Risk-Based Decision Support Tool

May 7, 2020
Recap: Project Goals

Create **data-driven decision support tools** to safely reopen the PA economy and achieve the following policy goals:

- Minimize the diffusion of COVID-19
- Maximize a rapid return to work and revitalize key industries
- Limit long-term economic impact of COVID-19 & the shut down
- Achieve equitable outcomes for vulnerable residents
Recap: Data-driven Decision Support Tools

Inputs: Data & Priorities

- Public Data from Census, BLS, BEA
- Data from State Agencies: UI Claims, Wage Records, Revenue, SNAP, TANF, Medicaid, Revenue, DCED, Health
- Health and Human Services Forecasts/Models from Partners (Pitt, Penn)
- State Priorities & Policy Goals

Decisions we can support

- Which industries can safely open, in which counties, and under what conditions?
- What will be the health risks and economic impact associated with opening an industry?
- Which industries can re-engineer workflows?
- What impact will this have on vulnerable workers & businesses?

Outputs

- Health and Economic Monitoring Dashboard
- Health Risks
- Economic Impact
- Impact on Equity
- Evaluating the Impact of policy interventions
Risk-Based Approach

We take a wide variety of risks associated with re-opening a set of industries in a county or region. In addition to what we show in this presentation, we have also explored and developed additional ones including:

- Face-to-Face Contact Risk (in workplaces)
- Nursing Home Spread Risk
- Customer Contact risk
- Supply Chain Risk
- Business Resilience risk
- Unemployment Risk
- Social Service Benefits Risk
- Equity Risk
Current Risk Indices

**COVID Case Risk**: # of reported COVID-19 cases / population of area

**ICU Capacity Risk**: # of 60+ year olds in area / # of unoccupied ICU Beds

**Population Density Risk**: Population of Region / Area of Region

**Population Age Risk**: % of population in area > 60 yr old

**Re-Opening Contact Risk**: % of workers in an area employed in currently “physically closed” industry sectors
Decision Support Tool to Support Safely Re-Engaging the Economy

Regional Risks

NorthWest  SouthWest  NorthCentral  SouthCentral  NorthEast  SouthEast

Risk

COVID-19 Cases Risk  ICU Capacity Risk  Population Density Risk  Population Age Risk  Re-Opening Contact Risk
Some extensions we plan to do as we get access to detailed State data

- Adjust Re-Opening Contact risk based on unemployment data
- Adjust ICU Risk based on the corresponding Hospital Referral Regions
- Add Disparate Impact Risk based on industry and demographics of the workers affected