

BLACK EQUITY COALITION

# MISSING OUR SHOT: COVID-19 VACCINE EQUITY IN ALLEGHENY COUNTY

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## EXECUTIVE SUMMARY

In Allegheny County, as seen in other parts of the country, COVID-19 has impacted Black populations disproportionately. Nationwide, COVID-19 deaths among Black people have occurred at almost twice the rate of white people; hospitalizations have been nearly three times higher for Black people than white people across the country. In light of these inequities, a group of concerned colleagues came together in April 2020 to discuss relevant issues and push for reporting of COVID-19 data by race in Allegheny County to better understand and address whether the impact on Black communities at the national level was present for our area. Thus, the Black Equity Coalition (BEC) was formed. The BEC is broken down into working groups, each focusing on a different area, including data, community engagement, and community health.

The BEC Data Working Group brings together individuals working in public health, medicine, philanthropy, and business development, with those involved with data science, access, and visualization, to support a shared understanding of the availability and meaning of data as it applies to the goals of the BEC. However, without adequate racial, ethnic, and socioeconomic data from the state and local authorities, it is not possible to appropriately examine vaccination rates, gaps, and opportunities for intervention. For instance, as of the time of this report, no geographic data on vaccine distribution was available for municipalities or neighborhoods within the county or within municipalities or neighborhoods by race, which is paramount in understanding where vaccine distribution efforts should be directed. The data tracking capacity, infrastructure, and political will are reasons underlying the lack of complete and transparent data for racial, ethnic, and underserved communities in COVID-19. Unfortunately, despite past efforts to ameliorate disparities and increase transparency, an equitable approach has not been implemented for the provision of vaccination data or vaccine distribution efforts.

This report highlights the disparities in Allegheny County related to early vaccine rollout by race and provides some additional insight on equity considerations for the distribution phase and strategies along with essential work status. For vaccine distribution data, Allegheny County Health Department (ACHD) is reliant on data collected by the Pennsylvania Department of Health (DOH) and has been unable to obtain an extract from the State Immunization Information System. The BEC Data Working Group and the county have asked the state to make this data available as capturing data on vaccine recipients' race and geography, the geographic disparity in vaccine distribution, cross-tabulations of data by race and age, and race and date of vaccination are essential. The limitations on sharing daily vaccine data appear addressable considering how the state shares COVID-19 testing and case data.

The BEC recommends both short- and long-term changes. Given the importance of vaccine data, we strongly recommend three short-term actions. The PA DOH should:

- share a daily extract of immunization data with Allegheny County;
- make geographically detailed vaccine data available to the County including race as a variable, so that it can be geocoded into small area geographies (ideally census tracts); and
- make data available at a county level with race and age variables intersected.

Over the long-term (and beginning as soon as possible), PA DOH, ACHD, and other stakeholders should improve public-sector data systems and processes to collect and provide high-quality equity-inclusive data in a timely fashion, and in formats that make it easy to analyze and integrate with other data systems. Any forthcoming improvements into public health ecosystems and infrastructures must also incorporate values such as health, equity, and racial justice. In this process, the BEC maintains its commitment to working with public offices, communities, and institutions to ensure equitable vaccine rollout and management of the public health crisis.

## SECTION ONE

# COVID-19 DISPARITIES IN ALLEGHENY COUNTY

In Allegheny County, as seen in other parts of the country, COVID-19 has impacted Black populations disproportionately. Nationwide, COVID-19 deaths among Black people have occurred at almost twice the rate of white people; hospitalizations have been nearly three times higher for Black people than white people across the country.<sup>1</sup> In light of these inequities, a group of concerned colleagues came together in April 2020 to discuss relevant issues and push for reporting of COVID-19 data by race in Allegheny County to understand whether the impact on Black communities at the national level was present for our area. Thus, the Black Equity Coalition (BEC) was formed.

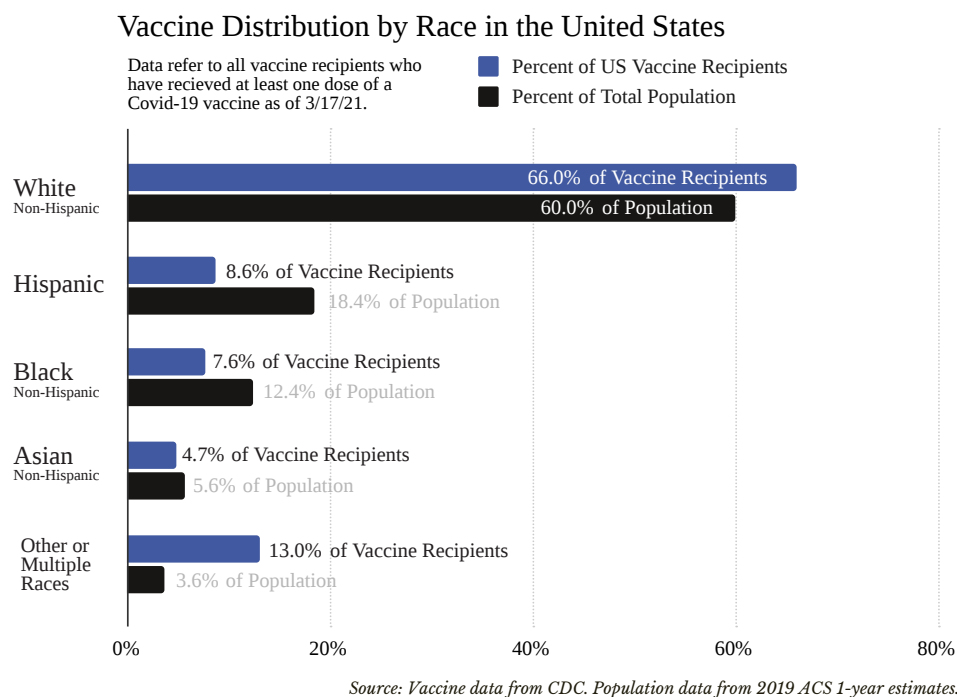
The BEC is broken down into working groups, each focusing on a different area, including data, community engagement, and community health. The Data Working Group brings together people working in public health, philanthropy, and business development, with those involved with data access and visualization, to support understanding the availability and meaning of data as it applies to the goals of the BEC.

The group's activities include the creation of a data dashboard that is updated daily, illustrating data on topics such as per-capita COVID-19 disparities over time in Allegheny County by race, in support of the Coalition's strategic priorities. The data shows that at one point during the pandemic, the COVID-19 rate among Black people in Allegheny County was as high as 3 times the rate of white people. Hospitalizations among Black people have been as high as 7 times the rate of white people.

<sup>1</sup>Centers for Disease Control and Prevention. US Department of Health and Human Services. (2021) "Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity". March 12. [www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html](https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html)



The BEC has utilized these insights to strategize improved testing, community partnership, and outreach, and more appropriate contact tracing, in addition to the connection with health and social services. The group has worked with local and state health departments and with policymakers to prioritize equity, improve access, and limit the spread of COVID-19 in Allegheny County's populations that have been overburdened and historically and contemporarily disinvested in by the government and other entities. Based on this work, the BEC anticipated that future actions, including vaccine rollout, would demonstrate a commitment to equity in practice. With death and hospitalizations due to COVID-19 occurring disproportionately among Black people, it is important to consider equity in the vaccine rollout. However, the data so far suggest that Black Americans are underrepresented among vaccine recipients, despite relatively low rates of vaccine hesitancy.<sup>2</sup>



However, without adequate racial, ethnic, and socioeconomic data from local authorities, we cannot appropriately identify vaccination rates and gaps. For instance, as of the time of this report, no geographic data on vaccine distribution was available for municipalities or neighborhoods within the county or within municipalities or neighborhoods by race, which is paramount in understanding where vaccine distribution efforts should be directed.

<sup>2</sup>Summers, Juana. (2021) "Little Difference in Vaccine Hesitancy Between White and Black Americans, Poll Finds". npr. March 12. <https://www.npr.org/sections/coronavirus-live-updates/2021/03/12/976172586/little-difference-in-vaccine-hesitancy-among-white-and-black-americans-poll-find>

There have been political and infrastructural reasons behind the lack of complete and transparent data for racial, ethnic, and underserved communities in COVID-19 overall. These issues have not disappeared with the reporting of vaccine data, but an intentional focus on equity from leadership would help to make progress. Unfortunately, despite past efforts to ameliorate disparities and increase transparency, an equitable approach has not been implemented for vaccination and the provision of vaccination data.

Ongoing processes and data challenges demonstrate that there is substantial work to be done to fully integrate equitable practices into the data infrastructure systems, the management of COVID-19, and the distribution of vaccines. The purpose of this report is to highlight existing disparities in the early vaccine rollout in Allegheny County and some of the ongoing challenges with data infrastructure and vaccine distribution. Finally, the report will discuss the opportunities and recommendations to encourage an equitable data-to-action response for moving forward.



## SECTION TWO

# DISPARITIES IN THE EARLY VACCINE ROLLOUT

### Background on Distribution Phases and Eligible Recipients

In order to assure a comprehensive approach to understanding vaccine distribution data by race, the BEC began to research and advocacy efforts in the fall of 2020 even prior to the first FDA emergency vaccine authorization approval. Specifically, the BEC began to research the State Immunization Information System (SIIS) in order to advocate for vaccine data accessibility, meet with PA state health department officials, and formulate data requests. Members of the Data Working Group also shared use cases with the Pennsylvania Department of Health (DOH) to connect data requests to potential outcomes. This advocacy, and relationship building, resulted in the DOH making vaccination data by race, age, gender, and ethnicity available, first at a statewide level through an interactive dashboard, and sometime later, at a county level of geography. The state also shared weekly data on vaccination shipments by the provider by county, including distributions to nursing and personal care homes.

The initial rollout of the vaccine and criteria for prioritization for Pennsylvania was based on guidance provided by the Centers for Disease Control and Prevention (CDC) and is split into four Phases: 1A, 1B, 1C, and 2.<sup>3</sup> Initially, Phase 1A included health care workers (defined broadly), nursing home residents and staff, and those aged 75+. On February 9th, the Commonwealth of Pennsylvania opened Phase 1A to those aged 65+ and those aged 16-64 with high-risk conditions such as cancer, chronic kidney disease, hypertension and type 2 diabetes.

<sup>3</sup>See PA state plan COVID-19 Interim Vaccination Plan V6.0 (pa.gov).

Shortly thereafter, Allegheny County Health Department (ACHD) opened their vaccine to those aged 65+, but not to 16-64 with high risk conditions. On March 19th, following advocacy from the BEC, ACHD opened their supply to people aged 50-64 who have high risk conditions (though this was still not fully in line with state recommendations). Finally, On March 24th, ACHD announced that it would vaccinate those 16-64 with high-risk conditions according to state recommendations.

Of note is that Allegheny County Health Department vaccine distribution makes up only 10% of Allegheny's vaccine supply. Other vaccine distribution providers and sites include hospital systems, commercial pharmacies, and dialysis centers.<sup>3</sup> At the time this report was written, PA was in Phase 1A distribution.

### **Vaccine Distribution Disparities by Race and Data on Age and Essential Worker Status**

BEC takes a data-to-action approach to understand key issues impacting Black communities from an equity lens which allows for immediate feedback to decision-making stakeholders and communities. First, we review data by age considering that CDC and state guidelines for Phase 1A are heavily based on age criteria.

Black residents make up 11% of the state of Pennsylvania's population and 7.2% of residents over the age of 65. Similarly, Black residents make up 12.9% of Allegheny County's population at large but only 9.4% of residents over the age of 65 (see figure below).<sup>4</sup>

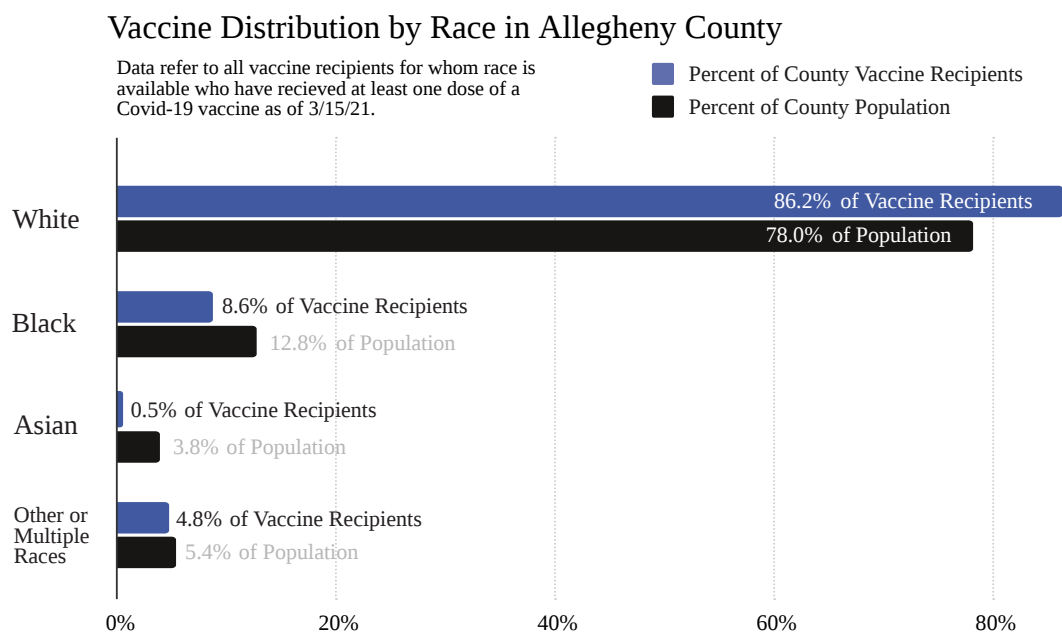
	<b>Total Population</b>	<b>Black Residents as a Percent of Total</b>	<b>Population 65 and older</b>	<b>Black Residents as a Percent of 65 and older</b>
<b>Pennsylvania</b>	12,801,989	11.40%	1,454,753	7.20%
<b>Allegheny County</b>	1,216,045	12.90%	157,352	9.40%

<sup>4</sup>See details of PA vaccine providers and data at [COVID-19 Vaccine \(pa.gov\)](https://www.pa.gov/covid-19-vaccine).

<sup>5</sup>Missing race data is a significant issue among state-reported vaccine data: over a quarter (26%) of Allegheny County's vaccine recipients are reported as "unknown race" at the time of writing (3/15/21)



Black residents of Allegheny County make up 8.6% of all vaccine recipients for whom race data is available — including everyone who has received at least one dose. A relatively high percentage of those Black recipients are only partially — as opposed to fully — vaccinated. Specifically, only 6.8% of fully vaccinated recipients for whom the race is available are Black, whereas 9.4% of partially vaccinated recipients are Black. This likely suggests that more Black recipients received the vaccine later in the distribution (hence, they remain only partially vaccinated). Still, even the 9.4% of partial vaccinations that have been distributed to Black residents is almost certainly substantially lower than the proportion of qualifying residents who are Black, based on workforce and age demographics.

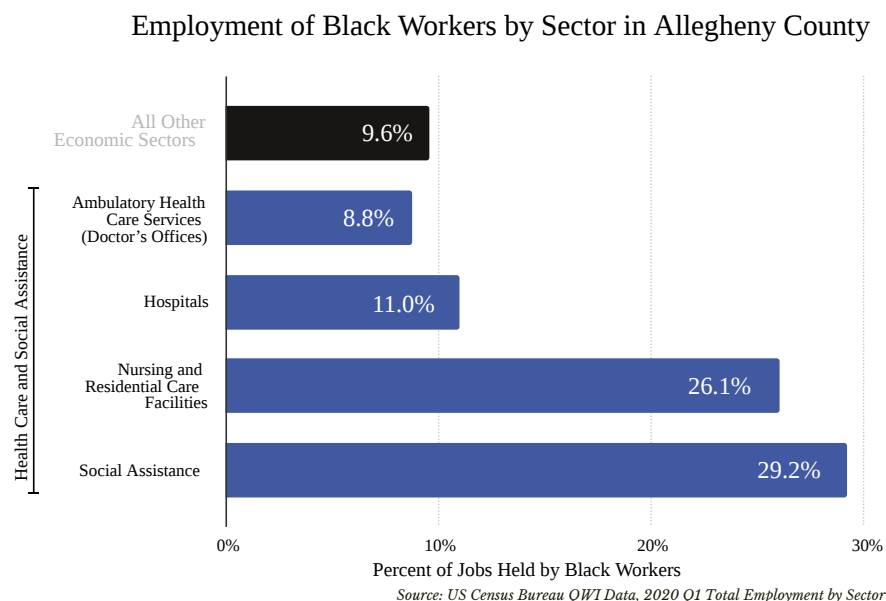


Source: PA Department of Health, accessed 3/15/2020. Note: 36,972 “unknown race” recipients not shown.

<sup>6</sup>Employment data come from the US Census Bureau’s Quarterly Workforce Indicators program and refer to Q1 2021.

Another priority for vaccine distribution in Phase 1A is long-term care facilities including nursing homes. According to the most recent data available at a county scale (from the 2010 Decennial Census), 13.3% of Allegheny County's nursing home and skilled nursing facility residents are Black. This is relatively high, considering that Black residents make up only 9.4% of the older adult population 65+. In addition, nursing home and skilled nursing facility staff are much more likely to be Black than workers in most other sectors. In Allegheny County, 26.1% of nursing home jobs are held by Black workers, compared to 10.7% of jobs overall.

Health care workers were also prioritized in Phase 1A, and a higher percentage of health care jobs in the county are held by Black workers compared to jobs in the economy at large.



Each bar represents the percentage of that sector's workforce that is made up of Black workers. Nursing/Residential Care Facility workers and Social Assistance workers are more than twice as likely to be Black as Allegheny County workers in general.

Health care and social assistance is a large employment sector in the state of PA, representing over a million jobs statewide and around 140,000 in Allegheny County specifically. And those jobs, both statewide and in the county specifically, are disproportionately held by Black workers.

That is to say: Black workers make up a greater share of health care employment than do Black workers in the economy at large. Health care jobs include employment at nursing homes and skilled nursing facilities, discussed above, which account for the part but now all of this concentration.



From the beginning of the pandemic, essential workers in many sectors have been a major population of interest, considering their employment excludes them from stay-at-home orders, and the percentage of essential workers is disproportionately Black. The hope is that as Phase 1B expands to other essential workers, the percentage of vaccines that are distributed to Black populations and people of color will be equitable compared to the percentage of the population represented as essential workers.<sup>6</sup>

<sup>6</sup>More data on essential workers in PA can be found at McGlasson, Mickey. (2021) "The Denominator is Essential: Considering the role of data in achieving vaccine equity". *Fourth Economy*. Jan 20. <https://www.fourtheconomy.com/post/vaccine-equity-data>.

## **Prioritizing Populations to Achieve Equitable Distribution**

When Pennsylvania enters Phases 1B and 1C of the distribution, the vaccine will be available to all “essential workers.” This refers to a wide swath of industries and professions, making it difficult to count or analyze the characteristics of those essential workers with specificity. There are, however, proxy measures that make it possible to *estimate* the characteristics of those essential workers. One such proxy comes from the state itself, through Pennsylvania’s previous business closure order (March/April 2020), which was well organized according to standard industry codes. If we use these classifications to define essential workers broadly, we find that essential jobs are disproportionately held by people of color throughout the state, as well as specifically in 61 of 67 counties, including Allegheny County.<sup>7</sup> (In Allegheny County, 52.1% of jobs held by white workers are essential, whereas 59.3% of jobs held by people of color (including Black workers) are essential). Overall, the diversity within essential worker status is partly due to the high percentage of Black employees in the health care and social assistance workforce. If we remove health care workers from the estimates, the rates of essential work are similar among the white workers and people of color, though jobs held by people of color are still slightly more likely to be essential both statewide and in Allegheny County specifically. The BEC hopes to contribute to an equitable distribution plan for essential workers in Phases 1B and 1C.



*<sup>7</sup>We use people of color (referring to all workers who list their race as anything other than white alone or who list their ethnicity as Hispanic/Latinx) here for reasons of data availability. In Allegheny County and the state at large, the largest specific racial/ethnic group among people of color are Black workers.*

## SECTION THREE

# ONGOING PROCESS AND DATA CHALLENGES

In addition to known disparities in vaccine distribution, ongoing data infrastructure challenges suggest that actions and outcomes do not fully match equity intentions. Early in the pandemic, the Pennsylvania Department of Health (PA DOH) and Allegheny County Health Department (ACHD) were not releasing testing and case data by race, but pressure and support from BEC members resulted in this data being made public first as a dashboard, and late in the summer, as record-level open data and accompanying BEC-produced data guide on the WPRDC's open data portal. The Data Working Group has also focused on encouraging public agencies to improve the reporting of data by race and ethnicity. Allegheny County now links COVID-19 testing data to records in its integrated data system and makes it a priority to ask about race as part of case investigations. Only 12% of positive COVID-19 case records in Allegheny County omit race, a figure much below the 37% statewide share.

The ACHD receives a daily extract from the state reporting system, PA-NEDSS, which enables them to link the data to the county data warehouse and add missing data on race and ethnicity. It also enables them to report on some geography other than ZIP codes. The state reports about 37% of this race data missing, but the county decreased it to 12% through this data linking process, and prioritizing the question as part of case investigations. This extract is how we were able to get the open data behind the dashboard. For vaccine distribution data, ACHD is reliant on data collected by the Pennsylvania Department of Health, and has been unable to obtain an extract from the State Immunization Information System. Our Data Working Group and the County have each repeatedly asked the state to make this data available. We are currently unable to answer questions about which vaccine providers are immunizing Black populations, and where these vaccinations are happening, which providers are capturing data on vaccine recipients' race and geography, the geographic disparity in vaccine distribution, and cross-tabulations of data by race and age, and race and date of vaccination.



## **Obtaining the Vaccine**

The rollout of the vaccine has been fragmented and highly uncoordinated. Vaccine allocations are given at the state level, and right now, there is no county-level vaccine distribution plan that is publicly available.

As it stands, many different providers, including pharmacies, health systems, and public health departments receive their own vaccine allocations to distribute at their existing locations, using their own registration and scheduling processes. This “system” largely privileges people with technological literacy, access to transportation, fast internet services, and connections to social networks with people able to assist in scheduling appointments. This inequitable “system” may be a contributing factor to the inequitable outcomes in receiving the vaccine.

Other states, such as West Virginia, have set up statewide registries to allow people to sign up for vaccinations and then to keep track of vaccine distribution. Currently, no central registry of recipients or other infrastructure exists to match eligible recipients to vaccine providers. Allegheny County Council and other local organizations involved with vaccine distribution efforts have supported such a registry in Pennsylvania.<sup>8</sup> Such a registry or other form of coordinated system would be an instrument for ensuring equity in distribution and making sure that people without access to the internet or people with lower levels of digital literacy were not left at a disadvantage. Instead, we are left with a “system” that reinforces inequitable access to the vaccine — and, therefore, inequitable protection from the virus.

## **"Unknown" Race Data**

Through Department of Health Secretary Levine's December 14, 2021 order, the state required that COVID-19 vaccine providers report race and ethnicity data to the Statewide Immunization Information System (SIIS) within 24 hours of administering the vaccine.<sup>9</sup> Despite this requirement, by February 12, 2021, the Department of Health admitted in a press release that “vaccine demographic reporting has thus far been incomplete.”<sup>10</sup>

<sup>8</sup>Bey, Jamil; Gilliam, Jerrel T.; and Lewis, Walter. 2021. “Three community leaders who led COVID vaccine events in Pittsburgh offer ‘one step in the solution to a wholly inequitable process’”. PublicSource. Essay. Feb 23. <https://www.publicsource.org/three-community-leaders-who-led-pittsburgh-covid-vaccine-events-discuss-equity-solution/>

<sup>9</sup>Pennsylvania Department of Health. 2020. Order Requiring Reporting of Data Related to Each Administration of an Immunization for COVID-19. Dec 14. <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/Vaccine%20Administration%20Reporting%20Order.pdf>

<sup>10</sup>Pennsylvania Department of Health. 2021. “Department Of Health Issues COVID-19 Vaccine Order To Help Expedite Vaccine Administration, Improve Accessibility For Seniors”. Press Release. Feb 12. <https://www.media.pa.gov/pages/health-details.aspx?newsid=1292>

The order from Acting Secretary of Health Alison Beam that accompanied that press release reiterated the requirement that vaccine providers collect and share that information with SIIS. It also included a section on enforcement that threatened to reduce or temporarily suspend vaccine providers' first doses if they failed to comply with the order.<sup>11</sup> Nonetheless, as of March 15, 16% of statewide vaccinations were reported without the race and ethnicity of the people that have been vaccinated. In Allegheny County since the beginning of March, reporting has improved. Without complete information about race in vaccine distributions, however, policy-makers, advocates, community organizations, health providers, and others are unable to accurately measure outcomes by race, ethnicity, and geography, and, as a result, are unable, to tailor interventions accordingly. Being able to do so is vitally important, especially considering the inequitable incidence of infection.

This ongoing lack of data statewide is a clear demonstration that measuring and targeting disparity in vaccinations is not a priority for some vaccine providers.<sup>12</sup> Additionally, recent media reports indicate that since the state required vaccine providers to collect race information, the state has focused on training and not on enforcement.<sup>13</sup> That suggests that providers not collecting race data have not been held accountable and that, despite the intention and rhetoric, fully obtaining race information on vaccine distribution has not been a priority.

## **Daily Vaccination Data**

A very limited set of county-level descriptive statistics from the State Immunization Information System is shared by the State Department of Health through its vaccine dashboard and State open data portal on a daily basis. This data includes counts of vaccinations, people vaccinated, and locations of vaccine providers.

<sup>11</sup>Pennsylvania Department of Health. 2021. *Order of the Acting Secretary of the Pennsylvania Department of Health Directing Vaccine Providers' Administration of COVID-19 Vaccines*. Feb 12.

<sup>12</sup>Southwick, Ron. 2021. "Few Black People Have Received COVID-19 Vaccine". *PennLive. Advance Local Media LLC*. Feb 19. <https://www.pennlive.com/coronavirus/2021/02/few-black-people-in-pa-have-received-covid-19-vaccines.html>

<sup>13</sup>Olumhense, Ese and Jaime Martines. 2021. "From Tests To Vaccines, PA Health Officials Still Missing Crucial Race Data For COVID-19". *Spotlight PA. 90.5 WESA*. <https://www.wesa.fm/post/tests-vaccines-pa-health-officials-still-missing-crucial-race-data-covid-19#stream/0>

Demographic data, including data by age, race, gender, and ethnicity is shared, but updated irregularly, and no cross-tabulations have been provided (e.g. counts by age and race). Data providing counts of vaccines administered or people vaccinated has also not yet been shared for geographies smaller than counties (e.g. ZIP codes, census tracts, and municipalities). Making this data available would enable public offices, advocates, and others to measure the impacts of its actions by age, race, and place, and hold vaccination providers accountable. The knowledge that would come from an analysis of this data can guide advocacy, inform the location and design of immunization clinics, and be incorporated into public messaging strategies.

The limitations on sharing daily vaccine data are addressable considering how the state shares COVID-19 testing and case data. Currently, DOH shares with ACHD a daily extract of record-level testing and case data from the Pennsylvania National Electronic Disease Surveillance System. ACHD then shares a de-identified version of this file as publicly-accessible as open data through the Western Pennsylvania Regional Data Center. It is not clear why this process cannot happen with daily vaccine data as well. As above, this lack of daily vaccine data suggests that equity is not integrated into the vaccine rollout.



## SECTION FOUR

# BEC RECOMMENDATIONS

**A major goal of the BEC Data Working Group is to assure that the data being used reflects the racial equity questions and priorities being assessed.**

Overall, stakeholders should use an equity-focused lens when approaching vaccine distribution, given what we already know about the disproportionate burden of chronic disease, COVID-19 outcomes, and socioeconomic disadvantage in Black populations. A major goal of the BEC Data Working Group is to assure that the data being used reflects the racial equity questions and priorities being assessed. The data should capture differences in wellness and thrive across the life course. Further, this data can be used for continuous monitoring and quality improvement to ensure practices and interventions include results-based accountability for racial equity. This “data-driven” decision-making discussion must involve an assessment of the quality of the data being used to inform decisions and the identification of missing data.







Across the data lifecycle, the pandemic has exposed the need to improve the public-sector data systems and processes to collect and provide high-quality data in a timely fashion, and in formats that make it easy to analyze and integrate with other data systems. While many of these recommendations may not be implemented until after the pandemic ends, the investments that will soon be made in people and systems to track disease and immunizations present us with an opportunity to incorporate values like health, equity, and racial justice into public health ecosystems and infrastructures.

The process for **planning**<sup>14</sup> and designing these new systems should start with the creation of inclusive design and data governance processes. Historically-marginalized people should have shared ownership of the design process of public health data infrastructures. Including people with a diverse set of lived experiences in conversations about what data to collect, how to classify people, and how to manage risks in collecting, using, and sharing this data will center their voices in the design of the systems themselves. We also encourage public-sector agencies to adopt modern software development and procurement practices, collaborate with other states to develop essential data systems, and test them regularly through “data drills” to make sure they and the people that maintain and use them are up to the test.

<sup>14</sup>*Bolded terms in this section are stages of the data lifecycle.*



**Data collection** processes should also ensure that reporting of data essential to measuring disparities is collected. Pennsylvania's experience shows us that (though important) training and education alone will not result in all providers reporting demographic information. Designing enforcement mechanisms into data management processes are also essential. The large number of vaccination records lacking race and ethnicity has left us unable to reliably track equity in the distribution of the vaccine and removes a vital feedback mechanism enabling us to plan distributions and refine outreach and engagement strategies.

The lack of data access mechanisms also leaves the BEC and Allegheny County Health Department unable to analyze critical information about who is receiving vaccinations, where they live, who provided them, and where they were obtained. The level of demographic and geographic detail that is provided with vaccine data (as well as other types of data related to public health and regional economics) are also important to local organizations — including the BEC, County Health Department, and others — in both assessing and alleviating disparities in outcomes. Given the importance of this data, we strongly recommend three short-term actions. The PA DOH should:

- share a daily extract of immunization data with Allegheny County;
- make geographically detailed vaccine data available to the County including race as a variable, so that it can be geocoded into small area geographies (ideally census tracts); and
- make data available at a county level with race and age variables intersected.

These two additional data elements would dramatically improve local policymakers' and analysts' understanding of the nature of the current inequities, and in so doing, empower a more effective response. Over the longer-term, new systems and data governance mechanisms should proactively reduce the legal and technical barriers to sharing information within the state, and between the state, its counties, research institutions, and the public.

**Formulas, algorithms, and statistical tools** are in use to allocate vaccines between the state and providers, open vaccinations to a new phase of the population, and help inform decisions on when to relax or tighten restrictions on businesses, schools, and public gatherings. These systems will also likely be used to determine when people will be contacted for appointments through a vaccine registry system if one is established. Where these systems are in use, they should be reported to the public using plain-language descriptions of how they're used, describe any potential biases in the data or in the algorithms themselves, provide performance statistics to enable accountability, and be audited and tested for fairness.<sup>15</sup>

Our data committee meetings have been a shared space where people with different lived experiences and expertise can come together to contextualize and analyze data about the pandemic and design reporting and dissemination tools. We know that this inclusive, participatory, and community-engaged process of analyzing data has led to important insights that can inform policy and action, but only if policymakers join us at the table, and share power in making decisions. This process has also served to center the conditions facing Black and other marginalized people in the data visualizations, something that hasn't happened in the recent re-design of the County's COVID-19 dashboard, which removed testing and case data by race from the front page of the tool.



<sup>15</sup>For More information about the biases in algorithms can be found on the University of Pittsburgh's Cyber Task Force website: <https://www.cyber.pitt.edu/algorithms>

## SECTION FIVE

# CONCLUSION



In our Data Working Group meetings, we often discuss how we might convince organizations to climb Arnstein's Ladder of Citizen Participation<sup>16</sup>, a longstanding framework that describes public participation in the planning process. The bottom rungs of the ladder are characterized by processes that provide the illusion of participation, but do not provide people with any ability to wield power or influence the process. The middle rungs are often described as "tokenism," where participants in the process may be heard or consulted, but there are few if any guarantees that their concerns will be heeded. The top rungs of the ladder are characterized by growing levels of community control and ownership of the process itself. Many of the challenges that have been exposed by the pandemic can best be addressed together with people who are marginalized, and we're asking that our public-sector partners climb the ladder of participation and work in meaningful partnership with us to institutionalize the values of equity and justice in our public health infrastructure.

<sup>16</sup> Arnstein, S. (1969.) *A ladder of citizen participation*. *Journal of the American Planning Association*, 35(4), 216–224. <https://www.tandfonline.com/doi/abs/10.1080/01944366908977225>



The BEC has a commitment to working with public offices and institutions to ensure equitable vaccine rollout and management of the public health crisis.

The hope is that improved practices today will help prevent inequitable impacts of future health crises and secure equitable access to preventable services and health care.

