

# COVID-19 Emerging Topic: A Public Health Framework for Reopening Tribal Economies

# Purpose

- Provide Tribal leaders with some resources and information to guide their decision-making around reopening businesses and resuming community operations
- Decisions should be guided by cultural values, non-maleficence, and grounded in public health principles
- The risks of increased transmission of COVID-19 are balanced against risks to the health and well-being of the public, society, and the economy from measures taken to reduce the spread of the disease

# Phased Approach

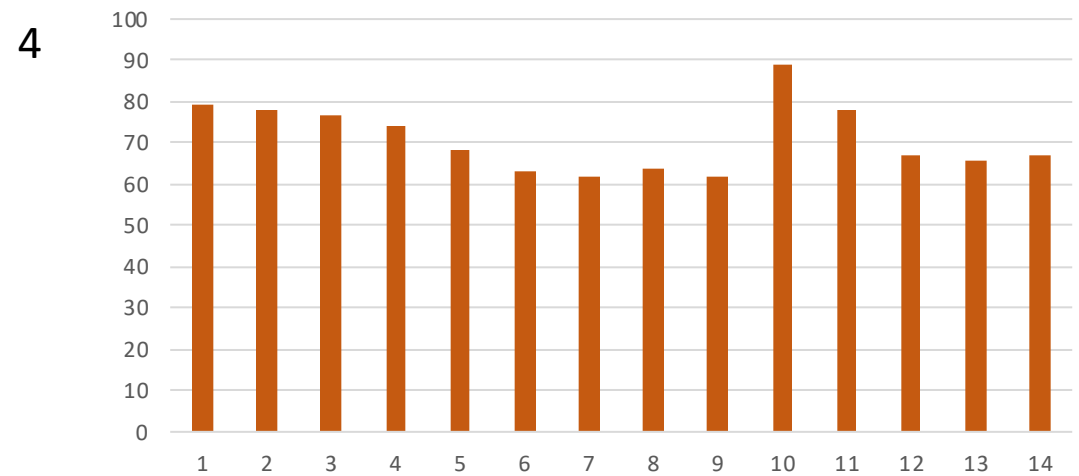
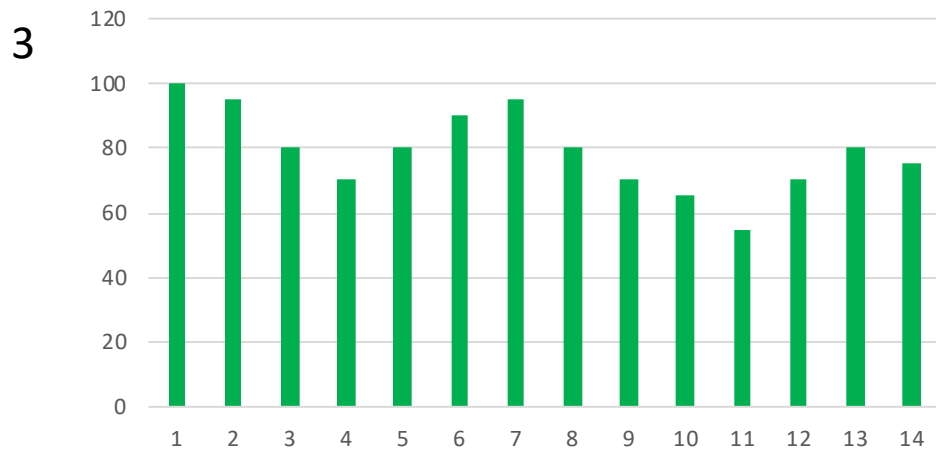
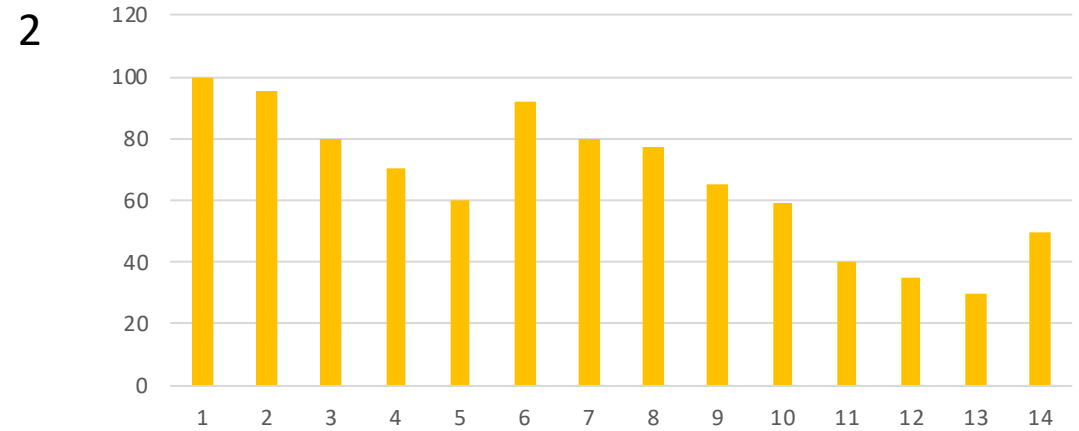
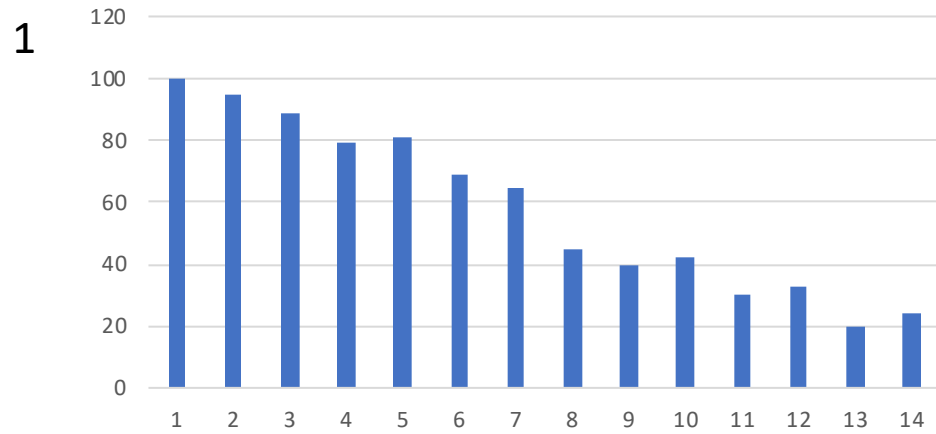
- Phase I
  - Controlling the spread of COVID-19 through strict social and physical distancing policies
- Phase II
  - Conducting epidemiological and clinical assessments and determine capabilities to meet required public health principles
  - Conducting environmental public health risk assessments of specific facility and business types to determine what modifications and protective measures need to be in place to reopen
- Phase III: Availability of therapeutics and a vaccine
- Phase IV: Policies for increasing preparedness for the next threat

# Public Health Principles & Epidemiological Assessment - Phase II

**Tribes should consider waiting to initiate the reopening process when the following are met:**

1. Downward trajectory of number of new cases for at least 14 days;
  2. Rapid diagnostic testing capacity is sufficient to test, at minimum, all people with COVID-19 symptoms, including mild cases, as well as close contacts and those in essential roles;
  3. The healthcare system is able to safely care for all patients, including providing appropriate personal protective equipment for healthcare workers; and
  4. There is sufficient public health capacity to conduct contact tracing for all new cases and their close contacts.
- Tribes should also have a plan in place for what to do when the number of new cases rises again and/or they discover a case has visited one of their establishments.

# Downward trajectory?



# Downward trajectory?

## COVID-19 in Washington State

Data as of April 24, 2020 11:59PM PT

Illnesses that began in the last 4 to 7 days may not yet be reported.

Click here:

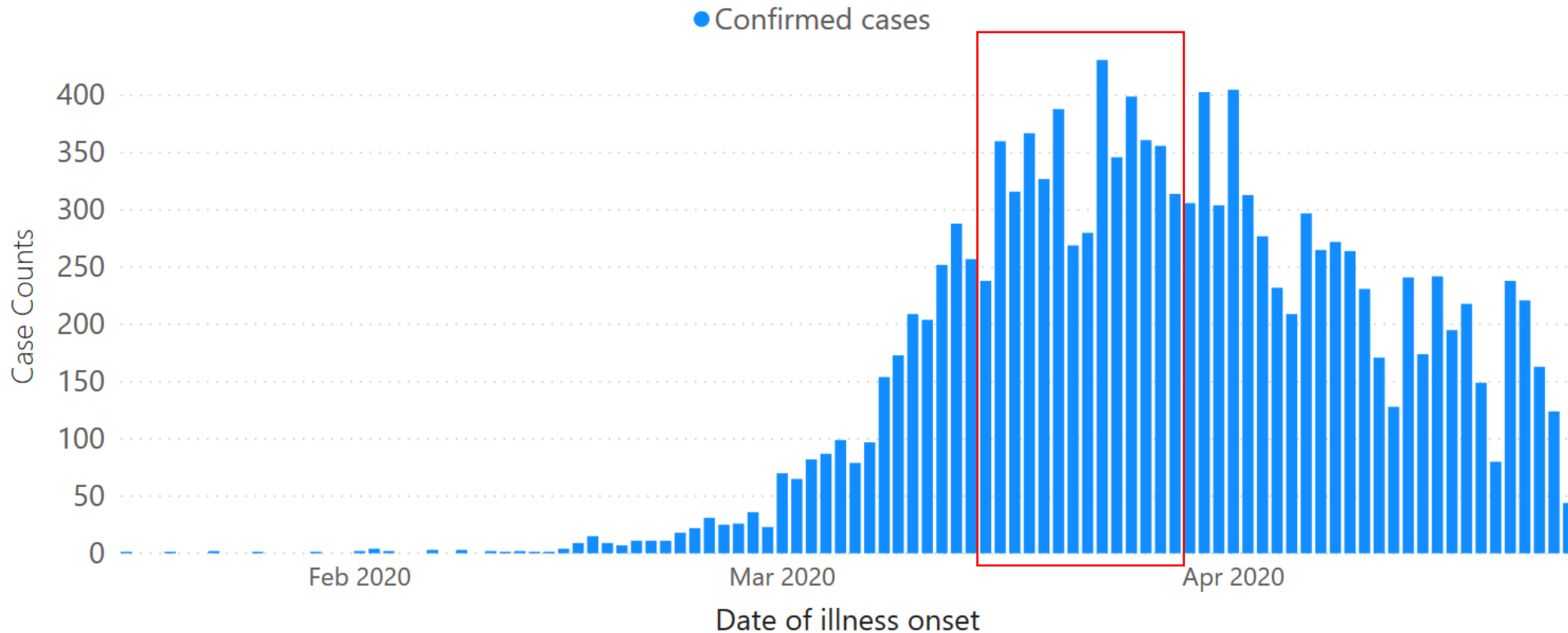
Confirmed Cases

Deaths

Downloadable Table

Counties with greater than 10 cases / deaths

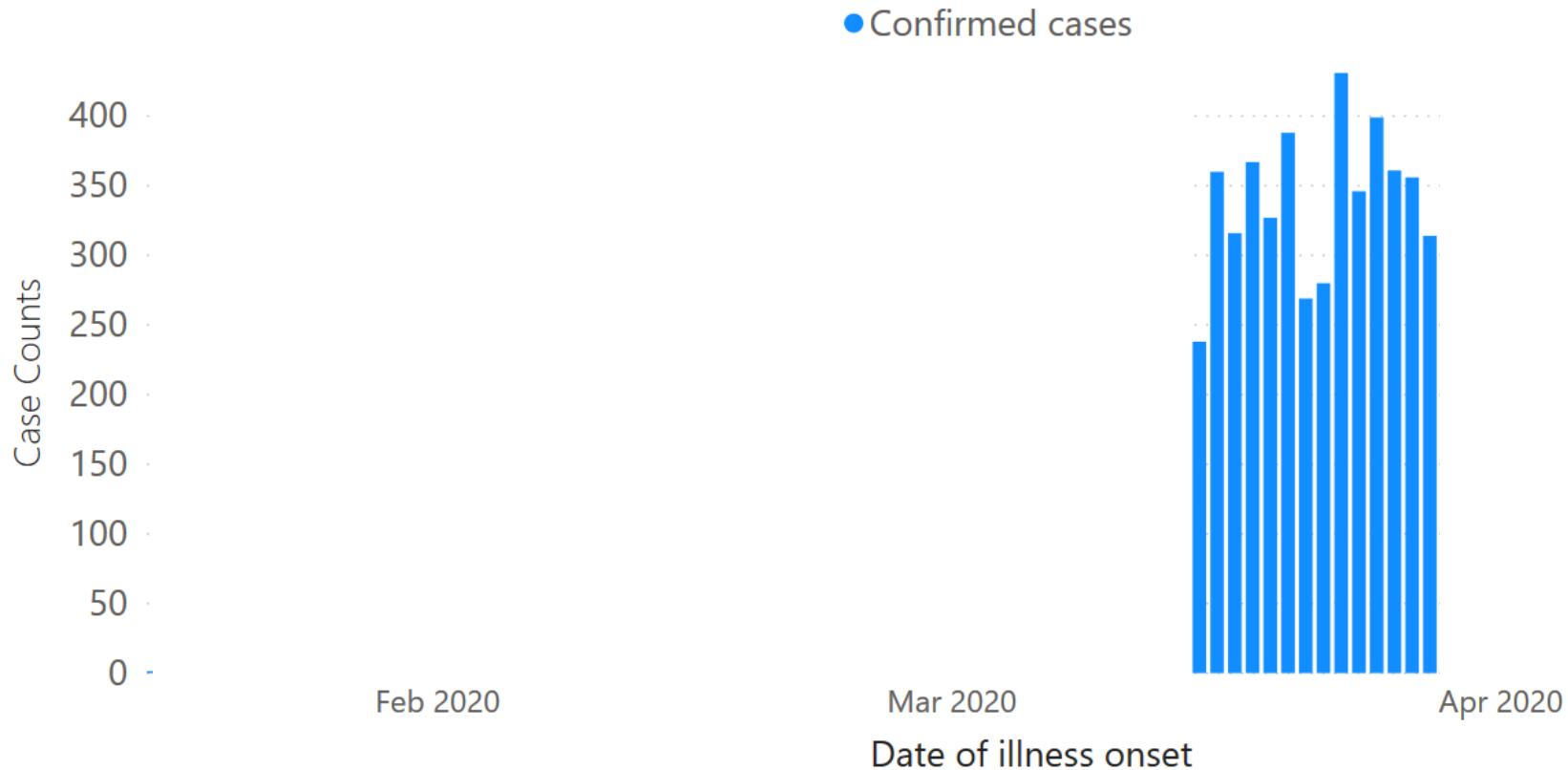
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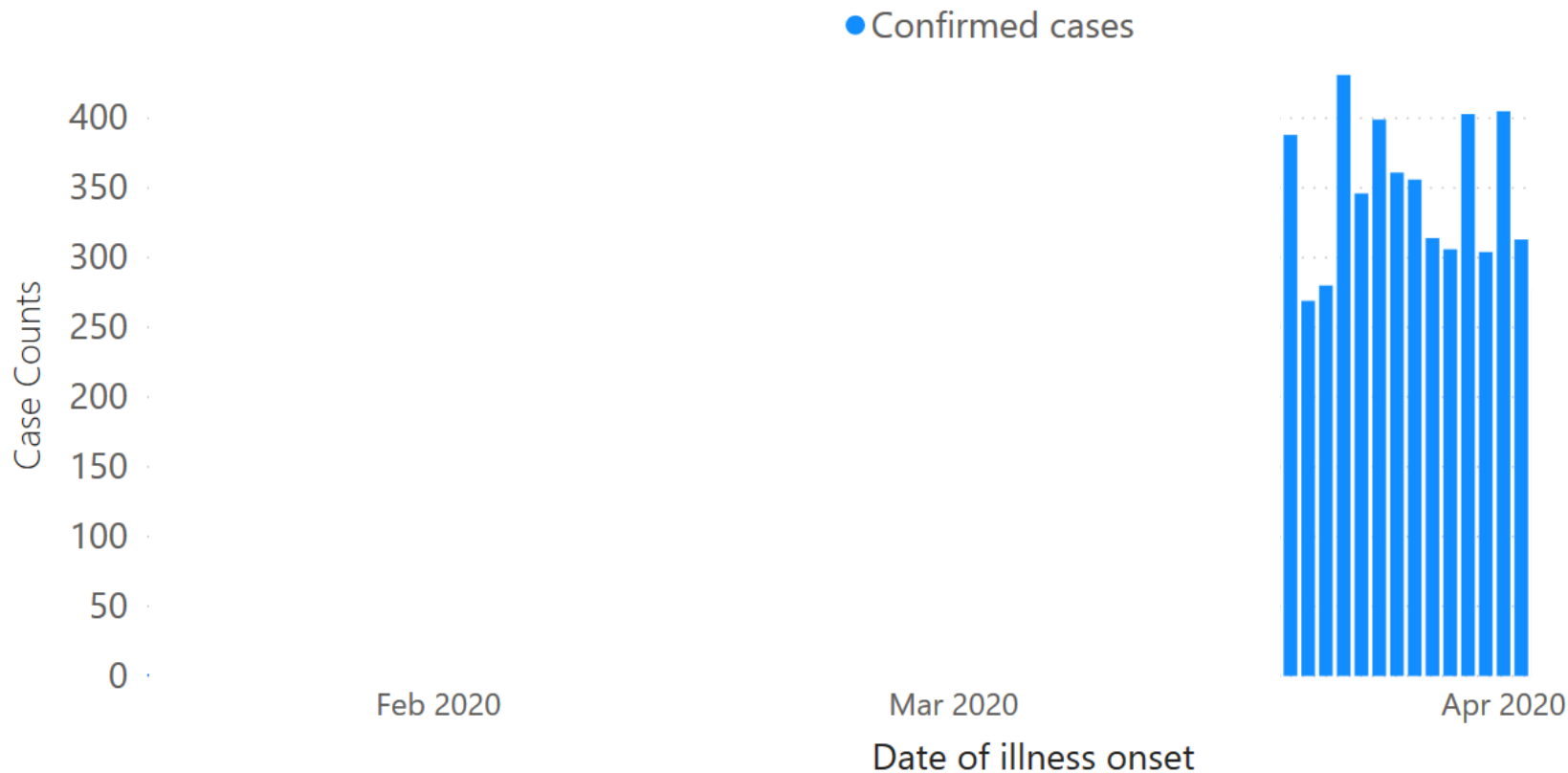
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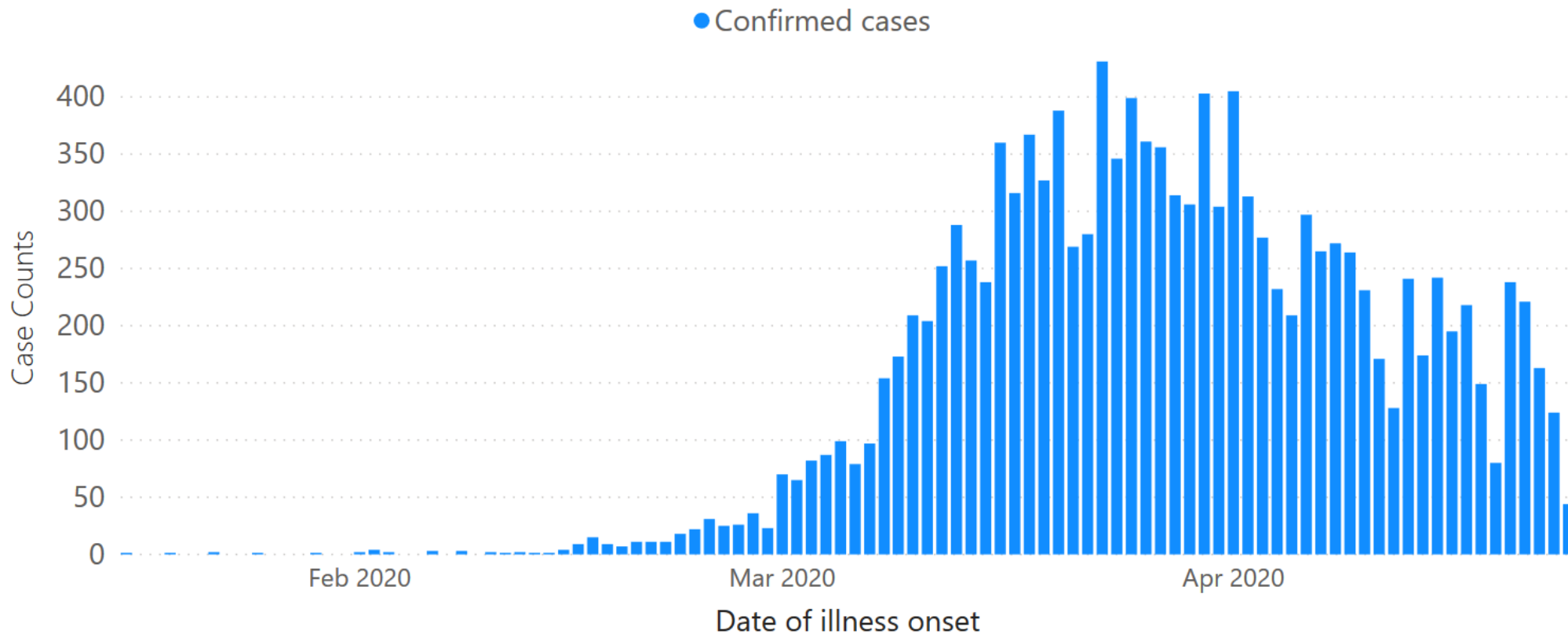


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**Syndromic**



**Epidemiologic**



**Healthcare**



**Syndromic**

**Downward trend of ED visits for COVID-like illness over most recent reported 14-day period, OR less than 20 visits/day on average over same 14-day period**

**AND**

**Downward trend over most recent reported 14-day period, OR less than 2 patients/day on average over same 14-day period**



Epidemiologic

**Downward trend of COVID-19 cases over most recent reported 14-day period, OR less than 20 patients per day on average reported statewide over the same 14-day period**

**OR**

**Downward trend of positive COVID-19 PCR tests as a percent of total tests over most recent reported 14-day period, OR less than 5 percent laboratory PCR positivity on average over same 14-day period**

**Treat all patients without needing to use crisis standards of care**

**AND**



**Healthcare**

**At least 50 available (unused) ventilators, 50 ICU beds, and available 10-day supply of N95 masks, surgical masks, face shields, gowns, and gloves**

**AND**

**Robust testing for at-risk healthcare workers: Downward trend over most recent reported 14-day period, OR less than 2 cases of healthcare workers reported/day on average over same 14-day period**

# Available Tests and Characteristics

## Viral RNA Detection Tests

- PCR (multiple platforms)
- Nucleic Acid Amplification
- Rapid Point of Care Tests
  - PCR (Cepheid Gene Xpert)
  - Nucleic Acid Amplification (Abbott ID Now)

## Serology (Antibody Detection Tests)

- IgM
- IgG
- Total antibody

# Sensitivity/Specificity

	Disease <i>Positive</i>	Disease <i>Negative</i>
Test <i>Positive</i>	True Positives	False Positives
Test <i>Negative</i>	False Negatives	True Negatives
	TP+FN	TN+FP

• Sensitivity =  $\frac{\text{True Positives}}{\text{TP} + \text{FN}}$

• Specificity =  $\frac{\text{True Negatives}}{\text{TN} + \text{FP}}$



# Percent Positive and Percent Negative Agreement

**Table 4. IgM Results for all time periods from symptom onset**

		PCR Comparator*		Total
		Pos	Neg	
Anti-SARS-CoV-2 Rapid Test – IgM Result	Pos	346	1	347
	Neg	59	311	370
Total		405	312	717

\*Note: Serum and plasma samples were collected from the same patients for serology testing between 1 day and > 30 days after PCR sample collection.

Positive Percent Agreement: (PPA)= IgM positive/PCR positive  
 PPA: 85.43% (346/405), (95%CI: 81.7% - 88.5%)

Negative Percent Agreement: (NPA) =IgM negative /PCR negative  
 NPA: 99.68% (311/312), (95% CI: 98.2% - 99.9%)

# Range of positive/negative agreement

Test	Percent Positive Agreement	Percent Negative Agreement
Liaison (IgG)	97.56%	99.3%
Vitros (IgG)	87.5%	100%
Autobio (IgG)	88.15% (99.01 at $\geq 15$ days)	99.04%
(IgM)	85.43% (95.7% at $\geq 15$ days)	99.68%

# Testing Purpose

**Clinical Evaluation:** Test is obtained to help confirm the clinical diagnosis, e.g., COVID-19 vs Influenza

- PCR/NAAT-May influence treatment or where a patient may go for inpatient care
- IgM- identifies recent infection (~2-4 weeks) and may indicate someone who could donate plasma

**Public Health:** Test is obtained for intervention or for population surveillance

- PCR/NAAT- identify currently infected for isolation and contact tracing
- IgG- identifies past infection (>4 weeks) and may identify the degree of spread within the population, potential proportion of immunes

# Environmental Public Health Risk Assessments

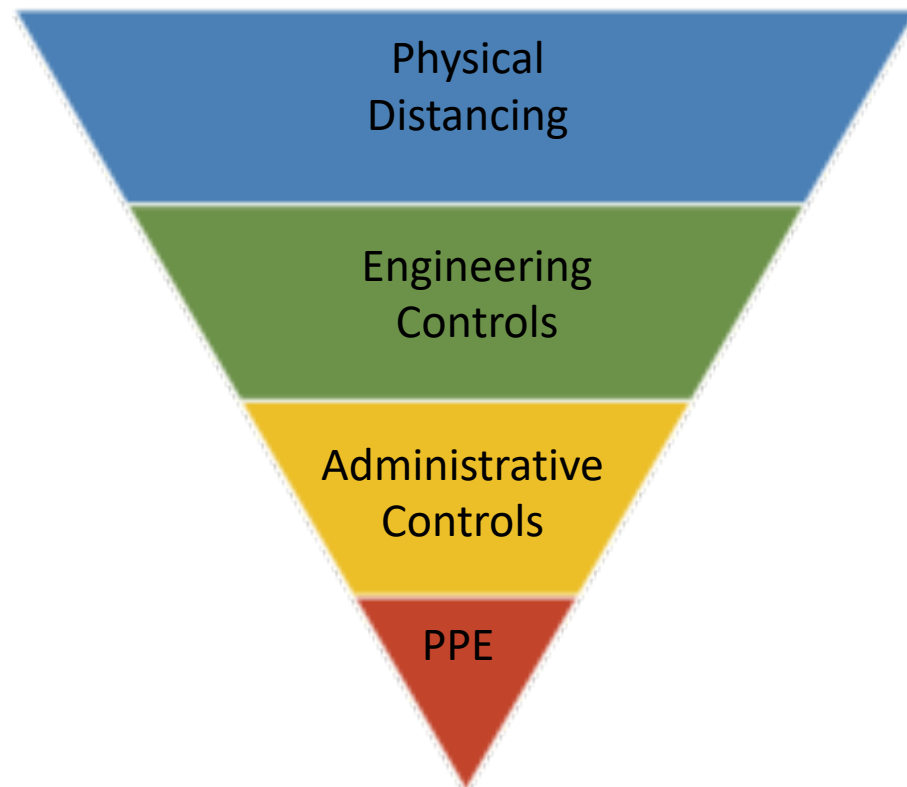
## – Phase II

- Formal process for evaluating risks and hazards
- Measure of the likelihood or probability of the risk or hazard – increased disease transmission and new cases
- Measure of the consequences or severity of impact – includes health impacts to individuals and society
- Measures to consider
  - contact intensity as a function of contact type (ranging from close to distant) and duration (ranging from brief to prolonged)
  - number of contacts as the approximate number of people in the setting at the same time, on average
  - modification potential (the degree to which mitigation measures can buy down those risks) is a qualitative assessment of the degree to which activities can be modified to reduce risk

$$\text{Likelihood} \times \text{Consequence} = \text{Risk}$$

# Mitigation Measures

Modified Hierarchy of Controls



- Physical Distancing — wherever possible having people work or access the business from home; this should include restructuring responsibilities to minimize the numbers of workers that need to be physically present, and reducing the number of patrons allowed in the business
- Engineering controls — creating physical barriers between people (e.g., Plexiglas panels between cashiers and customers) and reconfiguring space to enable people to be located apart (ideally, at least 6 feet)
- Administrative controls — redistributing responsibilities to reduce contact between individuals, using technology to facilitate communication and payment
- PPE — having people wear nonmedical cloth masks

# Summary – Reopening Requires....

- Epidemiological, Clinical, and Environmental Public Health Risk Assessments
- Business- or Facility-specific Plans for Reopening
  - Include Risk Assessment Results
  - Controls and Mitigation Measures to Reduce the Risks
  - Plan for Training of Employees
- Monitoring – ongoing surveillance of cases and monitoring of facility operations
- Evaluation – periodic evaluation and inspection of facility operations
- Actions and adjustments as necessary, based on current conditions and monitoring and evaluation results