For this project option, you will investigate the effectiveness of the 50 States and the District of Columbia in combatting the spread of seasonal influenza (flu) in terms of flu vaccination coverage (and, perhaps, the effectiveness of the flu vaccine for each season) from the 2008-2009 season until the 2022-2023 (truncated) season. [Putri et al. (2018)Links to an external site.](https://doi.org/10.1016/j.vaccine.2018.05.057) estimates the annual economic burden of seasonal flu at around $11.2 billion in lost productivity in the United States. Thus, it is important to obtain research-supported managerial insights on past flu seasons and provide sound managerial recommendations for mitigating risks of productivity losses resulting from the seasonal flu. It is important to note, however, that the numbers and graphs derived from the datasets only provide rough estimates.\*

\**Other researchers, such as*[*Caldwell et al. (2020)Links to an external site.*](http://dx.doi.org/10.2196/14337)*, have proposed prediction models of flu incidence using influenza-like illness (ILI) incidence and the weekly number of web searches about the flu.*

You will use the following datasets:

1. [Influenza Vaccination Coverage DataLinks to an external site.](https://data.cdc.gov/api/views/vh55-3he6/rows.csv?accessType=DOWNLOAD&bom=true&format=true) (data page available on [CDC.govLinks to an external site.](https://data.cdc.gov/Flu-Vaccinations/Influenza-Vaccination-Coverage-for-All-Ages-6-Mont/vh55-3he6" \t "_blank))
2. [Influenza-like Illness (ILI) Activity DataLinks to an external site.](https://www.cdc.gov/flu/weekly/usmap.htm)
3. [State-level Outpatient Influenza-like Illness (ILI) Surveillance DataLinks to an external site.](https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html)
4. [Population [Projections] DataLinks to an external site.](https://dataplanet-sagepub-com.proxy.libraries.rutgers.edu/dataset?view=AA0BXQAAgADBAQAAAAAAAAAA3_zMslwIJ8Ve1X%24GLcp7PrPxvZVf1VEI8N9eQXRnhttlZekajRXI05cmVxLw3YcToU4qT_aDA5DcS4Eb8QYONINZpU6SlavKieMsgwY%24wE6z64Nk0DuUzWjg%244NuxzQ59fEgER5N1JzpJAcI5KbJtQPc8dtX_8gIQRVKlPnPfW05aPX4Ryy%24CYx9fkhL0zFzBQxjCEIiFLBuUN5VLrmE5bXjhLDFMw0ExoWYZPmzHYxX%24SZSMI%24YPvSsezIctsO%24uPt0nly5jna0)
5. Other datasets that will enhance your **individual** analyses (e.g., [vaccine effectivenessLinks to an external site.](https://www.cdc.gov/flu/vaccines-work/past-seasons-estimates.html), State- and week-specific weather data, and incidences of other communicable diseases, among others)

Example dashboards are shown below: