Coronavirus Disease 2019 (COVID–19)

WEAR A MASK. PROTECT OTHERS.

An Approach for Monitoring and Evaluating Community Mitigation Strategies for COVID-19

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Overview

Framework: Community mitigation strategies to reduce or prevent COVID-19 transmission in the United States are described in CDC's framework for Implementation of Mitigation Strategies For Communities with Local COVID-19 Transmission. The implementation framework describes the current goals, guiding principles, and mitigation strategies to reduce or prevent local COVID-19 transmission.

Approach: This page describes CDC's approach to evaluating community mitigation strategies and provides overarching considerations to support state, territorial, or local health departments, tribal health organizations, or others in monitoring and evaluating COVID-19 community mitigation strategies, including a logic model, suggested monitoring and evaluation questions, and potential data sources. The approach considers outcomes that minimize COVID-19 morbidity and associated mortality, effects of community mitigation strategies on long-standing health disparities and social determinants of health, and how communities thrive socially, emotionally, and economically.

Using monitoring and evaluation findings

Monitoring and evaluation findings can be used to:

- Inform decision-making about strengthening, focusing, and relaxing mitigation strategies
- Understand individual and community factors that support or hinder mitigation behaviors
- Monitor disparities and social determinants of health and understand how different populations participate in and are affected by community mitigation strategies
- Effectively communicate information to the public based on culturally and linguistically appropriate strategies
- Ensure that the needs of disproportionately affected populations are met

- Strengthen community factors and outcomes related to epidemiology, healthcare capacity, social services, and public health capacity
- Disseminate lessons learned

Logic model overview

Logic Model: This logic model presents the U.S. Community Mitigation Strategy for COVID-19 at a high level and recognizes that many different stakeholders are working on specific elements of this strategy.

Roles: Governments, organizations, and individuals support and promote community mitigation strategies across multiple settings and sectors, while paying special attention to disproportionately affected populations.

Community mitigation strategies. Layering strategies across settings and sectors where people live, work, learn, and gather provides greater safeguards to reduce transmission. These strategies may be strengthened, focused, or relaxed based on local context. Through individual, community, and environmental actions, community mitigation strategies are implemented that:

- promote behaviors that prevent spread,
- maintain healthy environments,
- maintain healthy operations, and
- prepare for when someone gets sick;

And are designed to produce outcomes that:

- reduce exposure among individuals,
- reduce transmission,
- reduce burden on the health care system and enhance access to testing and contact tracing,
- with the long-term goals of minimizing COVID-19 morbidity and associated mortality.

Outcomes: Achieving these outcomes are essential to ensuring that communities thrive socially, emotionally, and economically. Working in collaboration, entities at federal, state and local levels can monitor and evaluate social, emotional, and economic indicators that may include: financial, food, and housing security; healthcare access and utilization (such as care seeking behaviors); physical and mental health; and community safety and violence with special consideration and attention to disproportionately affected populations.

Logic Model

- Issue recommendations
- Make policy changes
- Share information
- Commit to change
- Provide other supports

- Homes
- Educational institutions
- Childcare centers
- Recreational facilities
- Healthcare settings
- General workplaces
- Critical infrastructure workplaces
- Community and faith-based organizations
- Social gatherings and events

- People at higher risk for severe illness
- People at risk for negative physical mental or emotional health outcomes

Strategies   Outcomes   Impact

Factors that affect timing and selection of strategies as well as outcomes
- **Community:** Epidemiology; public health, organizations, and healthcare system capacity; characteristics, needs of disproportionately affected populations; and community lifelines
- **Individual:** Knowledge, attitudes, beliefs, motivation; social support; access to resources and ability to implement strategies; demographics

Implement community mitigation strategies that promote behaviors that prevent spread, maintain healthy environments and operations, and prepare for when someone gets sick

Individual actions
- Heighten personal protective measures
- Increase self-isolation practices

Community actions
- Increase physical distancing
- Limit movement and gatherings
- Restrict travel and borders
- Reduce and adapt services
- Conduct health screenings
- Close businesses and limit other services
- Dismiss schools
- Increase workplace administrative controls or flexible leave policies

Environmental actions
- Intensify cleaning and disinfection

Strengthen, focus, or relax mitigation strategies based on local context

Reduce exposure among individuals
- Reduce contact among individuals
- Reduce use of non-essential spaces and services
- Reduce exposure to virus on frequently touched surfaces

Reduce transmission
- Reduce total number of cases
- Reduce disparities of cases among population groups

Reduce burden on the healthcare system
- Reduce emergency dept. visits and hospitalizations
- Maintain ability to care for people with COVID-19
- Ability to maintain care for people with underlying medical conditions

Minimize COVID-19 morbidity and associated mortality

Thrive socially, emotionally, and economically

Critical considerations
- Ensure individual and community ability to adopt and sustain mitigation strategies
- Mitigate adverse effects and impacts on health disparities and social determinants of health
- Foster mental and emotional health and resilience
- Minimize negative physical, mental and emotional challenges related to mitigation strategies

Monitoring and evaluation questions, potential indicators and related data sources

Questions: The following overarching monitoring and evaluation questions can be adapted to meet community priorities and stakeholder needs.

Indicators and Data Sources: Indicators and data sources can be tailored to align with the context of the intended evaluation. All indicators and data sources used for monitoring and evaluation of community mitigation strategies should be high quality and should be collected ethically (e.g., with respect for persons, privacy, confidentiality) and scientifically (e.g.., with regard to validity, reliability, and representativeness). When available, use data sources with multiple time-points available for comparison. Indicators may be analyzed overall or to look at specific subgroups (e.g., urban vs. rural, by racial/ethnic population, socioeconomic groups, etc.). The following table provides a select number of example indicators and potential data sources and is not an exhaustive list. Consider data sources that best meet your monitoring and evaluation needs and refer to CDC's COVID-19 Secondary Data and Statistics for publicly available data sources. CDC does not endorse any non-CDC data sources.

Example evaluation questions

> Which community mitigation strategies do jurisdictions implement, and how and when are they implemented?

Example Indicators

- Description and timing of:
  - Stay-at-Home/Shelter-in-Place orders
  - Mass Gatherings orders
- Number/proportion of labor force that reports working remotely
- Number of Community- and Faith-Based Organizations or local leaders who are engaged to implement COVID-19 community-level mitigation strategies

Data Sources

- State/Local Policy Records, Executive Orders, and Legislative Actions (e.g., Stay-at-Home or Shelter-in-Place orders, school dismissals, Mass Gathering orders, travel orders, non-essential business closures, restrictions on non-urgent medical procedures)
- Survey Data on Individual and Organizational Behaviors (consider local and national surveys

To what extent do individuals and organizations practice community mitigation strategies?

Example Indicators

- Percent change in mobility (e.g., time spent at home, distance traveled, and by destination such as transit stations, retail/recreational, and worksites)[1]
- Number/proportion of population:
    - That report using masks outside the home in the last week
    - Who adhere to guidance in Stay-at-Home orders, Shelter-in-Place orders, and phased re-openings
    - Who report deciding not to travel or changing travel plans due to COVID-19
- Percentage change in consumer spending across business industries[1]

Data Sources

- Mobility Data[2]
- Survey Data on Individual and Organizational Behaviors (consider local and national surveys)
- Organizational policy records (e.g., school and childcare policies, business policies, shared & aggregate housing policies)
- Consumer Spending Data

What factors do communities use to assess readiness to strengthen, focus, or relax their mitigation strategies over time?

Example Indicators

- Total and incident COVID-19 tests/cases/hospitalizations/deaths
- Percentage of respiratory specimens testing positive for SARS-CoV-2
- Number/proportion of public spaces, workplaces, businesses, schools or homes practicing appropriate cleaning and disinfection practices

Data Sources

- COVID-19 Epidemiology, Community Characteristics, Healthcare Capacity, and Public Health Capacity Indicators[3]
- Survey Data on Individual and Organizational Behaviors (consider local and national surveys)
- State/Local Policy Records, Executive Orders, and Legislative Actions

What is the relationship between implementation of mitigation strategies and minimizing COVID-19 morbidity and associated mortality?

Example Indicators

- Total and incident COVID-19 tests/cases/deaths
- Percentage of respiratory specimens testing positive for SARS-CoV-2
- Description and timing of:
  - Stay-at-Home/Shelter-in-Place orders
  - Mass Gatherings orders

Data Sources

- COVID-19 Epidemiology, Community Characteristics, Healthcare Capacity, and Public Health Capacity Indicators[3]
- State/Local Policy Records, Executive Orders, and Legislative Actions

What, if any, impact have community mitigation strategies had on health disparities or social determinants of health?

Example Indicators

- Trends in excess cases, hospitalization, and mortality among disproportionately affected populations
- Number of calls to local/state hotline requesting housing assistance
- Vaccination coverage (e.g., universally recommended vaccines among young children, adolescents)
- Number/proportion of:
  - Workers filing unemployment claims
  - Eligible recipients enrolled in Women, Infant, and Children (WIC) /Supplemental Nutrition Assistance Program (SNAP) nutrition programs
  - Domestic violence calls to police
  - People who feel stress related to COVID-19 has had a negative impact on their mental health

Data Sources

- COVID-19 Epidemiology, Community Characteristics, Healthcare Capacity, and Public Health Capacity Indicators[3]
- State/local administrative records (e.g., unemployment claims, WIC/SNAP enrollment, foreclosures or evictions, state or local immunization records, 911 data from Emergency Medical Services)
- Survey Data on Individual Attitudes, Behaviors, and Quality of Life (consider local and national surveys)

1 Mobility data sources anonymously geolocate personal cellular devices to understand individual movement in communities and space between individuals.
2 Methods to calculate percent change will vary based on data availability. If available, consider comparing to a baseline value. Assess what is most feasible in your state/local jurisdiction
3 Data sources related to COVID-19 Epidemiology, Community Characteristics, Healthcare Capacity, and Public Healthcare Capacity should refer to existing indicators: CDC COVID Data Tracker or https://www.cdc.gov/coronavirus/2019-ncov/php/open-america/surveillance-data-analytics.html as well those being monitoring in your state/local jurisdiction.