C.6 Potential CDC Use Cases for Data:

1. Implementation and cancellation of community mitigation measures and its impact on case and fatality rates.
2. Impact of state limitations on close person-to-person contacts outside the household: comparing gathering density in 2019 and 2020.
3. The effect of large-scale anti-contagion policies on the COVID-19 pandemic
4. Analysis of bar and restaurant closure dataset compared to COVID-19 incidence and death rates.
5. Examination of volume of mobile phones grouped in proximity each month and compare 2019 to 2020 data to see the impact of these orders. Project how much worse things would have been without the bans.
6. Developing a clearer picture of IHE openings on mobility and COVID-19 case incidence, e.g. comparing areas with and without college campuses before and after re-openings.
7. Follow shifts in school decisions over time and its potential on student mobility and potential illness.
8. Track patterns of those visiting K-12 schools by the school and compare to 2019; compare with epi metrics if possible.
9. Hot spot detection - counties with more mobile residents more likely to be detected as hotspot counties
10. Prediction of hot spot counties due to influx of persons from nearby hot spots
11. Monitoring adherence to state-level policies to quarantine after arrival from another state
12. Examination of the effectiveness of public policy on Navajo nation.
13. Examination of COVID-19 vaccination rates, mobility, and incidence/seroprevalence/% positivity, etc. at the county or sub-county level (this could also be applied to flu and mask use).
14. Examination of the correlation of mobility patterns data and rise in COVID-19 cases:
    a. Schools (K-12) opening/closing/re-opening
    b. Shelter in Place Orders
    c. Social distancing measures (local/regional)
    d. Mass gatherings (Concerts, Games, Places of worship etc.)
    e. Public transit stations
    f. Major destinations (retail, grocery stores, parks etc.) correlated with COVID infection waves (2nd, 3rd, etc.)
    g. National Shelter Data for disasters
    h. Movement restrictions (Border closures, inter-regional and nigh curfews) and patterns
    i. Movement restrictions (Border closures, inter-regional and nigh curfews) to show compliance
15. Examination of mobility data for tracking school closures such as school bus routes and cell phone data around institutes of higher education around events like spring break.
    a. County, weekly number of visits to K to 12 schools as a dataset that could feed into other reports
    b. Compare with previous year as baseline
    c. Could help supplement the situation awareness data for K-12 and IHE
16. Assess movement in and out of counties during periods of natural disasters to assist with planning and distribution of COVID resources to evacuation areas
17. Research points of interest such as visits to pharmacies in a vaccine distribution plan or grocery stores
18. Exposure to place-based environmental exposures, like places with high air pollution and area-level incidence of pollution-related outcomes like asthma
19. Research points of interest for physical activity and chronic disease prevention such as visits to parks, gyms, or weight management businesses
20. Creation of user-defined queries and metrics of population mobility such as inferring mode of transport (e.g. walking, biking)
21. Exposure to certain building types, urban areas, and violence.

C.5 IT Security and Privacy Considerations:

A. Baseline Security Requirements