In this series, faculty across disciplines, from cross-cutting STEM fields, humanities, and social sciences, discuss a common topic or contemporary matter from the lens of their field. The conversation is open to all participants in the room, bringing the strength of the collective disciplines to bear on a wicked problem.

Regional Responses to COVID-19: Lessons Learned So Far
Since December 2019, the COVID-19 pandemic has caused a worldwide public health emergency, necessitating coordination amongst all levels of government and across non-governmental organizations and communities. Almost a year into what has been a devastating global crisis, data has shown that strong national, state, regional, and local leadership and coordination has resulted in better management of the pandemic, reduced transmission, and therefore fewer fatalities. What are some takeaways from the pandemic so far? PPRI’s Contemporary Matters Discussion Series explores the approaches to and impacts of Covid-19 through a regional (Nov 17, 2020) and global lens (Dec 17, 2020). The aim of the series is to facilitate dialogue among scholars and experts from different fields to connect and engage in a meaningful and informative discussion.

A County Health Department Perspective

Khala Hochstedler, an administrator in the Tippecanoe County Health Department, outlined the disconnect between the federal, state, regional, and local responses to the pandemic. Khala stressed how lack of a cohesive response at the federal level, coupled with the home-rule system in Indiana, has resulted in every IN county fending for itself. For health administrators like Khala, this has made formulating an effective response very difficult, because different counties have had varying levels of mandates and restrictions in place (if at all). Consequently, coordinating testing, contact tracing, and hospital facilities at a regional and state level has been incredibly challenging. A major lesson learned is that there needs to be a more comprehensive and cohesive response to such an event to allow local level administrators like her to have both better data and better plans to stem the rate of infection.
Preliminary data on COVID-19 Policies in a Campus Setting: The Case of Purdue University

Role models in a campus or work setting play a major role in COVID-19 policies. Dr. Hwanseok Song detailed several findings from student focus groups at Purdue University. First, it is becoming increasingly common to have individuals look to peers in order to decide day to day decisions regarding their health. Second, a common issue discussed was how students look to professors for emulating safety measures like mask-wearing; lax practices by faculty can therefore impact student behavior as well. Third, a wide array of avenues have become available for students to report mass social gatherings and improper adherence to safety procedures. While many aspects of institutional responses to Covid-19 are still being analyzed elsewhere, Dr. Song's research, funded through Purdue University's Office of Executive Vice President for Research and Partnerships, will highlight essential successes of and lessons learned from the University's response to Covid-19 and its impact on the campus community.

A Systems Approach to Covid-19

Panelist Dr. Nicole Adams suggested that basic engineering models can be applied to Recovery-Oriented Systems of Care (ROSC) for communities dealing with COVID-19. She described three main types of models that can help in designing a response to a pandemic like Covid-19: Ecological Model, Hub and Spoke Model, and Complex Adaptive System Model.
A Systems Approach to Covid-19 (Continued)

**Ecological Model**
This model looks like a bull's eye: a community member is at the center with different services radiating out. This model is very easy to map and understand, but has its shortcomings. It does not give a lot of information about existing gaps in connections, or an individual's movement through a community.

**Hub and Spoke Model**
This model looks like a bicycle wheel: it has a central controlling hub. Everything comes through the hub and gets radiated through the spokes. This model is easy to diagram and understand. This model also has shortcomings: the entire system can fail if the hub disappears, malfunctions, or falls apart. This is also very organization-centric, versus being person-centric.

**Complex Adaptive System Model**
This model is more complex to map out, but it is more agile. It allows for building strong connections between people and organizations. Even if an organization drops out, the system can adapt to that loss and still function. This is used in Tippecanoe County and has proven useful in building strong relationships between organizations, which have been able to pivot during this time of crisis to provide services remotely.

**Did you know?**

Indiana has a high number of positive tests per capita

110 Positive tests per 100k people (Nov 30-Dec 13)
13% Percentage of tests that are positive (Nov 30-Dec 13)
20% ICU bed availability
1.3% Hospital visits for flu-like illness (Nov 21-Dec 05)
Panelist Dr. Dorothy Teegarden discussed how the COVID-19 pandemic has placed a disproportionate burden on women. As more women have moved out of the workforce, they have incurred significant financial losses as compared to their male counterparts. With schools offering remote education, women have also been balancing childcare and work. Consequently, women have reported uncertainty and adverse impacts on professional development. In academia, female faculty have shown to disproportionately take on childcare duties, thus impacting their publication rate when compared to male academics. Healthcare workers are also predominantly women, battling Covid-19 on the frontlines. Unfortunately, staying at home has also led to a threefold increase in domestic violence cases; with most of those abused being women.

Long-term impacts on women's health due to limited access to healthcare are now being analyzed. The Women's Global Health Institute (WGHI) has worked this year to raise awareness of the impact that the COVID-19 pandemic has on women. The WHJI has encouraged researchers to disaggregate their data in order to study impacts on women.

Did you know?

39% of global employment is represented by women
54% of overall job losses are attributed to women

Source: McKinsey and Company
Nursing Homes: The epicenter of the epidemic in the United States

According to Dr. Kathleen Abrahamson, Indiana’s response at the local and county level has generated issues in both facilities and resources for nursing homes. A staffing shortage problem in nursing homes existed before the start of the pandemic; Covid-19, however, exacerbated issues in staffing, which prompted the state to reduce staff training requirements. Indiana, like many other state governments, also deployed the National Guard to join overburdened staff in many counties.

Indiana pursued a 'cohort model' of isolating Covid-19 positive residents, which meant that they were to be put in separate buildings, units, or rooms, depending on availability. This created a logistical problem, as many nursing homes did not have a separate unit or building. Underpaid staff members also suffered due to this model, and were also often vectors of the spread. Sadly, in many cases they also did not report symptoms or sickness as they did not get sick leave. Since the early months of the pandemic impacting the US, the Centers for Medicare & Medicaid Services (CMS), and state governments have increased Medicaid payment rates to provide facilities with more resources.

Did you know?

- 38% of all Covid-19 related deaths in the US are in nursing homes
- 5% of all US Covid-19 cases are in nursing homes
- 2845 deaths related to IN long-term care facilities
- 23,623 positive cases related to IN long-term care facilities

Source: NY Times, as of December 4, 2020
Testing: A Problem in Nursing Homes

In May 2020, Indiana failed to meet the CDC's weekly testing requirements for the 86,774 residents and staff in its nursing homes, primarily due to cost. By October 2020, roughly 60% of the state's Covid-19 related mortalities were in nursing homes. Controlling community spread within nursing homes has been a constant challenge: the state allows all nursing homes to have visitation. Increase in spread of infection thus puts additional logistical and financial strain on the state's testing capabilities both for nursing home staff and residents, and visitors.

Panel Highlights

Science and evidence-based information has become a source of mistrust and skepticism for many Americans. Politicization of the public health crisis has had grave national outcomes, including high rates of infection, hospitalization, and mortality. This mistrust has been exacerbated by a basic lack of understanding the scientific process, and confusion from evolving recommendations further cements this mistrust.

Public health officials face a deep crisis as they must figure out how to keep the economy afloat when the healthcare system, especially hospitals, are at capacity. Moving forward, panelists were in agreement that a comprehensive solution to such a deadly pandemic necessitates a unified federal response, coupled with collaborations among federal, state, and local agencies.