators/>

10 *Tracking COVID-19 in the United States*, July 21, 2020, See: <https://preventepidemics.org/wp-content/uploads/2020/07/Tracking-COVID-19-in-the-United-States-Report-1.pdf>

11 *Tracking COVID-19 in the United States*, July 21, 2020, See: <https://preventepidemics.org/covid19/resources/indicators/>; *Tracking COVID-19 in the United States Progress and Opportunities, Resolve to Save Lives and Vital Strategies*, November 2020. See: <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

6. COVID-19 daily hospitalization rates per capita with 7-day moving average*

7. Percentage of licensed beds occupied by suspected and confirmed COVID-19 patients

8. List of outbreaks (to extent legally permissible) in congregate facilities (long-term care, homeless shelters, correctional facilities) and essential workplaces with cases and deaths in residents and staff (Cumulative and most recent week)

9. New COVID-19 confirmed and probable deaths and per capita rates with 7-day moving average*†

10. Diagnostic (e.g. PCR) test turnaround time (specimen collection to test report), by week*

11. Time from specimen collection to isolation of cases, by week*

12. Percentage of cases interviewed for contact elicitation within 3 days of specimen collection, including all people who live in the jurisdiction, by week*

13. Percentage of new cases from among quarantined contacts, by week†

14. New infections among health care workers not confirmed to have been contracted outside of the workplace, by week*

15. Percentage of people wearing masks correctly in public settings (e.g., mass transit, shopping), based on direct observation or security camera analysis, by a standard, consistent method, by week

* This indicator should be stratified by categories such as age, sex, race, ethnicity, and ZIP code.

† This indicator should be stratified by outbreaks vs. community

In this report, we compare the 15 indicators from Resolve to Save Lives to the data that the District was reporting publicly as of November 17, 2020. This comparison shows what additional data the District could consider publishing. We also analyzed the District's COVID-19 website to identify potential areas of improvement that would allow the public to more easily access COVID-19 data and monitor the pandemic's impact in the District.

Appendix B summarizes the comparison between the indicators recommended by Resolve to Save Lives and the information the District is reporting on the COVID-19 data webpage.

The District Has Significantly Improved its COVID-19 Data Reporting

A Reopening Metrics page was added to the District's COVID-19 website on September 21, 2020. This page offers the public a clear, more complete overview of the COVID-19 impact on the District. In their November 2020 review, Resolve to Save Lives reports that the District of Columbia is now one of the top

four dashboards nationally. The District’s dashboard provides “robust information, enabling communities to be better informed on the local spread of COVID-19 and risk of infection.”¹²

Additional indicators recommended by Resolve to Save Lives were included in the Reopening Metrics page that had not been previously reported, such as:

- New case and testing per capita rates.
- Test turnaround time.
- Percentage of cases interviewed for contact tracing.
- The daily case rate (i.e. new cases per capita), which replaced the decreasing community spread graph with a clearer metric and graph.

The Reopening Metrics summarize key data on the pandemic for the user. Resolve to Save Lives highlighted the District’s positivity rate graph and the percentage of cases from quarantined contacts graph in their November 2020 report. Resolve to Save Lives also noted that the District was one of only two states (with Oklahoma) who fully and correctly reported to Save Lives the percentage of cases from quarantined contacts.¹³ The District is also using a color-coded system for most reopening metrics which allows the user to easily assess progress on each metric. It also allows website users to quantify the District’s progress on metrics that are tied to the District’s phased reopening plan. Resolve to Save Lives recommends as best practices both prioritizing key metrics and using this type of color-coded risk alert levels to communicate clearly and to support decision-making.¹⁴

The stark COVID-19 disparities by race in the District are clearly reported on the webpage. The Ward, Neighborhood, and Demographics series of graphs on the data webpage provides a snapshot of the toll of the epidemic on different groups. The Total Deaths metric is categorized by age, sex, race, ethnicity, and location as recommended by Resolve to Save Lives.

We commend DC Health for the work it has done to revise the COVID-19 data website and include additional metrics.

The District Has Gaps in Data Reporting

There are opportunities for DC Health to expand and better explain the data it is reporting. Resolve to Save Lives gives DC a score of 47% in indicator reporting.¹⁵

12 *Tracking COVID-19 in the United States Progress and Opportunities, Resolve to Save Lives and Vital Strategies*, November 2020, page 3, See: <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

13 *Tracking COVID-19 in the United States Progress and Opportunities, Resolve to Save Lives and Vital Strategies*, November 2020, pages 5, 16, See: <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

14 <https://preventepidemics.org/covid19/resources/levels/>

15 Essential indicator availability by state, Updated October 23, 2020 https://preventepidemics.org/wp-content/uploads/2020/11/RTSL_Tracking-COVID-in-US_Appendix-2.pdf

I. Data Not Reported or Partially Reported that is Recommended by Resolve to Save Lives

The District is not reporting:

- **Percentage of new cases epidemiologically linked to at least one other case by date (Resolve to Save Lives #2).**

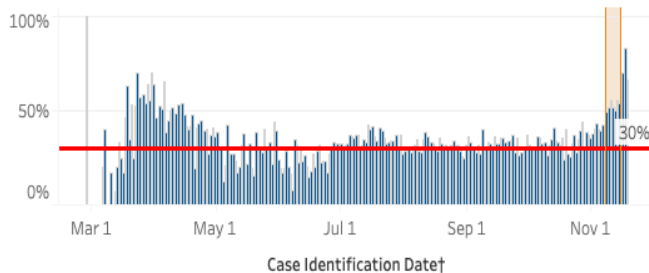
DC Health is not reporting this indicator which is broader than the Resolve to Save Lives Indicator #13 “Percentage of new cases from among quarantined contacts” which DC Health is reporting. The Resolve to Save Lives rationale for reporting Indicator #2 is: “If the majority of cases are not linked to at least one other case or a known source of exposure, public health departments do not have sufficient awareness of ongoing spread of disease.” Figure 2 shows Oregon’s reporting on the percentage of COVID-19 cases not traced to a known source.

Figure 2: Oregon Cases Without a Known Source

Percent of COVID-19 cases not traced to a known source

The chart below shows the percent of new cases that could not be traced to a known source of COVID-19. We want to keep this percent below 30% in the past 7 days.

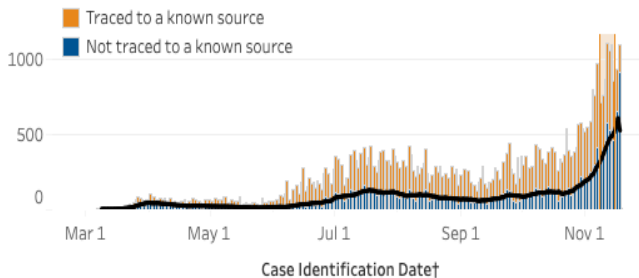
Lower is better on this indicator



New COVID-19 cases with and without a known source

This chart shows new COVID-19 cases identified each day and whether or not they were traced to a known source. The black line shows a moving 7-day average of the number of cases without a known source.

Lower blue bars are better on this indicator



Source: Oregon Health Authority Dashboard: Oregon’s COVID-19 Disease Burden [https://public.tableau.com/profile/oregon.health.authority.covid.19#!/vizhome/OregonCOVID-19PublicHealthIndicators/COVID-19Burden as of 11/17/2020](https://public.tableau.com/profile/oregon.health.authority.covid.19#!/vizhome/OregonCOVID-19PublicHealthIndicators/COVID-19Burden%20as%20of%2011/17/2020)

- **COVID-19-like illness (CLI) and influenza-like illness (ILI) trends from emergency departments (Resolve to Save Lives #5).** The District is collecting this data and should include it on the COVID-19 data website.¹⁶ Nine states were already reporting this indicator when Resolve to Save Lives reviewed state dashboards in July 2020 and the CDC is also publishing ILI.¹⁷ The Resolve to Save Lives rationale for the importance of this indicator is that “syndromic surveillance indicators are used to monitor trends in outpatient and emergency visits and can be used to detect a rise

16 DC Health is reporting Influenza Surveillance data at <https://dchealth.dc.gov/page/influenza-surveillance-dashboard-2020-2021-season>

17 For influenza-like illnesses: Trends by week at <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>

in COVID-19 cases before a rise in confirmed cases occurs.”¹⁸ For example, in late May, Arizona experienced an increase in CLI and ILI before an increase in deaths was recorded several weeks later.¹⁹

- **Time from specimen collection to isolation of cases, by week (Resolve to Save Lives #11).** For this indicator, Resolve to Save Lives defines isolation as “the exact time a case was notified they should immediately isolate.”²⁰ The Resolve to Save Lives rationale for reporting this indicator: “In order for testing to be an effective part of the Box-It-In strategy, mechanisms must be in place to notify cases of their test results and the need for isolation. This will minimize the number of potentially exposed contacts and interrupt ongoing secondary transmission from an infected individual who has not been notified of test results.”
- **New infections of health care workers not confirmed to have been contracted outside of the workplace (Resolve to Save Lives #14).** Although DC Health collects data on healthcare worker cases, the data is not reported. The Resolve to Save Lives rationale for this indicator: “Infections among health care personnel reflect appropriate [infection prevention and control] practices and use of personal protective equipment, strength of the health workforce, and need to be prevented to minimize harm to vulnerable populations in hospitals, long term care facilities and direct patient care settings.”
- **Percentage of people wearing masks correctly in public settings (e.g., mass transit, shopping), based on direct observation or security camera analysis, by a standard, consistent method, by week (Resolve to Save Lives #15).** The Resolve to Save Lives rationale for this indicator is that “mask wearing and use of cloth face coverings have been shown to reduce transmission of COVID-19. Measuring adherence can guide need for public messaging and assist in modeling disease transmission projections.” DC Health at a Mayoral press conference on September 21, 2020, mentioned an interest in reporting mask wearing compliance but had not determined how to measure this yet. Resolve to Save Lives provides [guidance](#) on how to set up a mask use measurement program.²¹

The District of Columbia ranked at the top of all states in self-reported mask wearing rates tracked by researchers at Carnegie Mellon University as of October 22, 2020.²² These rates are based on Facebook surveys, not direct observation as recommended by Resolve to Save Lives and do not differentiate between indoor and outdoor mask wearing. Other jurisdictions are starting to report on mask wearing prevalence, including indoor versus outdoor. Figure 3 shows how Utah reports data on its effort to monitor compliance with mask wearing.²³

18 Resolve to Save Lives published a Data Dictionary that includes more information on each indicator, including an indicator rationale: <https://preventepidemics.org/wp-content/uploads/2020/07/Data-Dictionary.pdf>

19 <https://preventepidemics.org/wp-content/uploads/2020/07/Tracking-COVID-19-in-the-United-States-Report-1.pdf> report pg. 6.

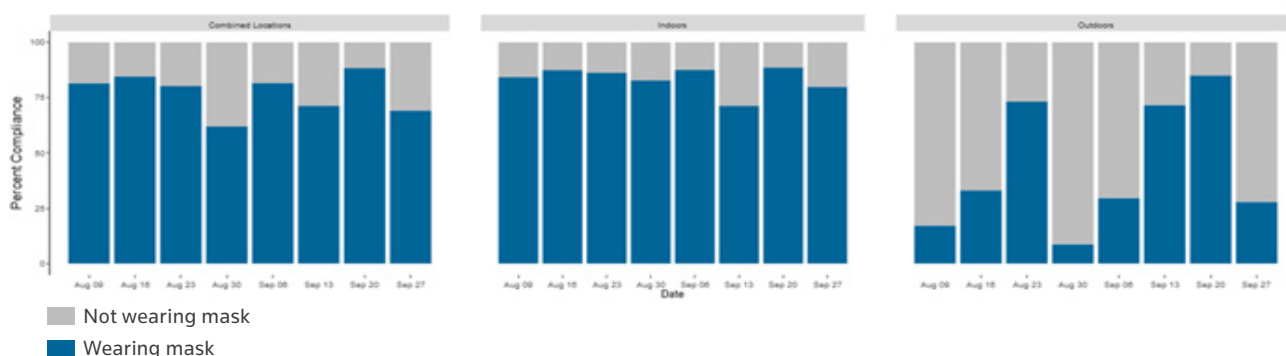
20 Resolve to Save Lives Data Dictionary: <https://preventepidemics.org/wp-content/uploads/2020/07/Data-Dictionary.pdf>

21 <https://preventepidemics.org/wp-content/uploads/2020/08/Promoting-Mask-Wearing-During-COVID-19.pdf>

22 Carnegie Mellon University, COVIDcast Real-time COVID-19 Indicators by the Delphi Group, See: https://covidcast.cmu.edu/?sensor=doctor-visits-smoothed_adj_cli&level=county&date=20201019&signalType=value&encoding=color&mode=export®ion=42003

23 <https://coronavirus.utah.gov/case-counts/>

Figure 3: Results of Utah Physical Survey of Mask Compliance



Source: Risk Factors, Mask Wearing Compliance, <https://coronavirus.utah.gov/case-counts>

The District is only partially reporting:

- New COVID-19 confirmed and probable deaths and per capita rates with 7-day moving average (Resolve to Save Lives #9). New deaths are not reported by day and per capita. Only cumulative deaths are reported.** On the District's COVID-19 data webpage, DC Health is not reporting new COVID-19 deaths daily and per capita. Instead, the Mayor's Office announces the number of new cases and deaths for the previous day in the form of an online press release, but this information is not posted on the COVID-19 data webpage.²⁴ The COVID-19 data webpage only has cumulative deaths in both the downloadable data and the graph in the [COVID-19 Surveillance page](#), leaving it up to the user to try to figure out the count for any specific day.²⁵ Only reporting cumulative data is a recurring issue we identified in reviewing the website. Resolve to Save Lives points out that "[cumulative data] is less useful to inform current risk, readiness and the effectiveness of response efforts than more granular information." Cumulative data can obscure the trend in daily deaths since cumulative deaths will always increase over time.
- New confirmed and probable cases and per capita rates by date with 7-day moving average (Resolve to Save Lives #1). New case counts are not reported although per capita rates now are.** The District is not reporting daily new case numbers with a 7-day average on the Reopening Metrics page; it is only reporting a 7-day average of new cases per 100,000. While per capita rates are helpful for comparing the District to surrounding counties, states, and other countries, new case counts are also important to report and serve as the basis of per capita rate calculations. Resolve to Save Lives recommends reporting data in a categorical bar graph of cases by date, with a 7-day moving average trend line. One way to report both per capita rates and new case counts would be to allow users to toggle between the two options when viewing the data. Again, the Mayor is

²⁴ See press releases on <https://mayor.dc.gov/>

²⁵ <https://coronavirus.dc.gov/data>.

publishing the daily number of new cases in news releases on her website,²⁶ but the District should add new case counts to the COVID-19 data webpage.²⁷

At the time of writing, the District is providing updated cumulative case numbers (i.e. Total Positives since the first case in the District on March 7, 2020) each day, both on the COVID-19 Surveillance page and in the downloadable data. However, cumulative case numbers are not a user-friendly way to determine new case numbers; the user must subtract one day from the next to determine the number of cases.

Additionally, more explanation is needed to understand how DC Health reports case numbers for a certain date. DC Health's [Reopening Metrics Data Notes](#) on the new case rate states that "the number of daily cases is subject to the timeliness of test results reported from laboratories and may not always reflect the number of new positive tests on a given day." The daily new case rate is based on DC Health's receipt of test results. This differs from case dates that are based on the date of specimen collection or the date of symptom onset. However, DC Health should be more explicit in defining how it reports case numbers on each date.

- **Antigen "rapid" testing is expanding, and the District has not incorporated antigen testing and results into the information it reports on new cases, testing rates, and the positivity rate. (Resolve to Save Lives Indicators #1, 3, 4)** Resolve to Save Lives recommends: reporting number of tests, positive results, and positivity rate, with molecular test and antigen test data presented separately.²⁸ As more and more antigen tests are used in the District, DC Health stated that they are collecting antigen test results but needs a system that reports positive results without duplicating previously confirmed cases.

Other jurisdictions are reporting on antigen tests. For example, Massachusetts currently reports²⁹ on antigen tests and provides a glossary to explain how it reports these tests as either confirmed or probable, as seen in Figure 4. Virginia is reporting probable and confirmed cases together on a graph, as seen in Figure 5.

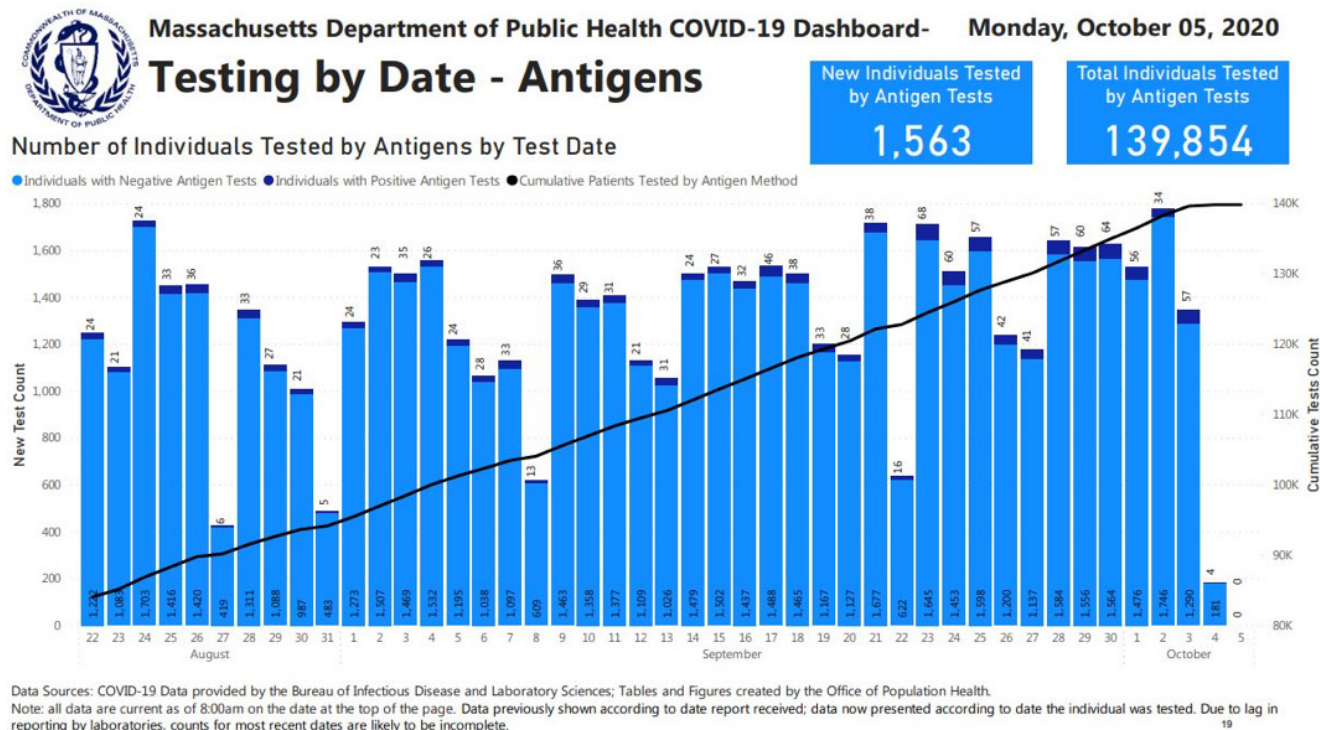
²⁶ See press releases on <https://mayor.dc.gov/>

²⁷ The District did publish new case data from June 15-September 17, 2020 for download on the District's Open Data website <https://open-data.dc.gov/pages/coronavirus>

²⁸ Resolve to Save Lives provides more information on how to present antigen test data in their November 2020 report: see page 18 <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

²⁹ Massachusetts Department of Public Health COVID-19 Dashboard-Glossary of Terms, See: <https://www.mass.gov/doc/covid-19-dashboard-october-5-2020/download>

Figure 4: A Massachusetts Report on Daily Antigen Test Results and Glossary of How Confirmed and Probable Cases are Reported



Case Definition: A standard set of criteria (including symptoms, laboratory tests and exposure) used to count persons who may have COVID-19. Case definitions tell public health professionals which people with disease to count; they don't tell healthcare providers how to diagnose or treat COVID.

Confirmed Case: A person is counted as a confirmed case of COVID-19 if they have a positive molecular test.

Probable Case: A person is counted as a probable case in three ways:

1. if they have a positive antigen test;
2. if they have COVID symptoms AND were exposed to someone with COVID;
3. if they died and their death certificate lists COVID as a cause of death.

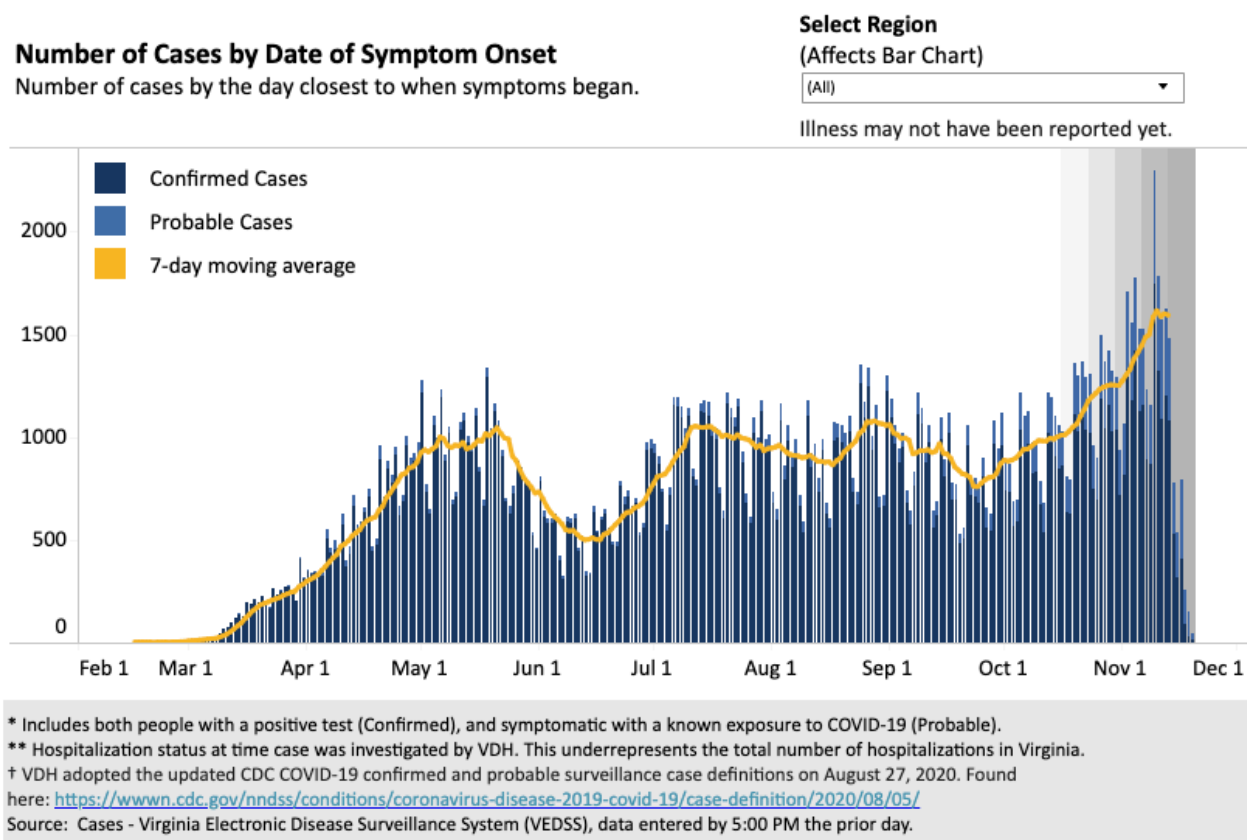
More complete information about the COVID-19 case definition may be found here: https://cdn.ymaws.com/www.cste.org/resource/resmgr/ps/positionstatement2020/interim-20-ID-02_COVID-19.pdf

Source: Antigen Test Results, Massachusetts Department of Public Health COVID-19 Dashboard: Testing by Date- Antigens on 10/5/20 <https://www.mass.gov/doc/covid-19-dashboard-october-5-2020/download>³⁰

Source: Glossary, Massachusetts Department of Public Health COVID-19 Dashboard: Glossary of Terms

³⁰ Updated daily dashboards are available on Massachusetts COVID-19 Response Reporting website: <https://www.mass.gov/info-details/covid-19-response-reporting>

Figure 5: Virginia Reports on Daily Probable and Confirmed Cases, with 7-day Average



Source: Virginia Department of Health Cases Dashboard: <https://www.vdh.virginia.gov/coronavirus/coronavirus/covid-19-in-virginia-cases/> on 11/20/20

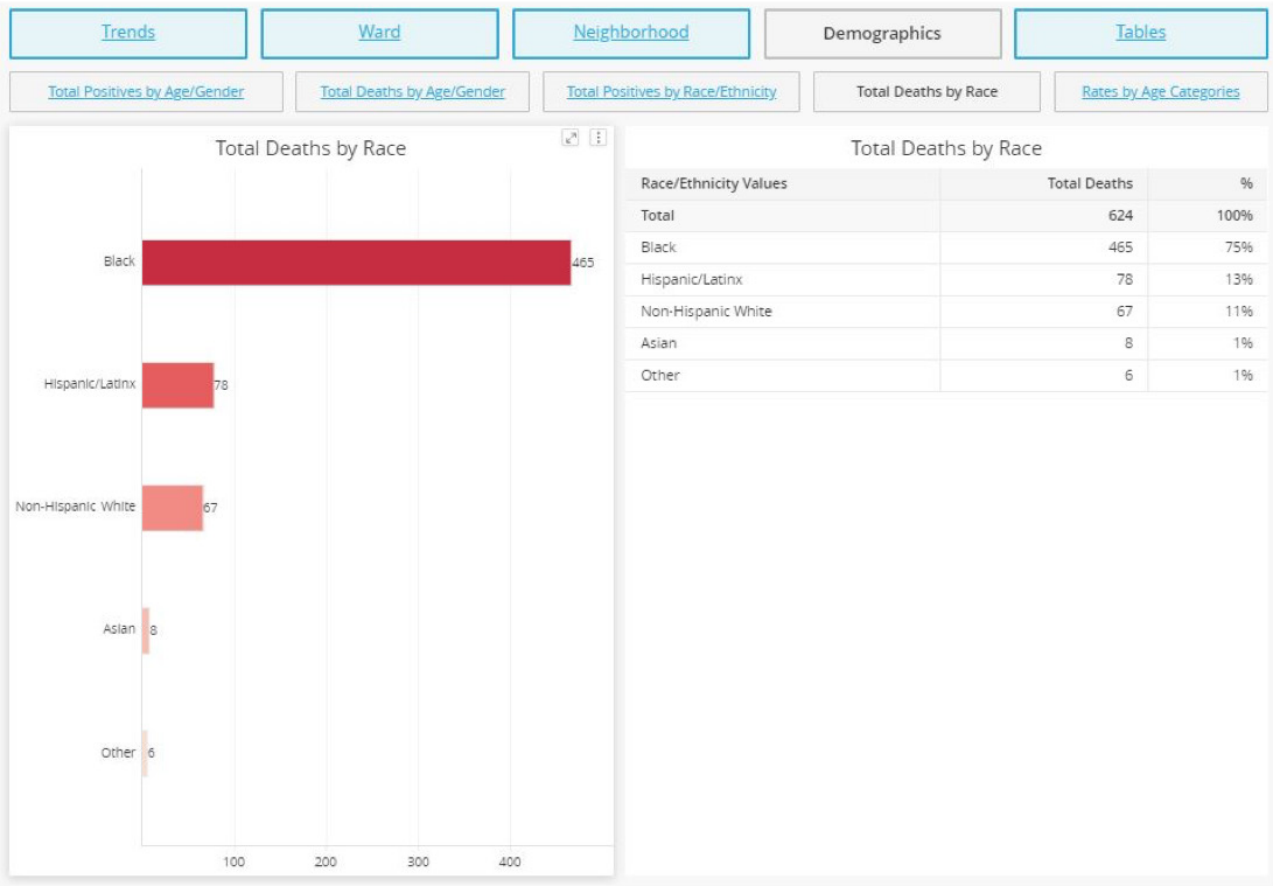
DC Health should consider how to incorporate antigen testing into new case reporting, the testing per capita rates, and the positivity rate.

- **Demographic data: Many indicators are not stratified by demographic group (i.e. age, sex, race, ethnicity, location).** Resolve to Save Lives recommends stratifying 9 of the 15 indicators by demographic group (age, sex, race and ethnicity, and in some cases, location) as seen in Appendix B. Resolve to Save Lives states that such stratification over time of essential indicators such as cases, tests, hospitalizations and deaths “is essential to understand patterns, triangulate risk, address bottlenecks, and inform public health action.”³¹ The District currently is only reporting on cumulative cases and deaths by demographic group, not daily trend data, as seen from Figure 6 below. As mentioned above, cumulative data does not allow the user to gain a sense of what is happening right now in the pandemic. For instance, a user might want to know if certain groups or areas of the city are currently utilizing testing services more. Or a user might want to know if a

31 Tracking COVID-19 in the United States Progress and Opportunities,, Resolve to Save Lives and Vital Strategies, November 2020, page 5, See: <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

certain age group is currently testing positive at higher rates than other groups. Cumulative data also does not allow for the user to clearly see trends over time for each demographic group.

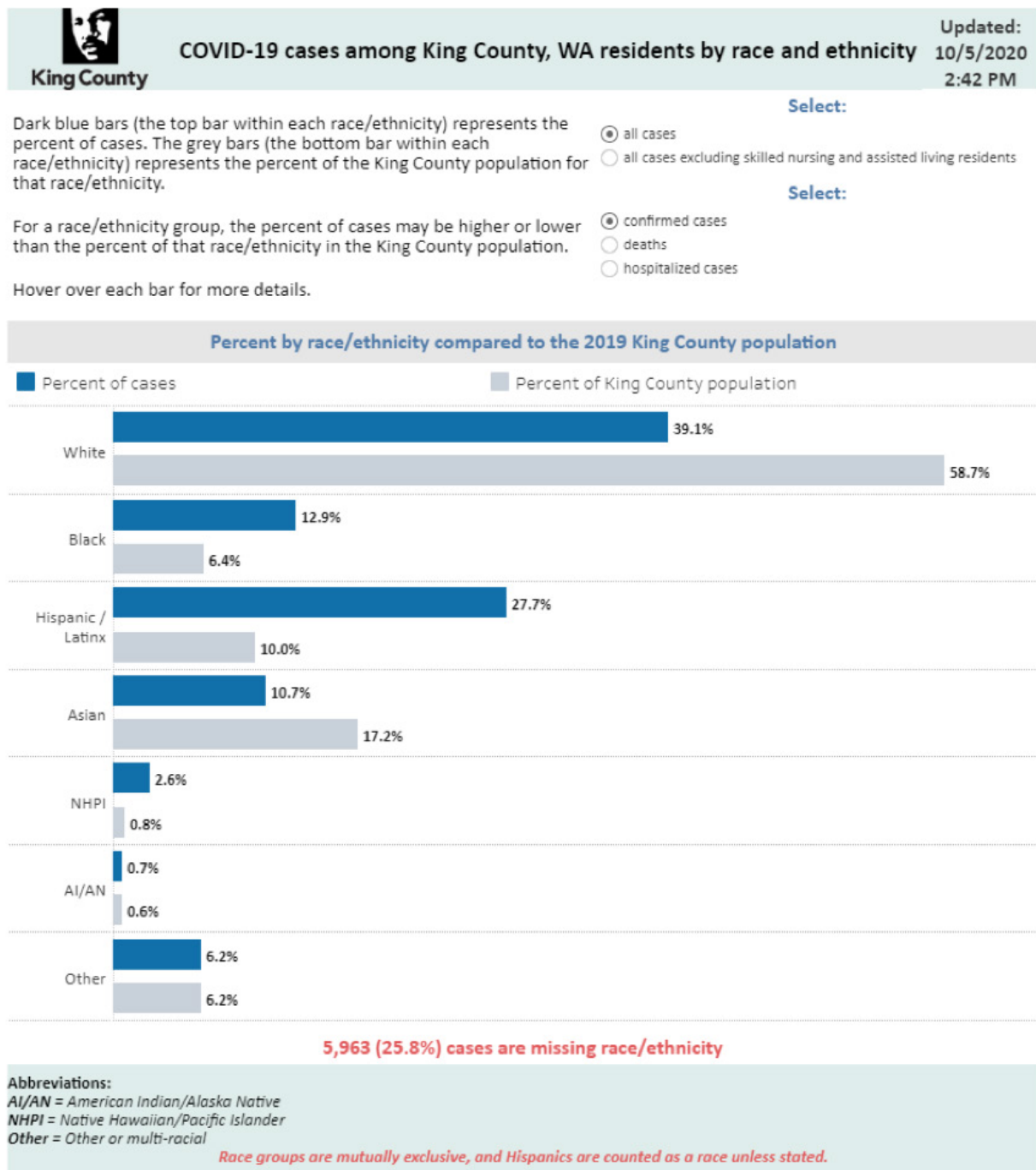
Figure 6: D.C. Provides Cumulative Data by Race, Age, and Gender, but Not Trend Data



Source: <https://coronavirus.dc.gov/data>

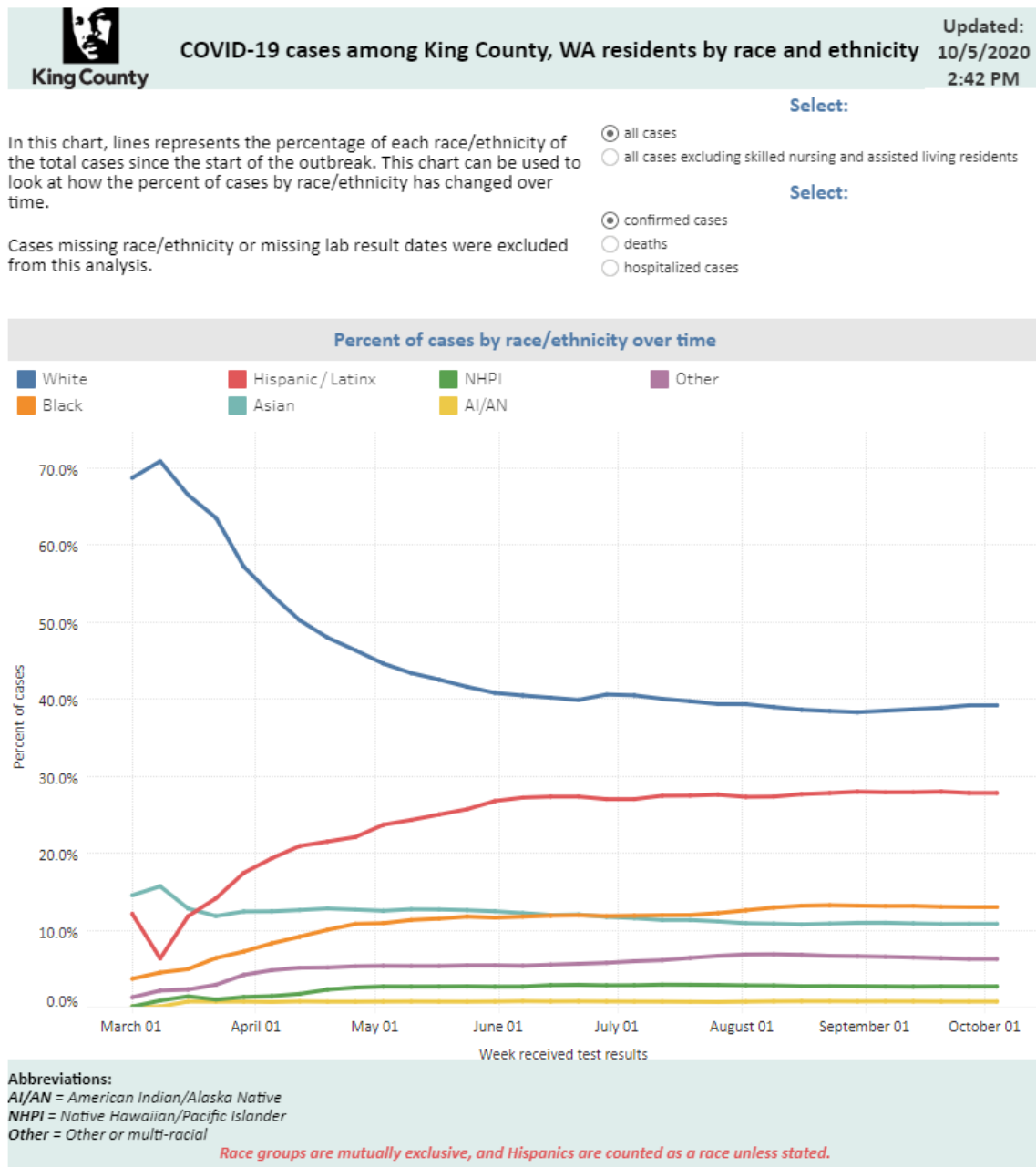
To gain a better sense of disparities by demographic group, it would also be helpful to have an idea of the pandemic’s toll on specific groups relative to their size of the population. One idea would be to see the percentage of demographic groups with positive cases or deaths compared to their percentage of the population of the city. A quick fix would be to add a column to the various demographic tables with this information. King County in the state of Washington presents clear graphs comparing the percentage of cases by race compared to population, as seen in Figure 7. King County also provides trends over time, as seen in Figure 8.

Figure 7: Washington State's King County Cases Reported by Race Compared to Share of Population



Source: King County COVID-19 Race and ethnicity data dashboard- Distribution of Cases on 10/8/2020:
<https://www.kingcounty.gov/depts/health/covid-19/data/race-ethnicity.aspx>

Figure 8: Washington State's King County New Cases Reported by Race Over Time



Source: King County COVID-19 Race and ethnicity data dashboard- Distribution Over Time on 10/8/2020: <https://www.kingcounty.gov/depts/health/covid-19/data/race-ethnicity.aspx>

- **Percentage of cases interviewed for contact elicitation within 3 days of specimen collection, including all people who live in the jurisdiction, by week (Resolve to Save Lives #12).**³² The District’s contact tracing interview completion rate is based on a timeframe that is longer than the Resolve to Save Lives recommended 3 days from testing.

DC Health made progress in reporting on contact tracing by publishing the percentage of positive cases interviewed instead of simply contact attempts; however, DC Health’s indicator does not measure time from the date of testing as Resolve to Save Lives does. Rather, DC Health currently reports the percentage of positive cases that are interviewed within 3 days of the date their cases were imported into the contact tracing system. Thus, DC Health’s indicator does not capture the time it takes from testing to processing results and importing them into the contact tracing system.

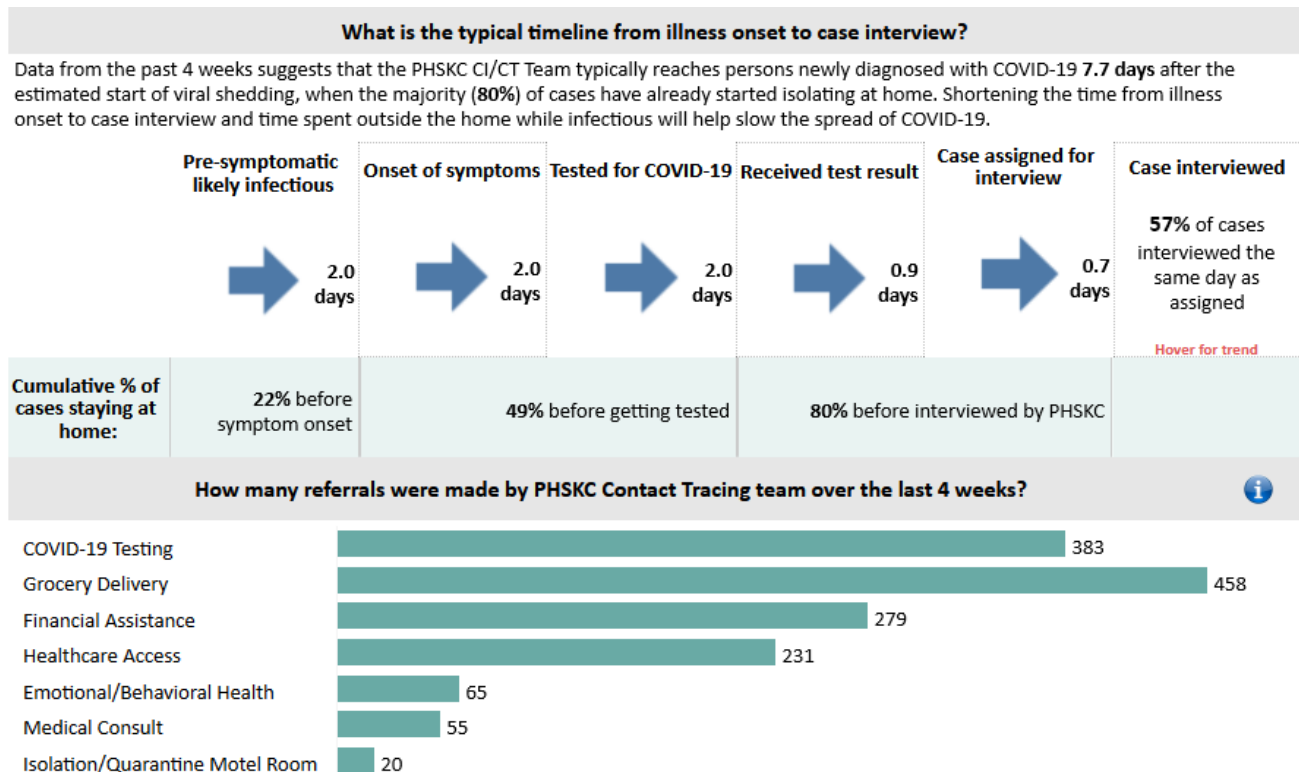
As of November 18, 2020, the District’s average test turnaround time has been greater than two days for over a month, meaning most cases will be imported into the contact tracing system after more than two days of testing. For example, using an optimistic two days to import test results into the contact tracing system, plus a three-day interview period, DC Health’s indicator would measure the percentage of people who tested positive who are interviewed within five days of getting tested. Five days is a long time in pandemic terms; it is longer than the Resolve to Save Lives indicator that measures 3 days from testing. As Resolve to Save Lives states for the indicator rationale: “Timely identification of contacts is essential to limit potential disease transmission. Cases should be interviewed soon after they are tested, and a timely test result is obtained.”

The District could report on the percentage of interviews completed within a shorter period than the current three days from import into the contact tracing system and consider reporting from the testing date. While it is true that this will lower the interview completion rate, it could provide a more meaningful measure in the effectiveness of contact tracing in contributing to reducing transmission.

Some jurisdictions are also breaking out the timeline of the testing and contact tracing process to show how long each step of the process takes and identify possible delays. Figure 9 shows how King County in Washington details key milestones in contact tracing, as well as data on social service referrals made by its contact tracers, which can help measure the effectiveness of its efforts. DC Health could consider also reporting on how long each step of the process is taking.

32 Resolve to Save Lives provided an update in their November 2020 report to say that in cases where test results are not reported with a specific time stamp, states may target interviewing 80% of cases within three days to account for this limitation and now lists this indicator as “Time from case specimen collection to new case interview for contact elicitation, by week of case specimen collection”, see: https://preventepidemics.org/wp-content/uploads/2020/11/RTSL_Tracking-COVID-in-US_Appendix-3.pdf

Figure 9: King County Detailed Graphics on Contact Tracing Outcomes



Source: <https://www.kingcounty.gov/depts/health/covid-19/data/contact-tracing.aspx>

Additionally, DC Health spotlights two metrics under “Public Health System Capacity,” (Positive cases with a contact attempt within one day; and Close contacts with a contact attempt within two days). These indicators are only a measure of contact attempts, not interview completion which is necessary to trace potentially infected contacts. These metrics have been above 95% since July 23, 2020.

- **List of outbreaks (to extent legally permissible) in congregate facilities (long-term care, homeless shelters, correctional facilities) and essential workplaces with cases and deaths in residents and staff (Resolve to Save Lives #8).**

Congregate Facilities and Essential Workplace Case Information can be expanded. Resolve to Save Lives includes an indicator on congregate facilities and recommends reporting on outbreaks in long-term care facilities, other congregate facilities, and essential workplaces to the extent

consistent with a jurisdiction's personal privacy laws.³³ Currently, all the data on cases in congregate settings is cumulative which is of less use for assessing current risk. Resolve to Save Lives recommends reporting outbreaks by the most recent week as well as cumulative data.

Additionally, the data on congregate facilities is not complete. The downloadable data includes a list of skilled nursing facilities that DC Health oversees, but it does not include other nursing homes or assisted living facilities although DC Health stated that they are collecting this data. The Centers for Medicare and Medicaid Services (CMS) publicly reports weekly COVID-19 cases and deaths for certified Medicare skilled nursing facilities and Medicaid nursing facilities in the District.³⁴ The [Human Services Agency COVID-19 Case Data](#) page lists the number of cumulative cases and deaths in homeless shelters, but it does not break down case and death data by homeless shelter. Similarly, for the Department of Corrections, which runs two halfway houses in addition to the D.C. jail and medical correctional facility, there is no breakdown by facility on the [Public Safety Agency Data](#) page. If DC Health has identified any essential workplaces, then information on outbreaks in those settings should also be provided.

■ **A lack of outbreaks versus community stratification of data.**

In addition to congregate settings, for several of the indicators [new cases (#1), deaths (#9), and indicators #2 and #13 discussed above], Resolve to Save Lives recommends that the data include a stratification by outbreaks as distinct from community spread. The District does not stratify its data in this manner. It is important to define what an outbreak means because states are defining an outbreak in different ways and a definition of an outbreak that requires too high a number of cases can mask significant transmission. Resolve to Save Lives defines an outbreak as a case "linked to one or more cases at a congregate resident facility, correctional facility, workplace or defined mass event."

For example, stratifying by outbreaks versus community spread is recommended for Indicator #1 (New confirmed and probable cases and per capita rates by date with 7-day moving average) because as Resolve to Save Lives explains: "When many cases are originating from unknown sources, the risk in the community is much higher than when known outbreaks are the primary source of new case."³⁵ The state of Utah provides an example of how cases and deaths are stratified by outbreaks and other settings in Figure 10.

33 The District of Columbia has no legal prohibition which would be more restrictive than the Privacy Rule contained in the Health Insurance Portability and Accountability Act (HIPAA). HIPAA, which in relevant parts provides patient data privacy, only covers certain institutions and that information which identifies an individual (or there is a reasonable basis to believe it can be used to identify an individual). HIPAA does not prohibit the sharing of aggregate information concerning COVID outbreaks at specific nursing homes. Further, the Centers for Medicare & Medicaid Services (CMS) promulgated regulations requiring nursing homes to inform residents, their families, and representatives of COVID-19 cases in their facilities. There are no legal prohibitions to this information being shared, in a non-personally identifiable way, with the public as well. Of note, the District has been sharing information on COVID cases at the DC Jail since close to the outset of the declaration of the health emergency.

34 COVID-19 Nursing Home Data, See: <https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpvg/>

35 *Tracking COVID-19 in the United States*, July 21, 2020, Page 14, See: <https://preventepidemics.org/wp-content/uploads/2020/07/Tracking-COVID-19-in-the-United-States-Report-1.pdf>.

Figure 10: Utah Community Outbreaks and Major Outbreak Settings

Community Outbreaks: Major Settings and Demographics Summary (Non-Long-Term Care)

Demographic	Workplace	Hospital / Clinic	Group Living	Detention Facility	Child Care	Other Setting
Total Outbreaks	833	35	34	8	33	21
Total Cases	5517	124	827	314	159	153
Total Hospitalizations	220	14	70	13	<5	8
Total Deaths	15	<5	<5	0	0	0
Male % / Female %	59.4% / 40.6%	25% / 75%	72.6% / 27.4%	91.4% / 8.6%	20.8% / 79.2%	51% / 49%
Median Age	38	38.5	37	38	23	22

Source: <https://coronavirus.utah.gov/case-counts>

Recommendations

- DC Health should work toward reporting the following indicators:
 - COVID-19-like illness and flu-like illness counts from emergency departments.
 - Time from specimen collection to isolation of cases.
 - New infections of health care workers not confirmed to have been contracted outside of the workplace.
 - Percentage of people wearing masks correctly in public indoor spaces if possible.
 - Percentage of new cases epidemiologically linked to at least one other case, stratified by whether part of known outbreak or not.
- DC Health with OCME is already collecting and should publicly report new probable and confirmed deaths, both each day's count and per capita rates, on the District's COVID-19 data webpage.
- DC Health should publish new case counts on the District's COVID-19 data webpage and in the downloadable data and should more explicitly define how new case counts are calculated.
- DC Health should develop a way to report on antigen testing on the COVID-19 data webpage, including test counts, positive results, and the positivity rate.
- DC Health should expand reporting on demographic data, including reporting reopening metrics stratified by demographic data where feasible and relevant.
- DC Health should revise the contact tracing interview completion rate to capture a shorter, more meaningful timeframe and consider reporting on the timeline for the different steps from testing to contact tracing.
- DC Health should improve congregate facility reporting to include:
 - Reporting cases and deaths by most recent week as well as cumulative data for congregate facilities.
 - Expanding reporting to include all nursing homes; assisted living facilities; and individual homeless shelters.
 - Reporting outbreaks at any essential workplaces that DC Health has identified.

II. Incomplete Downloadable Data and Explanation of Data on the COVID-19 data webpage

We commend DC Health for providing updated downloadable data in excel spreadsheet format every day. However, there are several elements that could be added to increase the data's completeness and accessibility.

The reopening metrics are not included in the downloadable data on the COVID-19 data webpage, which means that only cumulative data is available for download.

Each of the reopening metrics, new case numbers, and demographic stratification data should also be included in the downloadable data. For example, Massachusetts provides raw data underlying its dashboard for download.³⁶ If the District is going to report additional datasets on the Open Data DC webpage, these datasets should be clearly linked on the COVID-19 data webpage so users can find everything in one place.

The cumulative demographic data that is provided is also incomplete in the downloadable data. Data on total deaths is available by age, sex, race, ethnicity, and ward. However, total case data is not in the downloadable data by sex and age even though the website has graphs with this information. Resolve to Save Lives recommends that new case and death data be available by age, sex, race, ethnicity, and location (Resolve to Save Lives suggests ZIP code) with both cumulative and weekly counts.

The downloadable data lack a guide or data dictionary explaining the data.

An additional tab in the spreadsheet explaining each reported data point would also be helpful. As it is now, the user does not know exactly what all the data means. For example, the "Overall Stats" tab has many rows of data which need more explanation such as "Cleared from Isolation" or "Total Number Tested Positive OUT" under DYRS-residents (Department of Youth Rehabilitation Services). There is also a tab "Community Cases Tested By OCME" (Office of the Chief Medical Examiner) which does not provide more information to the user on what this means. DC Health should go through each data point and ensure it is explained in a data guide tab.

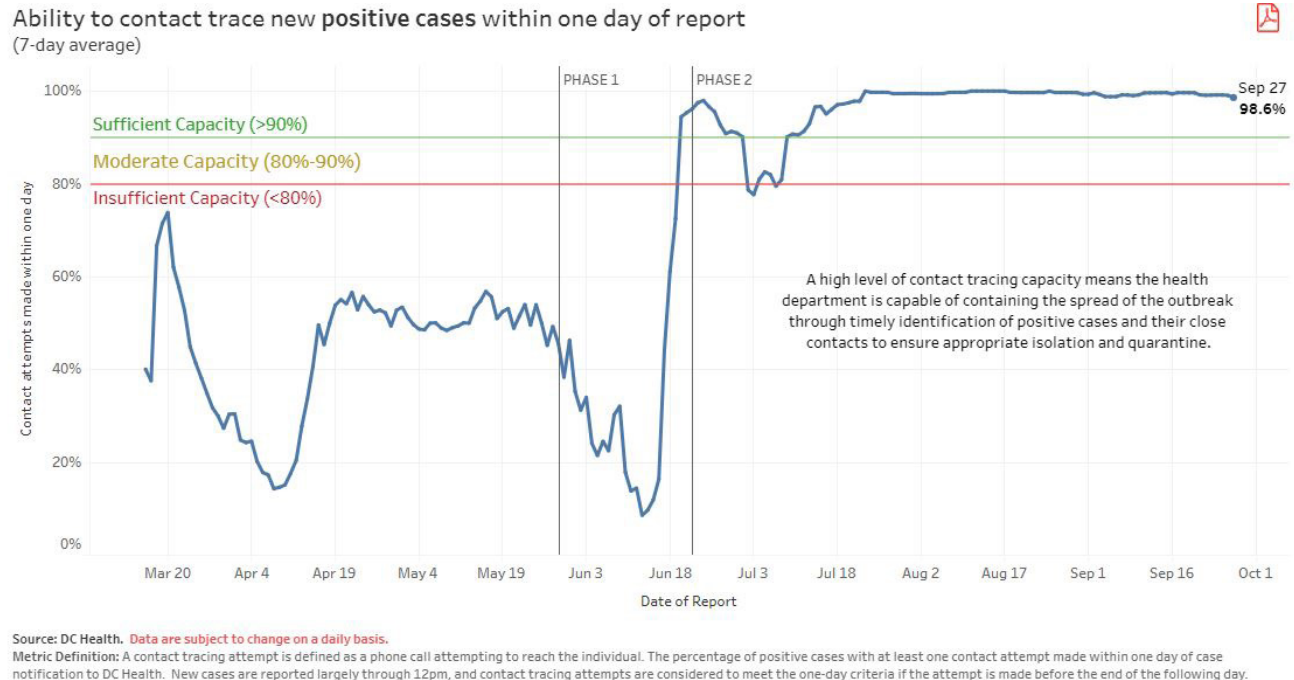
Other opportunities to explain data:

- The population figures that DC Health is using to calculate new case rates are not included on the website. Demographic population data would also be useful. It is important for the public to know what the denominator is when calculating or analyzing rates. Population information could be included in the two data guides, with relevant graphs, and in the downloadable data.
- More notes can be added to the page to explain data, especially when there is a stark change. For example, on the "[Reopening Metrics](#)" page in the graphs section, the "Positive cases with contact attempt" graph has a huge jump that is not explained from 8.5% of contact attempts completed to

36 Massachusetts COVID-19 Response Reporting, COVID-19 Daily Dashboard, See: <https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-daily-dashboard>

new cases within 24 hours on June 13, 2020 to 94.4% on June 20, 2020, as seen below in Figure 11.

Figure 11: An Example of Graphs That Could Benefit from Notes to Explain Dramatic Changes in Data



Source: Screenshot taken on 10/1/2020 at 9:30am of <https://coronavirus.dc.gov/page/reopening-metrics>

Recommendations

8. DC Health should include the reopening metrics data, new cases data, and more demographic stratification data in downloadable data.
9. DC Health should add a tab to the excel downloadable data with a data guide defining each data point and explaining how it was collected.
10. DC Health should report what population figures it is using for any metrics, e.g. the District population and demographic group population.
11. DC Health should explain any stark changes in trends in graphs, potentially including the explanation below the graph, space allowing, and in the Reopening Metrics Data Notes and in the User Guide for Data Visualizations.

Auditor's Concerns

The following section describes data reporting issues that surfaced in ODCA's review of the District's COVID-19 reporting that are issues not covered by the Resolve to Save Lives Essential Indicators. We offer items for further consideration.

Reopening schools creates new public reporting needs down to the school level.

DC Health should consider quickly developing a way to report new cases at the school and childcare center level if possible across the District's COVID-19 data webpage. Resolve to Save Lives states that "granular data is more actionable and informative to parents, students and staff."³⁷ In the District, multiple private schools, charter schools, and traditional public schools have already re-opened in-person for either some students or all students. DCPS is preparing to reopen schools. DCPS originally planned to reopen for approximately 75% of elementary grade students for Term 2 starting in November 2020 but has now greatly scaled back. Additionally, some childcare centers in the District have provided in-person services continuously throughout the pandemic; and more continue to reopen for in-person services.

DC Health stated that it is currently collecting data on cases in schools that have already re-opened. The District should consider methods to transparently report new and cumulative COVID cases for all in-person congregate settings for children, including all sectors of compulsory education (age 5 through 18) and all early childhood education and childcare centers (ages 0-5). Resolve to Save Lives recommends reporting cases and deaths for congregate facilities and essential workplaces, both by most recent week and cumulatively (Indicator #8). The District could consider reporting school and childcare center case data down to the school or center level, with both daily or weekly cases and cumulative cases and by student and staff cases.

The District is already reporting deaths by key District agencies whose workers come into contact with the public such as the Child and Family Services Agency, the Metropolitan Police Department, and the Department of Motor Vehicles. To be consistent would mean adding reporting on DCPS. The District could also consider reporting COVID-19 deaths for all school and childcare personnel. This data is important for tracking the epidemic as more schools and childcare centers reopen. The CDC in researching its Morbidity and Mortality Weekly Report (MMWR)³⁸ says "monitoring at the local-level could inform decision-makers about which mitigation strategies are most effective in preventing the spread of COVID-19 in schools and communities." The report makes the case for the importance of stratifying indicators by demographic data, including age, to monitor the trends in COVID-19 cases in school-aged children as schools reopen.

DCPS has committed to sending a school-wide communication if there is a confirmed case at a school.

37 Tracking COVID-19 in the United States Progress and Opportunities, Resolve to Save Lives and Vital Strategies, November 2020, page 22, See: <https://preventepidemics.org/wp-content/uploads/2020/11/Tracking-COVID-in-the-US-Progress-Opportunities.pdf>

38 CDC, *Morbidity and Mortality Weekly Report (MMWR)*, "COVID-19 Trends Among School-Aged Children — United States, March 1–September 19, 2020," October 2, 2020 / 69(39);1410–1415. See: <https://www.cdc.gov/mmwr/volumes/69/wr/mm6939e2.htm>

Since the information will be public, it should also be reported on the COVID-19 data webpage.

Currently, it appears that DCPS only plans to report the following four metrics:

DCPS Personnel Working In-Person:

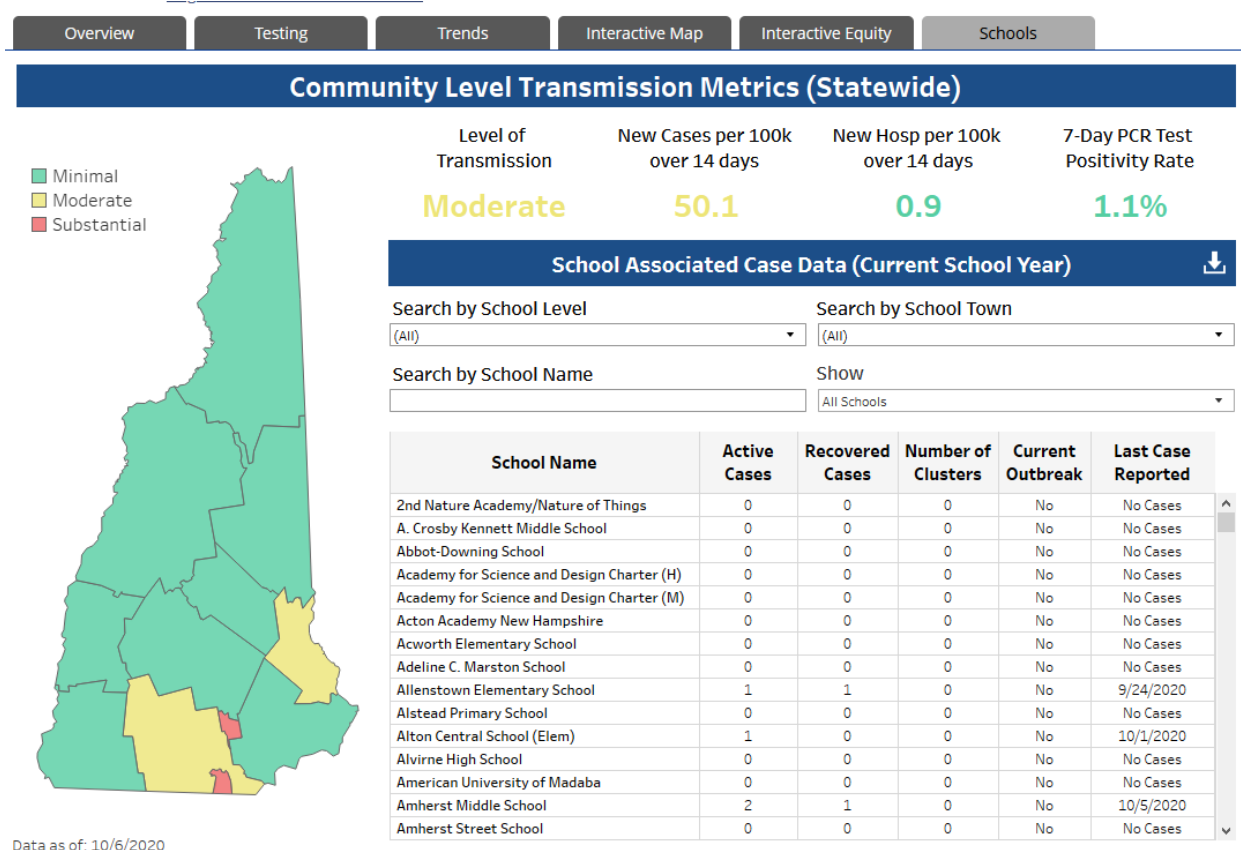
- Total Number of Personnel Who Have Tested Positive.
- Total Number of Personnel Currently in Quarantine Due to COVID-19.

DCPS Students Participating in In-Person Activities:

- Total Number of Students Who Have Tested Positive.
- Total Number of Students Currently in Quarantine Due to COVID-19.

While separating personnel and student cases is a good practice, the first two indicators for personnel and students would only report cumulative data, which we have noted is a poor indicator for assessing current trends. In its most recent review of state data, Resolve to Save Lives found that 19 states are reporting data at the school level. For example, New Hampshire is reporting new cases for all schools in the state- public, charter, and private sectors. Ohio's reporting includes charter and private schools. Virginia is mandating that the Department of Health report publicly on outbreaks in individual schools. Figures 12 and 13 provide examples from New Hampshire and Ohio of school level reporting.

Figure 12: New Hampshire School Dashboard Provides Detail on School COVID-19 Cases



Source: <https://www.nh.gov/covid19/dashboard/schools.htm>

Figure 13: Ohio School COVID-19 Dashboard Includes Private Schools

State of Ohio | School Reporting
Published: 10-15-2020

County: Franklin School / School District: (All) 

County	School / School District	Type	Student Cases - New	Student Cases - Cumulative	Staff Cases - New	Staff Cases - Cumulative	
Franklin	A+ Arts Academy	Community School	No Cases Reported	No Cases Reported	No Cases Reported	No Cases Reported	
	A+ Children's Academy	Community School	No Cases Reported	No Cases Reported	No Cases Reported	No Cases Reported	
	All Saints Academy	Preschool	0	0	0	1	
		Private School	No Cases Reported	No Cases Reported	No Cases Reported	No Cases Reported	
	Anchor Baptist School	Private School	No Cases Reported	No Cases Reported	No Cases Reported	No Cases Reported	

Source: <https://coronavirus.ohio.gov/wps/portal/gov/covid-19/dashboards/schools-and-children/schools>

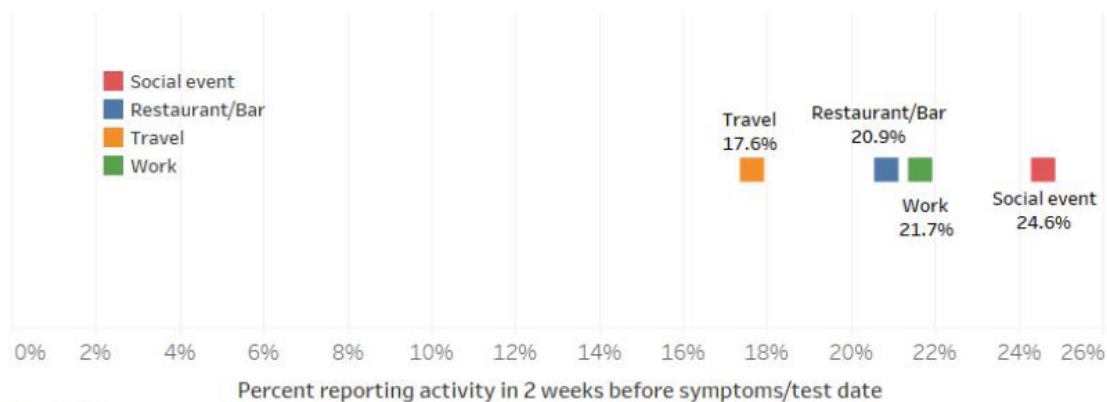
D.C. could report on potential exposure activities on the COVID-19 data webpage.

DC Health is collecting potential exposure data from contact tracing, but it is not regularly publishing it. On October 14, 2020, in the situational update, DC Health presented a helpful graph of self-reported activities that a sample of people testing positive for COVID-19 reported participating in during their exposure period, as seen in Figure 14.

Figure 14: Potential Exposure Activities Graph Shared by DC Health at Press Conference

**Percent of Positive Cases Reporting Select High to Moderate Exposure Activity Types*
During the 2 Weeks Before Symptoms/Test Date**

Week of Oct 2 – Oct 8, 2020



N = 374

Source: DC Health

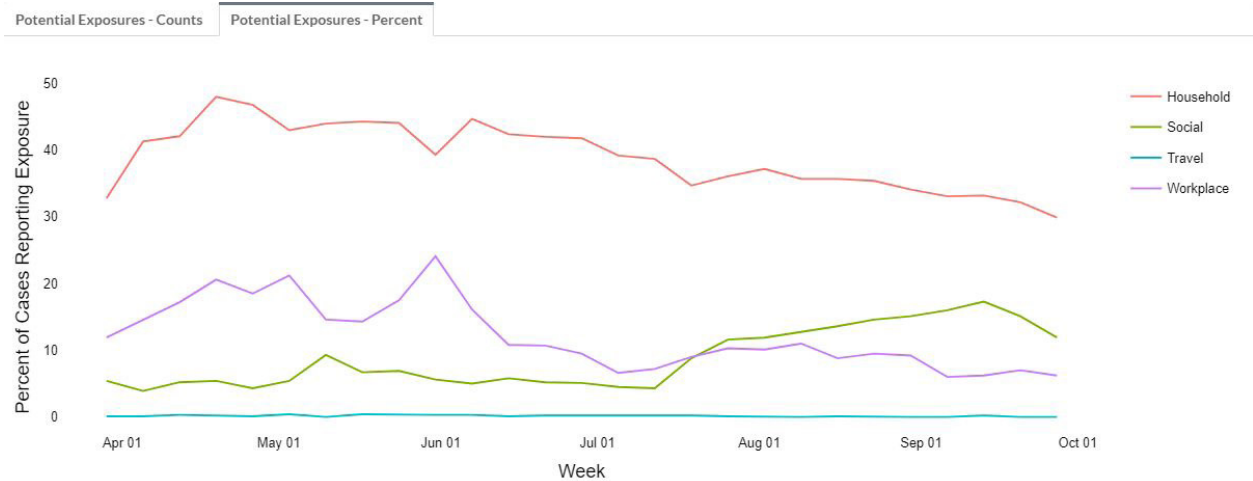
Note: Data are subject to change. Possible exposure data are collected through contact tracing interviews as self-reported activities occurring within the 2-week period before the date of symptom onset for symptomatic individuals or the date of the test sample collection for asymptomatic individuals.

*Select activity types include travel, work, restaurant or bar, and social events.

Source: D.C. Situational Update October 14, 2020: https://mayor.dc.gov/sites/default/files/dc/sites/coronavirus/page_content/attachments/Situational-Update-Presentation_10-14-20.pdf

This data is useful for understanding which types of activities have been identified as potential exposure sources in the District. Other states, like Utah—as seen in Figure 15—and Hawaii, are already reporting potential exposure data over time on their COVID-19 dashboards. We encourage DC Health to consider reporting potential exposure data on the District’s COVID-19 data webpage.

Figure 15: Utah Reports Data on Broad Categories of Potential Exposures



Source: <https://coronavirus.utah.gov/case-counts/>

In addition to the graph the District shared at the press conference, it would be helpful to have trends over time in self-reported potential exposure activities by cases as Utah shows and we recommend using the District's more specific categories compared to Utah's broader categories.

The more specific activity categories that DC Health is using allow people to have better, more actionable information on the type of activities where people may have potentially been exposed in the District. If reported over time, this information could also allow the public and decision-makers to track whether certain activities are reported more frequently by positive cases and thus may be an increasing risk factor for transmission. We also encourage the District to report on additional activity categories. For example, DC Health reported at the press conference that participating in faith-based activities were reported by 6.1% of cases in the sample, but this was not included in the graph and generated further questions from reporters.

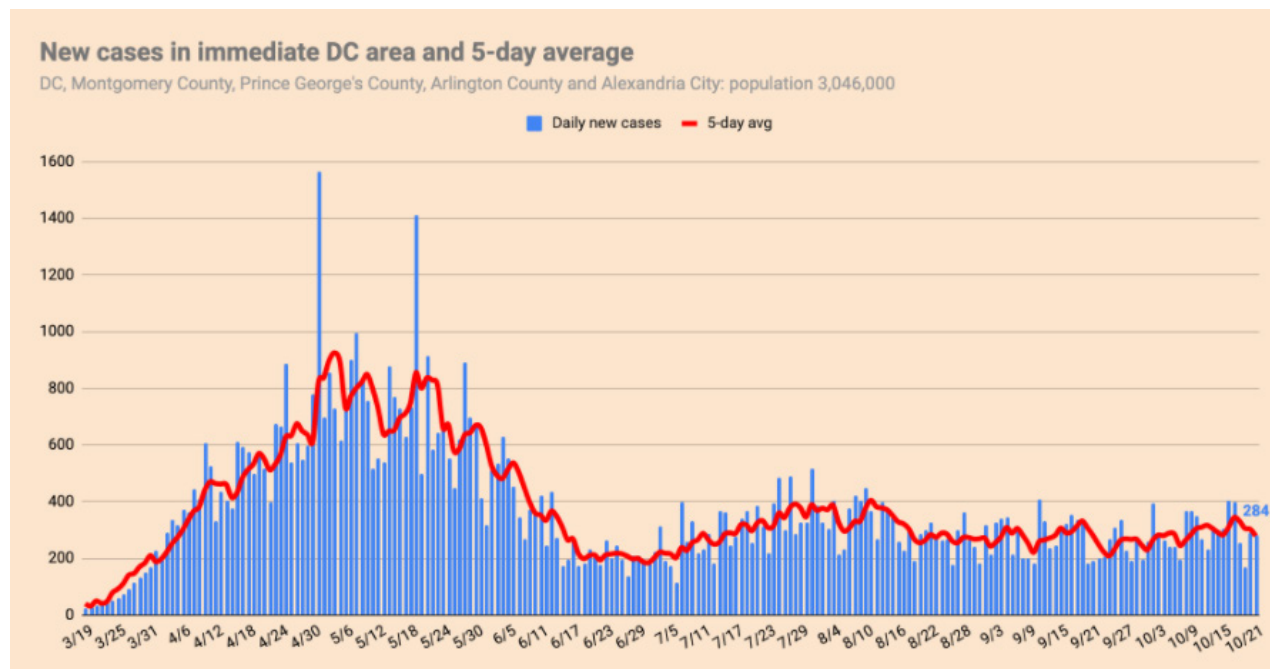
D.C. Metro Area Data Challenge

A clear need for the District's pandemic response is public data for the D.C. metro region as a whole. The District is part of a wider, highly connected metropolitan area with borders between the District and Maryland that are not meaningful in terms of how residents live their lives and thus how the COVID-19 virus can spread. The pandemic's spread in surrounding counties, such as Prince George's in Maryland or Fairfax in Virginia, can affect the wellbeing of District residents and surrounding jurisdictions pandemic reopening policies also affect the pandemic in the District. District residents use hospitals and laboratories in Maryland and Virginia who in turn also use hospitals and labs in the District. Analyzing trends in hospitalizations and hospital capacity for the region makes more sense than simply looking at hospitals in the District in isolation.

Despite the clear need for data for the D.C. metro region, there is no website that adequately aggregates pandemic data for the D.C. metro region that we have identified to date. The DC Line daily newsletter

presents a helpful graph of new cases over time in the District and bordering jurisdictions, with a line indicating a 5-day average, as seen below in Figure 16.³⁹ The DC Line currently does not include Fairfax County and jurisdictions that do not directly border the District which the District may want to include for DC metro analysis.

Figure 16: The DC Line Graph of New Cases in the District and Bordering Jurisdictions



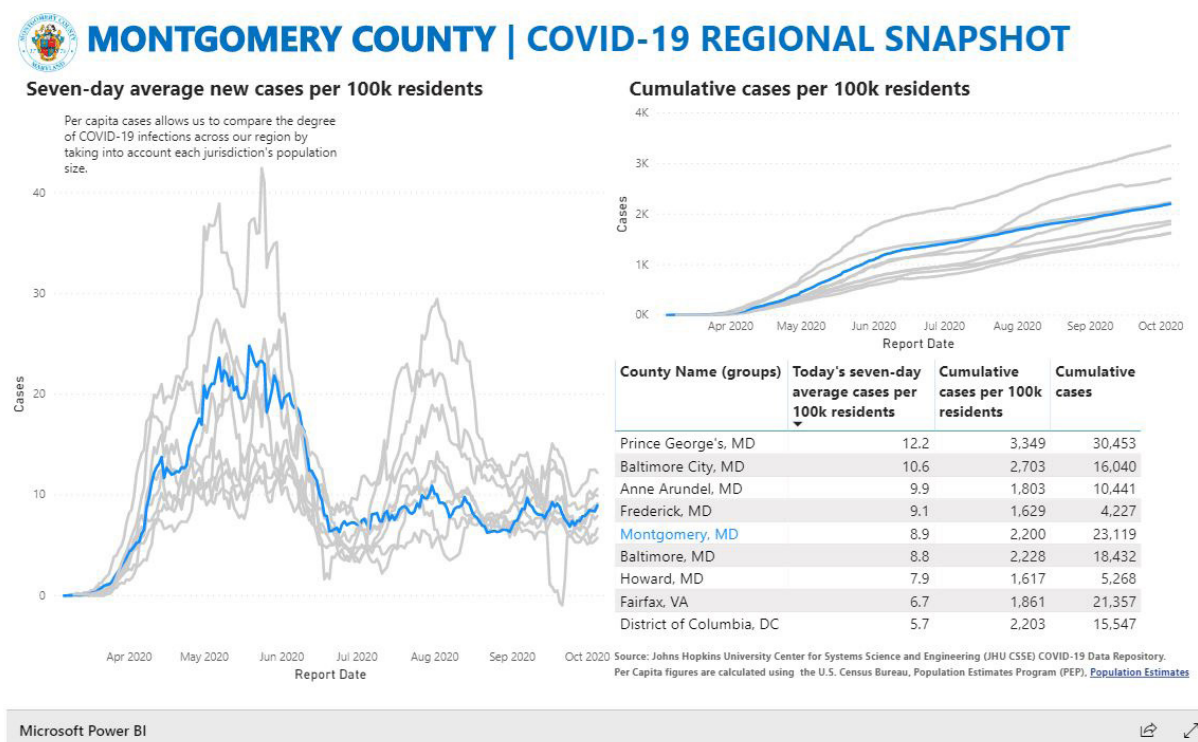
Source: The DC Line Newsletter on 10/21/202: <https://mailchi.mp/434dd6765582/district-links-labor-panel-ruling-could-disrupt-dcs-elementary-school-reopening-plans-homicides-up-17-over-same-time-last-year-and-more>

In terms of official data, Montgomery County presents a [regional snapshot](#) of the pandemic, captured in Figure 17 below.⁴⁰ On their regional snapshot, Montgomery County includes Baltimore City and other counties in Maryland, but the only Virginia jurisdiction included is Fairfax County.

³⁹ <https://thedcline.org/newsletter/>

⁴⁰ <https://www.montgomerycountymd.gov/covid19/data/#regional-snapshot>

Figure 17: Montgomery County Regional Snapshot of COVID-19



Source: Screenshot on 10/6/2020 of Montgomery County's COVID-19 Regional Snapshot: <https://www.montgomerycountymd.gov/covid19/data/#regional-snapshot>

That said, at the time of writing, the Montgomery County website does not give the total number of new cases for the D.C. metro region. Instead, it presents new case data per county and the District without providing aggregate numbers. This serves as a comparison among counties rather than providing a sense of the region as a whole.

The D.C. area's geographic position across three states and multiple counties translates into fragmented data online. Data often is presented only at the state level, diluting the D.C. metro area pandemic data with more distant counties. On most websites that offer either data at the state or county level or both, a user must switch back and forth between data for Maryland, Virginia, or the District. The websites that do present data for the D.C. area do not include the same list of jurisdictions.

The following is a list of the websites that offer some regional COVID-19 data:

- **The DC Line Newsletter**

<https://thedcline.org/newsletter/>

In each newsletter, The DC Line presents an updated graph of total new cases with 5-day average in the immediate D.C. metro area.

- **Montgomery County Regional Snapshot**

<https://www.montgomerycountymd.gov/covid19/data/#regional-snapshot>

Montgomery County lists new cases per 100,000 residents and cumulative cases by jurisdiction for many jurisdictions in the D.C.-Baltimore metro area.

- **The Metropolitan Washington Council of Governments COVID-19 Dashboards** <https://www.mwcog.org/about-us/covid-19/covid-19-dashboards/>

The Metropolitan Washington Council of Governments compiled the COVID-19 dashboards for D.C. region counties and the District.

- **The Washington Post District, Maryland, and Virginia COVID data page** <https://www.washingtonpost.com/graphics/local/dc-maryland-virginia-coronavirus-cases/>

The Post reports new cases and deaths, testing, positivity rates, and hospitalizations per 100,000. It is also possible to see a ranking of counties/cities with the highest number of rates of cases and deaths. The data comes from The COVID Tracking Project.⁴¹

- **The New York Times Coronavirus Metro Areas page** <https://www.nytimes.com/interactive/2020/04/23/upshot/five-ways-to-monitor-coronavirus-outbreak-us.html>

The New York Times publishes data on metro areas throughout the U.S. Users can select the Washington, D.C., region to see daily new cases and new deaths as a 7-day moving average. Users can also compare the D.C. region's average daily cases for the last two weeks per 100,000, its week to week change in the number of cases per 100,000, and cumulative cases per 100,000 compared to other metropolitan regions. The webpage cites the D.C. metro area as having 6.3 million people. However, it is not clear which surrounding counties in addition to the District are included.

The lack of national standards is reflected in the lack of standards across the D.C. metro region for reporting data. The same data point can be reported in different ways. In Figure 18, we compare new case reporting, a basic indicator, for the District and bordering counties.

⁴¹ The COVID Tracking Project, *The Atlantic*, See: <https://covidtracking.com/>

Figure 18: Comparison of New Case Reporting for D.C. and Bordering Counties

D.C. Reopening Metrics Page ⁴²	Montgomery County Data Dashboard ⁴³	Prince George's COVID19 Dashboard ⁴⁴	Alexandria COVID-19 Cases and Fatalities ⁴⁵	Arlington County COVID-19 Dashboard ⁴⁶	COVID-19 Case Data for Fairfax Health District ⁴⁷
New confirmed cases per 100,000 as a 7-day average	New confirmed cases per 100,000 as a 7-day moving average	Weekly new case counts	New cases and a 7-day moving average	Daily new case count (confirmed and probable) by test report date and weekly new cases by symptom onset date	Daily new case total and weekly new confirmed cases by symptom onset date

Source: ODCA Analysis of Various Websites

Only Montgomery County and the District are reporting new cases in the same way. This presents a challenge for understanding the pandemic in the D.C. area as a whole and for creating a D.C. metro area dashboard. DC Health could consider working with selected counties in Maryland and Virginia to find a solution that would allow the public to see COVID-19 indicators for the D.C. metro area as well as drill down to the county/District level.

⁴² <https://coronavirus.dc.gov/page/reopening-metrics>

⁴³ <https://www.montgomerycountymd.gov/covid19/data/>

⁴⁴ <https://princegeorges.maps.arcgis.com/apps/MapSeries/index.html?appid=82fa5c47b1f542849ca6162ab1564453>

⁴⁵ <https://www.alexandriava.gov/performance/info/dashboard.aspx?id=114883>

⁴⁶ <https://data-dashboard.arlingtonva.us/covid>

⁴⁷ <https://www.fairfaxcounty.gov/covid19/case-information>

Conclusion

The District can be proud that we are considered a national leader in COVID-19 data reporting, and we want to recognize the hard work this takes. When we started this project, we noted several ways the District could improve its reporting practices. As the weeks progressed the District made significant efforts to increase and improve data reporting. We were encouraged that the District is already collecting data that can be used to expand and improve the District's current COVID-19 reporting. We commend the Bowser Administration for this progress and encourage continued efforts to improve transparency to help the public understand the pandemic in the District and in the wider D.C. metropolitan region. We hope our efforts to compare the District's public reporting to national best practices and practices in other jurisdictions, as well as to highlight new data issues that are on the horizon, will assist in continued improvement. We know that not every improvement we suggest can be immediately implemented, but we hope the District will consider each proposal and work to quickly expand clear reporting of essential COVID-19 data on the website.

As indicated at the outset we have initiated an audit of the quality and completeness of the District's data and hope that this too will provide additional resources to deliver accurate and effective data to help decision makers and the public address the pandemic.

Summary of Recommendations

1. DC Health should work toward reporting the following indicators:
 - a. COVID-19-like illness and flu-like illness counts from emergency departments.
 - b. Time from specimen collection to isolation of cases.
 - c. New infections of health care workers not confirmed to have been contracted outside of the workplace.
 - d. Percentage of people wearing masks correctly in public indoor spaces if possible.
 - e. Percentage of new cases epidemiologically linked to at least one other case, stratified by whether part of known outbreak or not.
2. DC Health with OCME is already collecting and should publicly report new probable and confirmed deaths, both each day's count and per capita rates, on the District's COVID-19 data webpage.
3. DC Health should publish new case counts on the District's COVID-19 data webpage and in the downloadable data and should more explicitly define how new case counts are calculated.
4. DC Health should develop a way to report on antigen testing on the COVID-19 data webpage, including test counts, positive results, and the positivity rate.
5. DC Health should expand reporting on demographic data, including reporting reopening metrics stratified by demographic data where feasible and relevant.
6. DC Health should revise the contact tracing interview completion rate to capture a shorter, more meaningful timeframe and consider reporting on the timeline for the different steps from testing to contact tracing.
7. DC Health should improve congregate facility reporting to include:
 - a. Reporting cases and deaths by most recent week as well as cumulative data for congregate facilities.
 - b. Expanding reporting to include all nursing homes; assisted living facilities; and individual homeless shelters.
 - c. Reporting outbreaks at any essential workplaces that DC Health has identified.
8. DC Health should include the reopening metrics data, new cases data, and more demographic stratification data in downloadable data.
9. DC Health should add a tab to the excel downloadable data with a data guide defining each data point and explaining how it was collected.
10. DC Health should report what population figures it is using for any metrics, e.g. the District population and demographic group population.
11. DC Health should explain any stark changes in trends in graphs, potentially including the explanation below the graph, space allowing, and in the Reopening Metrics Data Notes and in the User Guide for Data Visualizations.

Appendix A

Available D.C. COVID-19 Data

The District is publishing data on the District's COVID-19 website: <https://coronavirus.dc.gov/>

District's COVID-19 Reopening Metrics page:

The new Reopening Metrics page provides:

- The most recent data per metric, color coded by which Phase threshold is met.
- A three-Phase reopening threshold for each metric.
- Graphs of each metric over time.
- [Reopening Metric Data Notes](#).

District's COVID-19 Data Webpage COVID-19 Surveillance page: <https://coronavirus.dc.gov/data>

The COVID-19 data webpage gives basic cumulative information on testing, positive cases, and deaths. It also provides:

- **Downloadable data.** There is a link to download an excel file with more data.
- **Data visualizations.** Viewers must scroll down to see a series of graphs showing:
 - Cumulative testing, case and death numbers, district-wide and by ward, neighborhood, demographic group.
 - Hospitalization and bed availability.
 - Ventilator use and availability.
- [User Guide to Data Visualizations](#)

Other data:

- [Public Safety Agency Data](#)
- [Human Services Agency Data](#)
- [DMV Agency Data](#)
- [Hospital Status Data](#)

Situational Update: <https://coronavirus.dc.gov/> (at the top of the page)

The District also publishes the most recent COVID-19 situational update from the Mayor and provides the link at the top of the District's coronavirus webpage.

Open Data DC- Coronavirus: <https://opendata.dc.gov/pages/coronavirus>

The District is also publishing some datasets that underlie the District's COVID-19 data homepage <https://coronavirus.dc.gov/data> although at the time of writing, the reopening metrics datasets were not updated.

Appendix B

Comparison Between Resolve to Save Lives Essential Indicators and District Reported Data

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
1. New confirmed and probable cases and per capita rates by date with 7-day moving average. ■ With breakdown by age, sex, race, ethnicity, and ZIP code. ■ Outbreaks vs. community.	Daily case rate: 7-day average of new cases per 100,000. Cumulative cases by age, gender, race, ethnicity, ward, neighborhood.	No new case counts, just per capita rate⁵¹. No breakdown by age, sex, race, ethnicity, and ZIP code.	Daily new cases reflect the proportion of the outbreak captured by surveillance systems. Cases give a sense of the size of the epidemic/outbreak in a given area. Per capita rates are more useful when comparing locations with different population sizes.
2. Percentage of new cases epidemiologically linked to at least one other case, by date ■ With breakdown by age, sex, race, and ethnicity. ■ Outbreaks vs. community.	Not reported.		Linked and unlinked cases are an indicator of community transmission and of the strength of the response. The higher the percent of linked cases, the more robust the surveillance and response system and the lower the risk to the community at large.

48 Tracking COVID-19 in the United States, See: <https://preventepidemics.org/covid19/resources/indicators/>.

49 D.C. government Coronavirus data webpages, See: <https://coronavirus.dc.gov/data> and <https://coronavirus.dc.gov/page/reopening-metrics>.

50 Data Dictionary of essential and recommended information for states and counties to publicly report (DRAFT), Resolve to Save Lives, July 21, 2020, See: <https://preventepidemics.org/wp-content/uploads/2020/07/Data-Dictionary.pdf>.

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Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
3. New screening (e.g. antigen) and diagnostic (e.g. PCR) testing per capita rates (per 1,000 people) by date with 7-day moving average. ■ With breakdown by age, sex, race, and ethnicity.	Diagnostic tests conducted as a 7-day average per 1 million people. Cumulative test counts available by ward and by neighborhood.	No breakdown by age, sex, race, and ethnicity.	Testing rates are a main driver of case detection, and differences in testing rates are important to consider when comparing incidence in different groups or locations.
4. Percent of individuals testing positive on PCR, antigen and combined tests by date, with thresholds, with the 7-day moving average	Test positivity rate from RT-PCR tests (7-day average).	No reporting of antigen test data.	Test positivity is an important indicator of the extent of testing being performed in relation to the amount of disease in a given area. When test positivity is low, this indicates that locations are testing enough to find all cases.
5. COVID-19-like illness (CLI) and influenza-like illness (ILI) trends from emergency departments.	Not reported. ⁵²		Syndromic surveillance indicators are used to monitor trends in outpatient and emergency visits and can be used to detect a rise in COVID-19 cases before a rise in confirmed cases occurs.

⁵² For influenza-like illnesses: Trends by week at <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
6. COVID-19 daily hospitalization rates per capita with 7-day moving average. ■ With breakdown by age, sex, race, and ethnicity.	Percent COVID-19 patients among the total number of hospitalized patients (acute inpatient, 7-day average). Daily counts of COVID-19 patients in D.C. hospitals and in the ICU.	No breakdown by age, sex, race, and ethnicity.	COVID-specific hospitalization rates reflect the proportion of the population that has a severe enough case of COVID-19 to require inpatient treatment, and important for healthcare system preparedness and impact of COVID on specific populations. Rates allow for comparisons across geographies of different sizes.
7. Percentage of licensed beds occupied by suspected and confirmed COVID-19 patients.	Percentage utilization of available beds without surge at acute care hospitals.		The percentage of hospital beds filled by COVID-19 patients is important to understand the impact on the health system and to plan for surge.

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
8. List of outbreaks (to extent legally permissible) in congregate facilities (long-term care, homeless shelters, correctional facilities) and essential workplaces with cases and deaths in residents and staff. ■ Cumulative and most recent week.	Cumulative cases and deaths broken down by staff and residents for skilled nursing facilities, Saint Elizabeth's Hospital, correctional facilities (DOC, DYRS), and homeless shelters. Some D.C. government essential worker cases (FEMS, OUC) and cases and deaths (MPD, CFSA, DMV).	Does not include assisted living. Individual shelters not listed. While some agencies may not have had deaths of staff (FEMS, OUC) or residents (DYRS), they still did not report the metric on death.⁵³	Long-term care and congregate facilities are disproportionately impacted by the pandemic and a major source of COVID-19 deaths. Early detection of outbreaks and rapid response to them can greatly impact overall COVID-19 death rates.
9. New COVID-19 confirmed and probable deaths and per capita rates with 7-day moving average. ■ With breakdown by age, sex, race, ethnicity, and ZIP code. ■ Outbreaks vs. community.	Cumulative deaths, including by age, sex, race, and ethnicity.	No daily death counts (as a 7-day moving average). No per capita death rates.	Deaths reflect disease severity, access to care, healthcare-seeking behavior, diagnostic capacity, and the effectiveness of treatment. It is important to understand death rates in different subsets of the population in order to allocate resources and target interventions.

⁵³ Possibly, if there have been no deaths, there would be no data, but the number of deaths should be reported as zero for those agencies.

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
10. Diagnostic (e.g. PCR) test turnaround time (specimen collection to test report), by week. ■ With breakdown by age, sex, race, and ethnicity. ■ long-term care facility vs. community	Mean test turnaround time, 7-day average.	No breakdown by age, sex, race, and ethnicity.	Timely test results are critical to timely isolation of cases and quarantine of contacts. Delayed test results can render test-based disease control strategies ineffective.
11. Time from specimen collection to isolation of cases, by week. ■ With breakdown by age, sex, race, and ethnicity. ■ long-term care facility vs. community	Not reported.		In order for testing to be an effective part of the Box-it-in strategy, mechanisms must be in place to notify cases of their test results and the need for isolation. This will minimize the number of potentially exposed contacts and interrupt ongoing secondary transmission from an infected case who has not been notified of test results.
12. Percentage of cases interviewed for contact elicitation within 3 days of specimen collection, including all people who live in the jurisdiction, by week. ■ With breakdown by age, sex, race, and ethnicity.	Percentage of D.C. resident positive cases interviewed within 3 days of case import into contact tracing system, 7-day average.	No breakdown by age, sex, race, and ethnicity.	Timely identification of contacts is essential to limit potential disease transmission. Cases should be interviewed soon after they are tested, and a timely test result is obtained.

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
13. Percentage of new cases from among quarantined contacts, by week. ■ Outbreaks vs. community.	Percent of new cases from quarantined contacts, 7-day average.		The percentage of new cases linked to already-known cases can serve as a measure of the contact tracing effectiveness and reflect on the degree of ongoing uncontrolled community transmission.
14. New infections among health care workers not confirmed to have been contracted outside of the workplace, by week. ■ With breakdown by age, sex, race, and ethnicity.	Not reported. ⁵⁴		Infections among health care personnel reflect appropriate IPC practices and use of personal protective equipment, strength of the health workforce, and need to be prevented to minimize harm to vulnerable populations in hospitals, long term care facilities and direct patient care settings.

⁵⁴ The webpage does include cumulative cases and deaths for Saint Elizabeth's Hospital (psychiatric), but it does not include any other D.C. area hospitals, See: <https://coronavirus.dc.gov/page/human-services-agency-covid-19-case-data>

Essential Indicators for Effective COVID-19 Response ⁴⁸	Information D.C. Reports ⁴⁹	Information D.C. is Not Reporting at https://coronavirus.dc.gov/data	Resolve to Save Lives' Rationale ⁵⁰
15. Percentage of people wearing masks correctly in public settings (e.g., mass transit, shopping), based on direct observation or security camera analysis, by a standard, consistent method, by week. ■ With breakdown by location type (e.g. indoor vs outdoor)	Not reported.		Mask wearing and use of cloth face coverings have been shown to reduce transmission of COVID-19. Measuring adherence can guide need for public messaging and assist in modeling disease transmission projections.

Agency Comments

On November 13, 2020, we sent a draft copy of this report to DC Health for review and written comment within 72 hours (weekend excluded) and asked that DC Health address each recommendation we made in the report. DC Health responded with comments on November 18, 2020. Agency comments are included here in their entirety, followed by ODCA's response.

DCHEALTH AUDIT

General Comments

Page 2 – The data underlying the original seven reopening metrics were released publicly in July. When the reopening metrics were updated, one metric was removed and seven more were added. The data underlying the seven additional metrics were released publicly on November 13, 2020.

Recommendations

1.
 - a. DC Health regularly monitors CLI and ILI from emergency department visits yet these have not been presented publicly. These are based on chief complaints rather than diagnoses, and may not necessarily reflect diagnoses of COVID or Influenza. We can work with the team to develop visualizations and documentation to help interpret these results. DC Health publishes a flu dashboard incorporates ILI.
 - b. It is correct that we do not report this and we can explore this metric.
 - c. We can explore this metric.
 - d. There is currently an outdoor mask audit that is underway. Data will be presented as they become available.
 - e. We can explore this metric.
 2. The OCME tests all decedents for COVID-19, so all deaths are confirmed.
 3. DC Health can work with OCTO to provide the net new cases each day.
 4. The number of antigen tests have recently begun to increase, and we are currently working on developing probable (antigen) case metrics.
 5. On our surveillance data page (<https://coronavirus.dc.gov/data>), DC Health reports COVID-19 cases, case rates, tests, and lives lost by Ward; cases and tests by neighborhood; cases and lives lost by age and gender; case rates by age; and cases and lives lost by race/ethnicity. The purpose of reopening metrics is to monitor key measures across four categories and provide a simple trend to show progress through thresholds. We believe the public reporting of multiple demographic stratifications will detract from the purpose, but can consider a small number of metrics where this could be beneficial and potential avenues for dissemination.
 6. For this metric, the purpose is to engage the community and highlight and encourage their role in the contact tracing process. DC Health agrees that a shorter turnaround for interviewing positive cases is ideal, and will consider shortening the current timeline of 3 days from report to DC Health. We will need to take into consideration continuity with the current metric, current thresholds, and communication around a potential change.
- DC Health has been conceptualizing a way to publicly report more of the process data around contact tracing, including numbers and percent of cases and contacts who are successfully reached, interviewed, and/or lost to follow-up. This could include average duration of each step of the process.
7. DC Health currently presents the cumulative number of cases and deaths for staff and residents at Skilled Nursing Facilities (SNFs), weekly. We have not presented the new cases because the numbers are relatively small and may result in identification of residents and staff. We can provide a similar table for data from Assisted Living Residences (ALRs). Data from homeless shelters has been reported by

Department of Human Services. We recognize that there may be challenges to collecting these data from shelters, but we can engage with DHS to collect and report. DC Health does not release data identifying businesses or types of business.

8. Updated underlying data for all current reopening metrics were released publicly on November 13, 2020 (opendata.dc.gov). Underlying data for all sheets within the dashboard on the surveillance data page (<https://coronavirus.dc.gov/data>) are available by clicking the download icon in the upper right corner of the dashboard, and includes the data that are visualized by age, gender, race, ethnicity, Ward, and neighborhood.

9. We can work with OCTO to create a data guide to define each of the data points. There are data from other agencies, so this would require coordination with the other agencies.

10. We provide the reference to the total population counts in the data guide but can also add the total numbers so that it is clear.

11. In the Data Notes for the reopening metrics (located just above the summary table, via a link (https://coronavirus.dc.gov/sites/default/files/dc/sites/coronavirus/page_content/attachments/Reopening_Metrics_Data_Notes.pdf)), more detailed information on Data Sources, Data Notes, and Metric Considerations are included. DC Health can update these notes as well as those in the User Guide for Data Visualizations to include more description/context around stark changes in the graphs.

ODCA's Response to Agency Comments

Given the current surge in COVID-19 cases, we appreciate that DC Health took the time to review and comment on this special report. We also are encouraged that DC Health is open to implementing or exploring all of our recommendations.

This report was revised in response to the comments from DC Health. We also updated the report since DC Health reviewed it to reflect the Resolve to Save Lives report issued on November 16, 2020.

We recognize that DC Health has posted a good bit of data and is continuing to post on a few different websites. We hope that <https://coronavirus.dc.gov/data> can serve as the primary online hub with links to relevant data that is not directly featured on the website.

DC Health's openness and ability to enhance its processes during this rapidly evolving and history-making pandemic defines an agency that has emerged as a national model.

About ODCA

The mission of the Office of the District of Columbia Auditor (ODCA) is to support the Council of the District of Columbia by making sound recommendations that improve the effectiveness, efficiency, and accountability of the District government.

To fulfill our mission, we conduct performance audits, non-audit reviews, and revenue certifications. The residents of the District of Columbia are one of our primary customers and we strive to keep the residents of the District of Columbia informed on how their government is operating and how their tax money is being spent.

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