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INFO 648: Healthcare Informatics

# Assignment: Healthcare Datasets Review

For my healthcare dataset, I selected the COVID-19 Vaccine Distribution Allocations by Jurisdiction – Pfizer ([**Data.CDC.gov**](http://data.cdc.gov/?s_cid=cdc-data-001)). This dataset was Data Provided by HHS ASPA. The ASPA (Assistant Secretary for Public Affairs) reports directly to the HHS (Health and Human Services) Secretary. Shipments of an FDA-authorized safe and effective COVID-19 vaccine continue to arrive at sites across America. Vaccinations began on December 14, 2020. The purpose of this publicly available dataset is to provide researchers access to a variety of health indicators over time to better understand issues which affect a large portion of Americans. Together with other federal agencies, vaccine providers, jurisdictions, state/local public health departments, and tribal health facilities across the United States uses these data systems to inform decision-making regarding COVID-19 vaccination.

## Part A: What data elements are available?

This dataset features 1764 rows and 4 columns. Each row is a Pfizer Vaccine Allocation by State and Week. The dataset is available from 12/14/2020 to 06/21/2021 as per the week of allocation. The indicators selected for this dataset represent new weekly allocations of doses are posted every Tuesday. Beginning the following Thursday, states can begin ordering doses from that week’s new allocation of 1st doses. Beginning two weeks (Pfizer) or three weeks (Moderna) from the following Sunday, states can begin ordering doses from that week’s new allocation of 2nd doses. After doses are ordered by states, shipments begin the following Monday. The entire order may not arrive in one shipment or on one day, but over the course of the week. In addition, there are columns for jurisdiction, week of allocations, 1st dose allocations and 2nd dose allocations. In Jurisdiction city, state, territory by type plaintext. In week of allocations week that vaccines are allocated to a jurisdiction by type date and time. In 1st and 2nd dose allocations by type number of 1st and 2nd dose allocations that a jurisdiction can order from.

## Part B: Requirements to access the datasets

These datasets are freely available to the public and professional workers who need that data they can access for their research and help the nation. They are already aggregated and contain no patient information, so there is no need to have a special login to access the information. In addition, the data can be fully accessed at:

<https://data.cdc.gov/Vaccinations/COVID-19-Vaccine-Distribution-Allocations-by-Juris/saz5-9hgg/data> where it can be filtered and visualized or exported into a variety of standard formats for further visualization, analysis, or aggregation. There is also related content using this data like National weekly Pfizer Allocations and State Pfizer Allocations Totals.

## Part C: How do data owners manage privacy?

Privacy is not a concern with aggregated data such as there as there is no identifying information about the patients, only values per states showing in jurisdiction.

## Part D: Important issues and uses of this dataset

I believe that this data is especially useful and relevant as, according to the CDC and HHS this dataset contains the initial Pfizer COVID-19 vaccine distribution allocation by state published by Centers for disease control and prevention (CDC). The geographic coverage of the dataset includes the United States, and the geospatial resolution is by HHS Region, Jurisdiction (US States). Jurisdiction will receive first and second doses simultaneously to optimize transportation logistics. A sub-set of these jurisdictions are also receiving expected allocations for the remainder of the month pulled forward. In Marshall Islands, Micronesia, Palau will not receive Pfizer vaccines due to logistical considerations with ultra-cold requirements. Jurisdiction will receive a "Sovereign Nation Supplement" for American Indian/Alaskan Native populations that elected to receive vaccines through the state instead of Indian Health Service. Federal Entities includes Bureau of Prisons, Dept. of Defense, Dept. of State, Indian Health Service, & Veterans Affairs + Dept. of Homeland Security. ~San Antonio and Houston jurisdiction allocations consolidated with Texas.

Benefits of interest deemed critical were prevention of symptomatic laboratory confirmed COVID-19 and prevention of hospitalization due to COVID-19. Important benefits included prevention of death due to COVID-19 and prevention of asymptomatic SARS-CoV-2 infection. Efficacy estimates allowed for partial protection (52.4%) after receipt of the first dose and full protection (94.8%) after the second dose. The COVID-19 pandemic poses serious challenges to many countries, including disrupting routine immunization programs. Twenty-three million children missed out on basic vaccines through routine immunization services in 2020 – 3.7 million more than in 2019 – according to data published recently by WHO and UNICEF.

We examined additional scenarios that would deliberately disadvantage the flexible strategy, by assuming substantially greater declines in vaccine supply and greater waning of protection with delayed second dose. Pfizer’s oral antiviral drug (a combination of nirmatrelvir and ritonavir tablets) is strongly recommended for patients with non-severe COVID-19 who are at highest risk of developing severe disease and hospitalization, such as unvaccinated, older, or immunosuppressed patients. It offers an easy way to analyze overall trends in health across large population centers to spot issues which could use further analysis and research before they turn into crises. It can be a very valuable tool for researchers looking into health patterns for a substantial portion of the American public.

This public dataset lists the allocations of doses made available for states and jurisdictions for the Pfizer vaccine. Weekly allocations are provided to states on Tuesdays, after doses are ordered by states, shipments begin the following Monday. The entire order may not arrive in one shipment or on one day, but over the course of the week, delivery sites are notified by the private shipping partners.

While having this data and being able to break down the data into more deep level would be great helpful, this kind of data can still be extremely useful to health policymakers to set priorities based on trends in morbidity. It offers an easy way to analyze overall trends in health across large population centers to spot issues which could use further analysis and research before they turn into crises. It can be a very valuable tool for researchers looking into health patterns for a substantial portion of the American public.

# References

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