**C**ollaborative Leadership: COVID-19, ENC Population Health Surveillance & Mapping Project

**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 ENCHHealth.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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