



ANNEX I: Monitoring Mask Use in the COVID-19 Pandemic

Executive Summary

The use of face masks has been shown to reduce transmission of SARS-CoV-2, the virus that causes COVID-19. Along with washing hands and watching distance, wearing a mask is one of three key measures that people can take to decrease their own risk of contracting COVID-19 and decrease the chance that they may infect someone else. Though recommendations differ slightly by age group, the United States Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) recommend mask use for adults and children. The word “mask” in this document refers to any cloth face covering, medical or surgical face mask or respirator.

This document serves as an introduction to strategies and methods for measuring face mask use by public health entities. The percentage of people wearing masks in public indoor spaces is one of [15 essential indicators identified by Resolve to Save Lives](#) that can be used to inform decision-making. Data should be used to inform the public, governments and organizations on local mask-use patterns and to guide policies and evidence-based campaigns that promote mask-wearing and engage communities in protecting themselves from the ongoing threat of the COVID-19 pandemic.

Observing mask use

A. Data to collect

Two essential measures should be assessed in public indoor locations or any location where crowding may not allow for adequate physical distancing:

1. proportion of people who are wearing a mask.
2. proportion of people who are wearing a mask correctly.

There are also optional measures that could inform decision-making, though they will complicate data collection.

Optional measures include:

- Whether circumstances may explain why a person was observed not wearing a mask correctly (e.g., eating or drinking);
- Mask type;
- Role of each observed person in the public place; and
- Demographics (i.e., age, sex, race, ethnicity) of each observed person.

About Us

Vital Strategies is a global public health organization working in 70+ countries to strengthen public health systems. Resolve to Save Lives, an initiative of Vital Strategies, aims to prevent at least 100 million deaths from cardiovascular disease and epidemics. Through its Prevent Epidemics program, Resolve to Save Lives has rapidly leveraged existing networks to establish a multi-disciplinary, multi-pronged effort to support countries throughout Africa and beyond. This work is supported by Bloomberg Philanthropies, the Bill & Melinda Gates Foundation and Gates Philanthropy Partners, which is funded with support from the Chan Zuckerberg Initiative.

More information at
PreventEpidemics.org
ResolveToSaveLives.org
VitalStrategies.org

B. Collecting the data

There are several methods that may be used to measure mask use. Methods that involve direct data collection include in-person observation and observation of video (live or recorded). Because in-person observation is a good way to collect accurate, objective, timely measurements with fewer privacy concerns, it is the focus of our full-length technical guidance [Mask-Use Adherence Measurement Technical Reference](#). Another option for gathering data is to do so indirectly, by administering surveys in which people self-report mask use. Surveys should be administered systematically to minimize bias and, when possible, validated through comparison with data from direct observation.

For observational studies, it is important that data collected by different observers, from different locations and across time, can be compared and collated. Observers should be uniformly trained to recognize what constitutes a public indoor or crowded outdoor space, what constitutes a mask and what constitutes correct mask use; they must also be trained to collect, record, report, store and safeguard data. Selected observation points should be visited during different times of the day and on different days, on a rotational basis, to avoid observation biases.

Observation data should be collected using standardized techniques that reduce potential for human error and facilitate rapid data collation and analysis. Either interactive data collection forms on technology such as tablets or smartphones, or manual data collection forms may be used. Punch counters may facilitate the data collection process. As it is preferable that observations are made covertly in order to avoid the Hawthorne effect, a data collection tool that can be used discretely should be selected.

Reporting mask use

The proportion of people wearing masks and the proportion of people wearing masks correctly in public indoor or crowded outdoor locations should be reported as two separate outcome measures.

Analyzing and presenting these outcome measures separately can facilitate the creation of effective public health messaging strategies. Data should be periodically collected, analyzed and reported to allow for analysis of trends; ideally this should occur on a weekly basis. The results of monitoring should be publicly presented.

The location and timing of each observation should be recorded and stored for further analysis; this may help target public health interventions even if these data are not publicly presented. Jurisdictions may choose to collect, analyze and report additional information that may also be useful to targeted messaging campaigns.