Risk-Based Decision Support Tools

July 16, 2020
Recap: Project Goals

Create **data-driven decision support tools to provide an additional input** into the decisions being made to safely reopen the PA economy and achieve the following policy goals:

- **Minimize the diffusion** of COVID-19
- **Maximize return to work** and revitalize the economy
- **Limit long-term economic impact** of COVID-19 & the shut down
- **Achieve equitable outcomes** for vulnerable residents
### Our Vision: Suite of Data-driven Decision Support Tools

<table>
<thead>
<tr>
<th>Inputs: Data &amp; Priorities</th>
<th>Decisions we plan to inform</th>
<th>Outputs we seek</th>
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<tbody>
<tr>
<td><strong>Current version primarily relies on Public Data from Census, BLS, BEA, and DOH</strong>&lt;br&gt;(Future Versions will hopefully use data from) State Agencies: UI Claims, Wage Records, Revenue, SNAP, TANF, Medicaid, Revenue, DCED, Health&lt;br&gt;Health and Human Services Forecasts/Models from Partners (Pitt, Penn, and other partners)&lt;br&gt;State Priorities &amp; Policy Goals</td>
<td>Which industries can safely open, in which counties, and under what conditions?&lt;br&gt;What will be the health risks and economic impact associated with opening an industry?&lt;br&gt;Which industries can re-engineer workflows?&lt;br&gt;What impact will this have on vulnerable workers &amp; businesses?</td>
<td>Health and Economic Monitoring Dashboard&lt;br&gt;Health Risks&lt;br&gt;Economic Impact&lt;br&gt;Impact on Equity&lt;br&gt;Evaluating the Impact of policy interventions</td>
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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 using public data, we are exploring and developing 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
How we intend the current risk indices to be used

- The current version primarily relies on public data sources to generate risk indices along a variety of dimensions.
- The scores and risk indices do not correspond to “open” or “not open” recommendations.
- These indices are provided to the State as one of many inputs they consider in making decisions affecting the “Process to Reopen Pennsylvania.”
Risk Indices

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

**Commute Risk**: Additional # of infected workers commuting from neighboring counties / Total # of workers in the county

**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
How we intend these risk indices to be used

- The risk indices and colors are relative risks and do not correspond to “open” or “not open” recommendations
- These indices are provided to the State as one of many inputs they consider in making decisions affecting the “Process to Reopen Pennsylvania”