Collaborative Leadership: COVID-19, ENC Population Health Surveillance & Mapping Project

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BACKGROUND

The purpose of this project was to foster collaboration and combine resources to develop a COVID-19 population health surveillance system, monitor population health and inform decision.

Project dates:8/1 to 12/31/2020.

PROJECT AIM

- Surveillance - detect COVID-19 trends and hotspots in ENC (Figures 1a and 1b)

- Population Vulnerability – map and prioritize "at-risk" communities for COVID-19 vaccine (Figure 2)

- Communicate - implement a COVID-19 web portal with a focus on ENC and Vidant service region (Figure 3)

PROJECT DESIGN/STRATEGY

- Partner to expand Vidant and ECU resources, knowledge and capacity

- Engage in COVID-19 population health surveillance & issues affecting ENC

- Inform health care providers, communities, and decision makers with enhanced visualization

- Provide information and resources on COVID-19 for mitigation

CHANGES MADE (PDSA CYCLES)

Plan – Leverage academic expertise with healthcare operations knowledge and hospital data to mitigate COVID-19 spread across ENC

Do – Deep collaboration of multiple cross-functional entities via a data sharing agreement to solve problems

Study – Identified vulnerable populations, COVID-19 hot spots and trends, geo-located facilities and socio-economic variables of specific geographies

Act – Development of ENCHealth.org
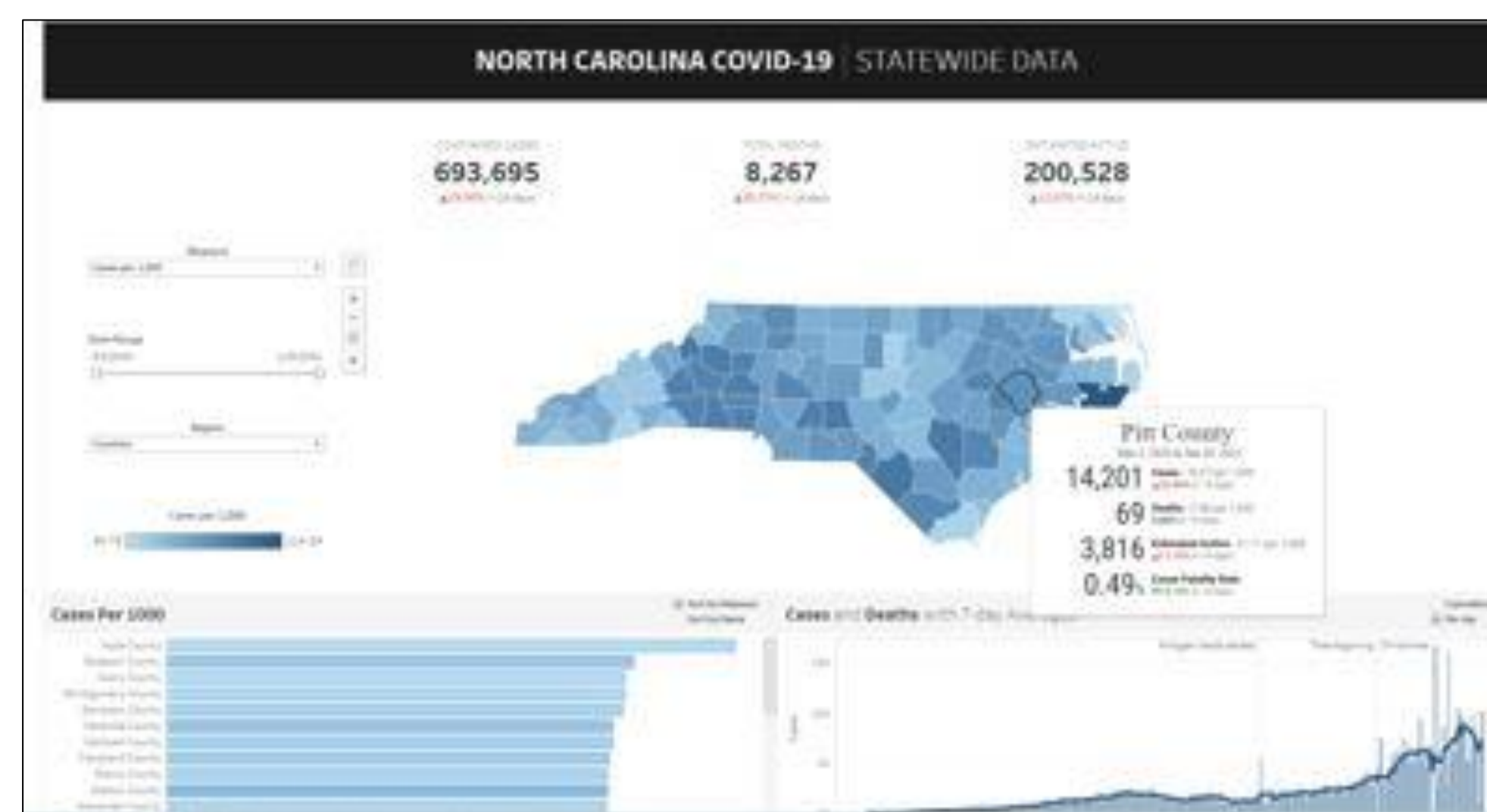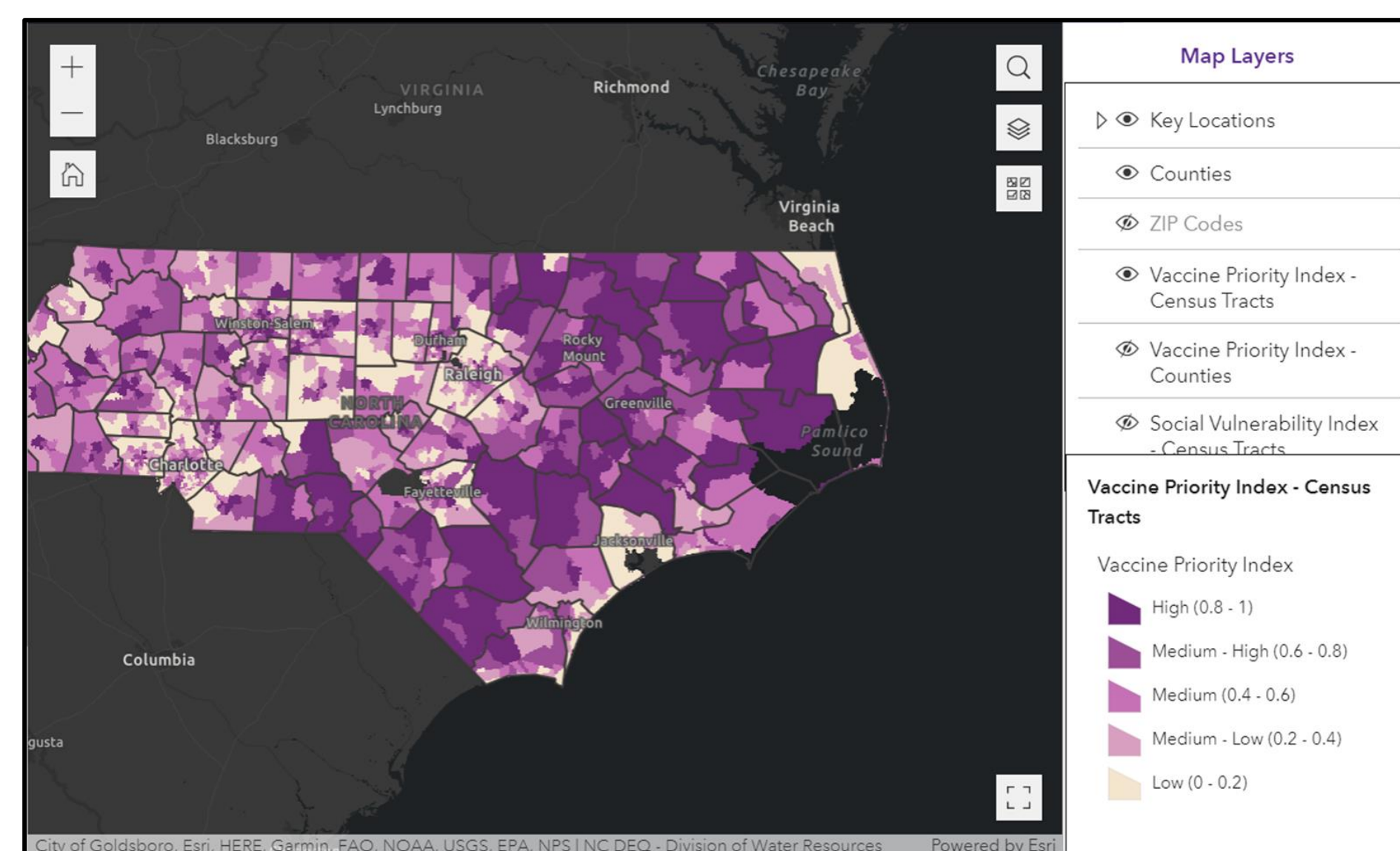
RESULTS/OUTCOMES

Figure 1a. COVID-19 Case Tracking

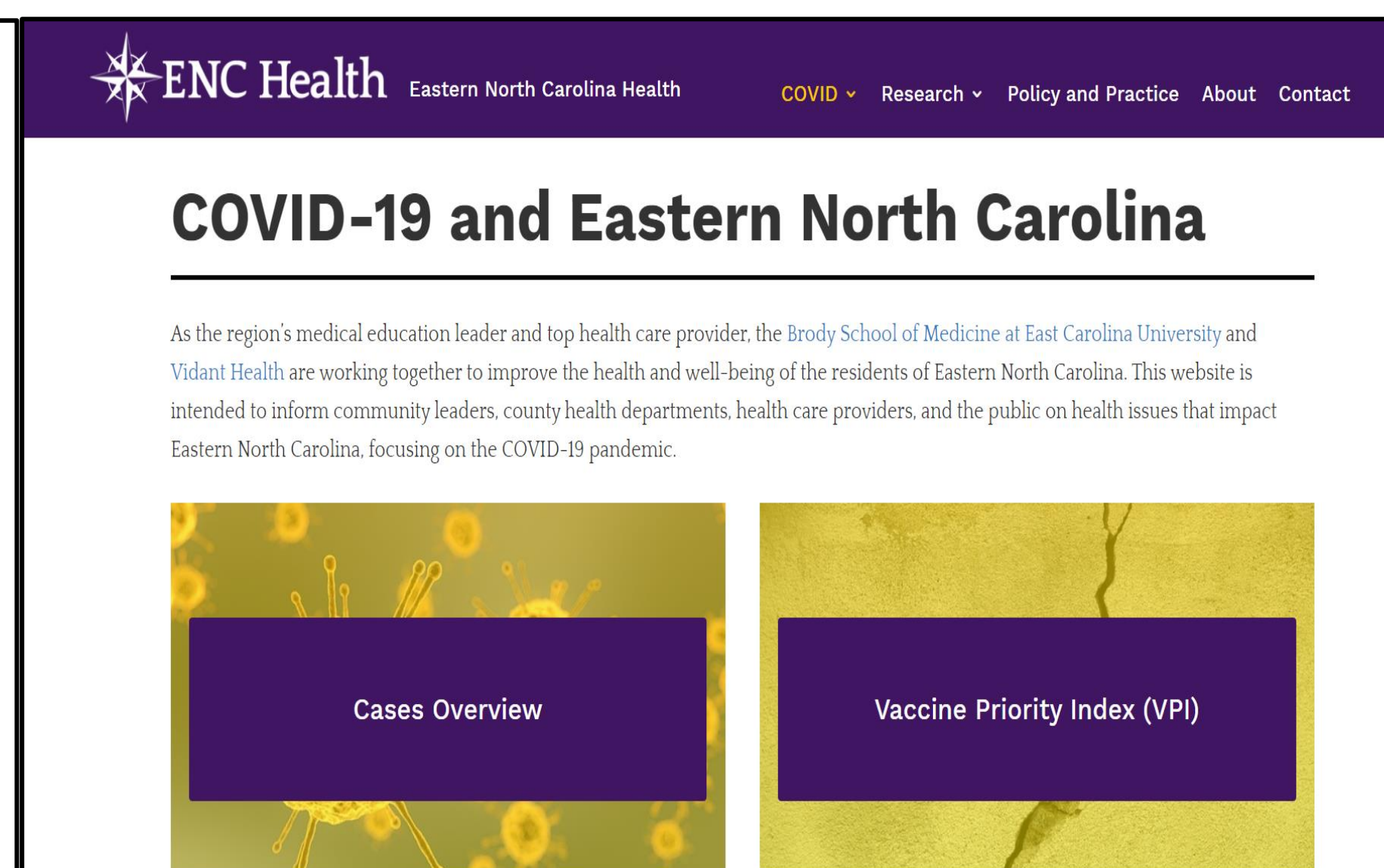Figure 1b. COVID-19 Weather Forecast
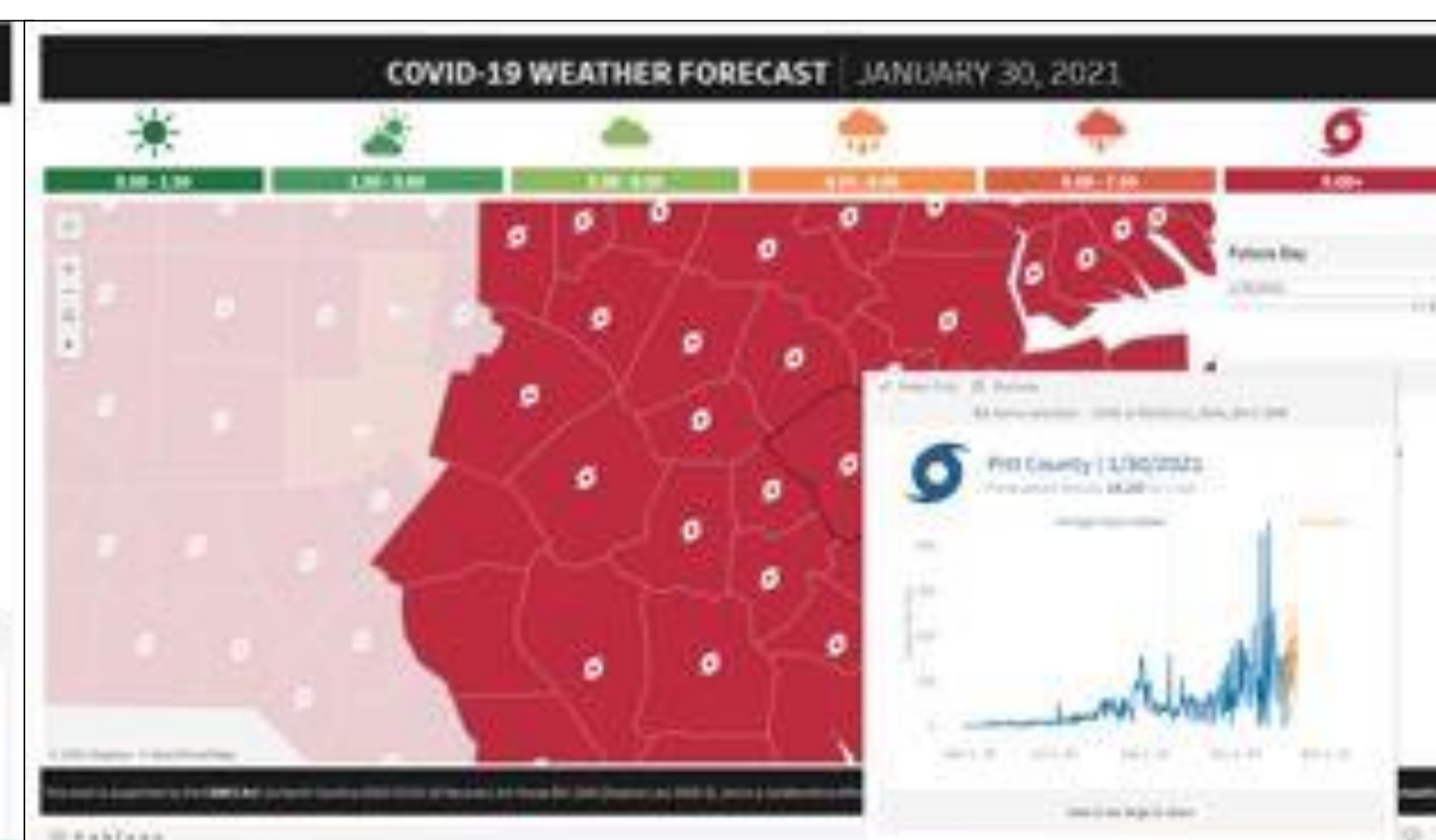
Figure 2. Vaccine Priority Index

Figure 3. ENC Health web portal

LESSONS LEARNED

- Identify all potential data needs prior to implementing formal agreements

- Get partners and advocates involved early and often

- Collaboration is meaningful & fun

NEXT STEPS

- Examine differences in COVID-19 related emergency department visits among rural populations in NC

- Identify predictors of COVID-19 related cases and deaths in nursing homes in the US.

- Explore COVID-19 educational intervention efforts among staff working in nursing homes

- Enhance forecasting models to better predict COVID-19 rates of spread over time

- Explore machine learning using COVID-19 data

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