

# Model for Mitigation of Workplace Transmission of COVID-19 Through Population-based Testing and Surveillance

## Background

- Employers are in need of plans for their employees to return to the workplace, which can be a source of COVID-19 transmission. Implementing measures that mitigate transmission in the workplace is important for employee safety.
- Accurate and real-time assessment of transmission and transmission risk is critical for such measures and depends on population health surveillance that enables preventive practices (eg, plans, testing, training) and policies (eg, sick leave, hazard pay).
- **Objective:** The authors describe an integrated population health surveillance system that uses population-based testing and real-time tracking for large, multisite employers to consider. The goals of these efforts are to reduce workplace SARS-CoV-2 transmission and maintain a safe working environment.

## Integrated Population Health Surveillance System

- **Workplace programs:** Employers must weigh many factors when designing and implementing programs to mitigate workplace transmission. Such programs can be facilitated by certain tools and processes.
  - **Maintaining confidentiality:** All information about employee illness must be kept confidential in compliance with the Americans with Disabilities Act (eg, separate from personnel files).
  - **Planning testing programs:** Planning and implementation require coordination between multiple groups (eg, Medical, Human Resources, Legal) and consideration of multiple cost factors (eg, testing, software for real-time monitoring of symptoms, contact tracing).
  - **Enhancing population screening:** Population sampling in regions with highest transmission and specimen pooling by a laboratory can contribute to higher efficiency and capacity.
  - **Tracking positivity rates:** High rates can indicate that transmission is high, testing is insufficient, or a region needs higher population testing.
  - **Integrating data systems:** Connecting data systems related to laboratory test and population data enables disease surveillance.
  - **Identifying asymptomatic and pre-symptomatic infection:** Tactics include testing asymptomatic individuals, monitoring trends in residential communities, monitoring symptoms of employees, and contact tracing.
- **Data integration and surveillance**
  - **Monitoring data in real-time:** Prompt identification of employees with COVID-19 can be facilitated by real-time testing and symptoms data.
  - **Identifying community risk:** Local risk indices indicate the chance of getting ill in a residential community; these indices can be factored into decisions about limiting or restarting local activities.
  - **Predicting “hot spots”:** Monitoring local risk indices can inform employers where to enhance “screening” testing, which can improve test use efficiency.
  - **Integrating data at a “command center”:** A command center integrates data from multiple sources and analyzes the data to determine risk at the individual, community, and workplace levels. It then graphically delivers insights to authorized users to assist with designing specific action plans.

## Conclusions

- Population-based testing and surveillance enabled by a system that integrates data from employee and community sources and analyzes the data may help employers develop action plans to keep employees safe as they return to the workplace.

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