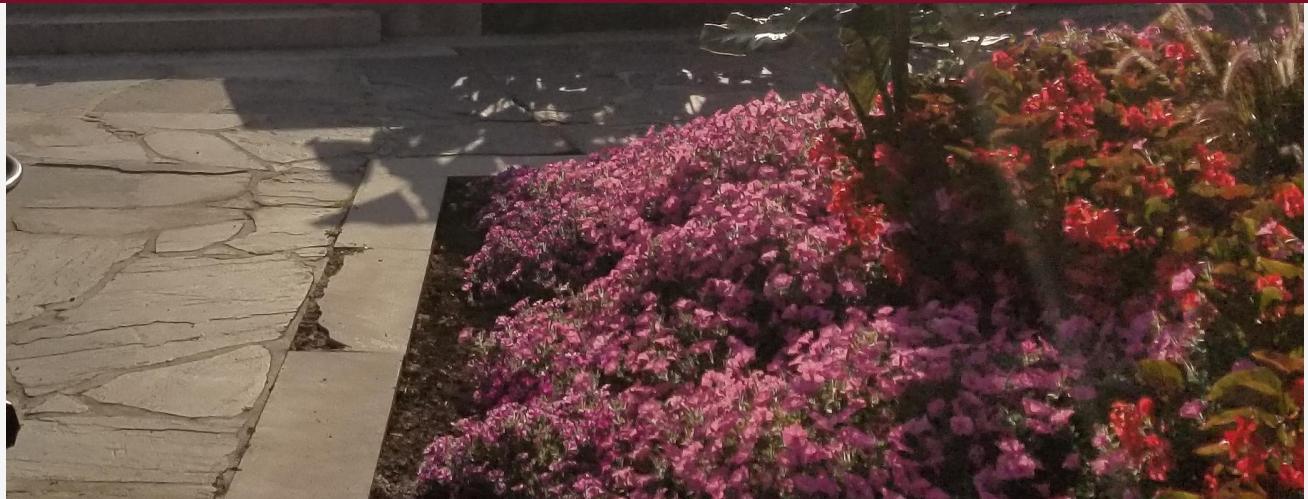




Recover Monroe County, IN

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PREPARED BY
Aviel McDermott



IN THIS ISSUE

This past week we've focused on modeling scenarios and estimating future impact with an eye to providing meaningful interpretations and describing the significance of public data. The first few sections are focused on modeling the economic risks based on different scenarios and their respective probabilities as well as the potential impact of ongoing COVID-19 infection spread.



01

COVID-19: EVIDENCE OF INCREASED INFECTION IN INDIANA AND MONROE COUNTY.

There is some evidence that Monroe County COVID-19 cases are increasing rapidly. The amount of recent positive cases has increased, with a particular increase in those ages 20-29 who represent 30.5% of new cases. COVID Act Now finds Indiana to be at risk of an outbreak, as rates of transmission in Indiana have been increasing without a similar increase in contact tracing and testing.

02

IMPACT ON EMPLOYMENT AND GDP: ESTIMATING GDP LOSS FOR 10-14% JOB LOSS

The Indiana Business Research Center at the Kelley School of Business has considered how gross domestic product - a measure of the value of goods and services produced, or the economy - for the Bloomington Metro (defined by U.S. OMB as Monroe and Owen counties) might be impacted through the end of the year.

03

SCENARIO MODELING: IN PROGRESS

Our team - in particular Dr. David Wild -have been working on modeling the intensity of impact for different scenarios. This modeling looks at our current economic situation in terms of unemployment and job loss, K-12 school enrollment, and other references to gauge vulnerability to different scenarios.

INCREASED INFECTION IN INDIANA AND MONROE COUNTY

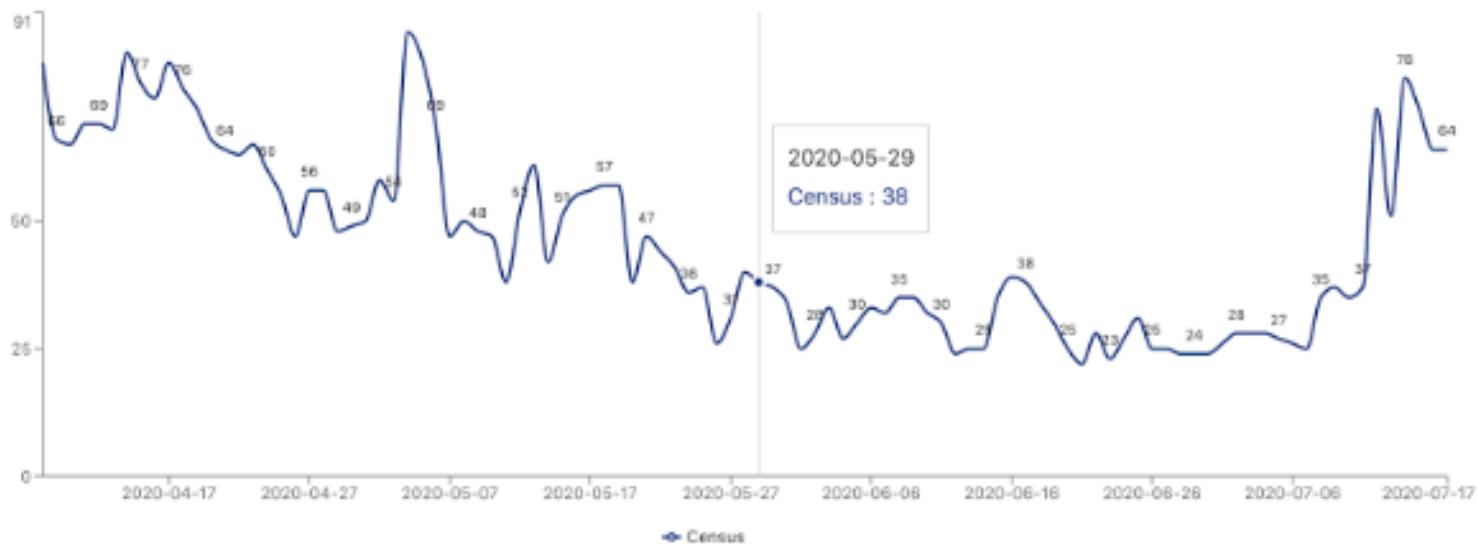
There is some evidence that Monroe County COVID-19 cases are increasing rapidly. The amount of recent positive cases has increased, with a particular increase in those ages 20-29 who represent 30.5% of new cases. COVID Act Now finds Indiana to be at risk of an outbreak, as rates of transmission in Indiana have been increasing without a similar increase in contact tracing and testing. Monroe County issued a mandatory mask order on Friday which may limit infection there, but the amount everyone complies with the rules and the effectiveness of it has yet to be determined. Recent studies on COVID have found it may be airborne and more likely to transmit indoors than anticipated.

There have been infection increases of COVID-19 in college towns due to college-aged interactions, because it's common and hard to stop and because younger people may not have registered the danger. Due to limited testing capabilities IU will probably only be testing Greek Houses and IU campus apartments. Until recently Monroe County infection rate has been trending downward. This really shows how the situation with COVID-19 can change quickly and outbreaks occur sometimes before it's even possible to track them. These graphs are recent to 7/19 and show the recent upward trend in cases and hospitalizations. There has been an increase in hospitalizations in District 8 of Indiana since the first week of July.

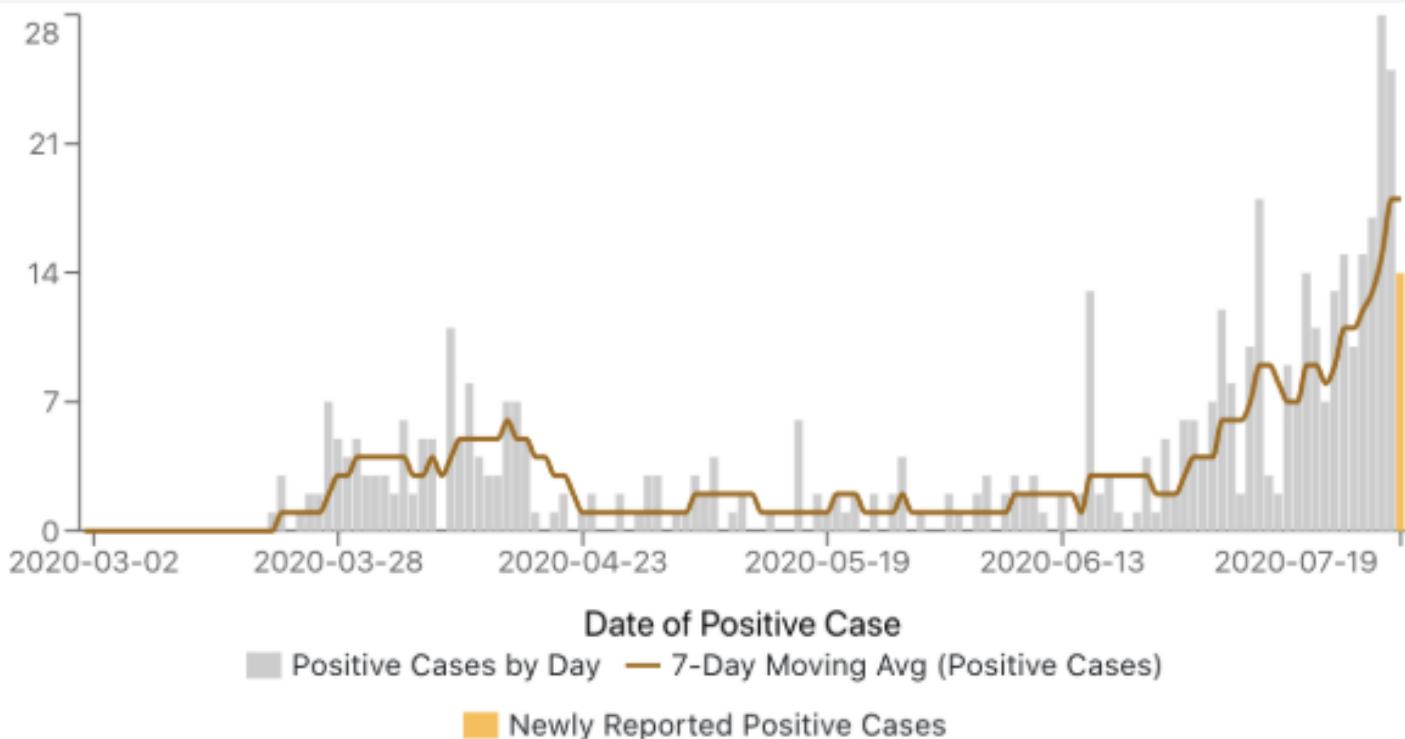
Hospitalizations

Census Admissions

District 8 COVID-19 Hospital Census ^①



In Monroe County specifically the amount of positive cases shot up on the 17th further than any other amount of positive cases per day this year.



ESTIMATING GDP LOSS FOR 10-14% JOB LOSS

The Indiana Business Research Center at the Kelley School of Business has considered how gross domestic product – a measure of the value of goods and services produced, or the economy - for the Bloomington Metro (defined by U.S. OMB as Monroe and Owen counties) might be impacted through the end of the year. If we consider the loss of earnings and productivity through job losses, we can consider what the negative impact will be on the size of the economy. That is, how much value in the economy could be lost in 2020. The metro area GDP, as measured by the U.S. Bureau of Economic Analysis, stands at \$7.5 billion (in 2018 dollars), and is comparable to the size of the Jefferson City, MO and Las Cruces, NM economies, for example.

Ann Arbor's metro area is \$24 billion, and College Station, TX is \$13 billion.

So, if we lose 10% of all jobs in the metro this year, we could see the metro economy (GDP) shrink by an estimated \$750 million; job losses of 14% could result in a GDP loss or \$1 billion. The effect of those potential losses will result in reductions in spending as well as losses in sales and income taxes. With the ongoing uncertainty, we do not know how much job loss is temporary (folks either go back to their current jobs or they join another business or industry) and how much will be permanent, as a result of businesses closing or shifting more and more to online sales.

POTENTIAL JOB LOSS LEVELS	POTENTIAL GDP LOSS
10%	-\$742,359,500
11%	-\$816,595,450
12%	-\$890,831,400
13%	-\$965,067,350
14%	-\$1,039,303,300

Estimates take into account job losses across industries, aggregated to a total proportion of potential job losses from April through end of 2020 provided by the Indiana Business Research Center. Low end of estimates is based on flattening in COVID-19-19 case totals; higher end of estimates based on continued spikes in COVID-19-19 cases resulting in closings, reduced consumption etc.

SCENARIO MODELING: IN PROGRESS

Economic mitigation efforts include economic support for people and businesses. Business support may be a business-level stimulus, resources for training and virtual commerce, and opportunities/guidelines for opening safely. Individual support may be individual/household-level stimulus, job training, employment programs, and resources aimed toward the individual level. What resources are needed and how intensely the economy will be hit depends on different scenarios.

Our team - in particular Dr. David Wild -have been working on modeling the intensity of impact for different scenarios. This modeling looks at our current economic situation in terms of unemployment and job loss, K-12 school enrollment, and other references to gauge vulnerability to different scenarios. It then enumerates scenarios that are likely to threaten the economy. Scenarios are then ranked on likelihood and impact on a scale from 0-4. This works off of assumed worst-case scenarios and impacts.



COLLABORATORS

**BLOOMINGTON ECONOMIC STABILIZATION RECOVERY
CITY OF BLOOMINGTON, INDIANA**

**CRISIS TECHNOLOGIES INNOVATION LAB -
INDIANA UNIVERSITY**

**INDIANA BUSINESS RESEARCH CENTER -
INDIANA UNIVERSITY**