



NOTICE OF SPECIAL BOARD OF HEALTH MEETING

Notice is hereby given that the Southwest District Health Board of Health will hold a Special Board of Health meeting on Thursday, July 23, 2020, at 10:00 a.m. at the Canyon County Courthouse, Courtroom 140, 1115 Albany Street, Caldwell, ID, 83605. The meeting room will have limited seating and will allow for social distancing. Face coverings will be available for those who choose to wear one. The meeting will be available for live streaming at [the SWDH You Tube page](#).

Please note public comments will not be taken during the Special Board of Health meeting on Thursday, July 23, 2020. Public comments specific to an agenda item for the July 23, 2020, meeting can be submitted at <https://www.surveymonkey.com/r/BOHpubliccomment07212020>. The period to submit public comments will close at 2:30 p.m. on Wednesday, July 22, 2020. Comments will be compiled and shared with board members in advance of the meeting and an overview presented at the Special Board of Health meeting.

The agenda has been simplified from earlier this week to dispel public speculation about the Board of Health's intent to impose a mandatory mask order.

AGENDA

Southwest District Health Special Board of Health Meeting
Thursday, July 23, 2020
10:00 a.m.
Canyon County Courthouse - Courtroom #140
1115 Albany Street, Caldwell, ID 83605

A = Board Action Required	G =Guidance	I = Informational item
10:00 AM	Call to order	Bryan Elliott, Board Chairman
10:01 AM	Pledge of Allegiance	All
10:03 AM	I Overview of public comments submitted electronically during comment period	Nikki Zogg
10:15 AM	A Discussion and possible decisions regarding mitigation strategies to slow the spread of COVID-19 and limit exposure to high risk populations including: 1. Recommendation to wear a face covering when the SWDH COVID-19 Health Alert Level is at or above Yellow (Low) in public areas where physical distancing of at least 6 feet between non-household members is not possible 2. Recommendation to limit the density of persons at events to a minimum of 1 person per 64 square feet of space when the SWDH COVID-19 Health Alert Level is at or above Yellow (Low) 3. Recommendation to temporarily suspend visitation to older adult living and correctional facilities when new cases of COVID-19 are detected within the facility or when the SWDH COVID-19 Health Alert Level is Red (High)	Chairman Elliott
10:30 AM	Adjourn	

Healthier Together

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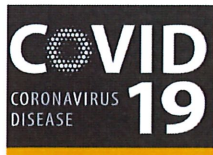
COVID-19

HEALTH ALERT LEVELS

What to know about Coronavirus Disease 2019 (COVID-19) Health Alert Levels:

- Health alert levels may be applied at a city, sub-region, and county.
- Different parts of a region may be at different alert levels. Alert levels can move up and down.
- The health alert levels, community risk and personal risk are cumulative. For example, Grey (Routine) is the base-level response, and moving to Yellow (Low) would include the risks and advisory of Grey (Routine). Always prepare for the next alert level.
- The column 'What Determines Risk' has two categories to consider when making decisions: Community Risk and Personal Risk.
- To accommodate physical distancing needs for large gatherings, the recommended capacity is a minimum of 1 person per 64 square feet. Only account for space where attendees can gather. Examples of space that should not be included in the estimate of available square footage include space allocated for food vendors, a concert stage, bounce houses, carnival equipment, etc.

RISK OF EXPOSURE WHEN VISITING PUBLIC SPACES	WHAT DETERMINES COMMUNITY RISK AND PERSONAL RISK	WHAT YOUR PUBLIC HEALTH DISTRICT ADVISES
RED HIGH	Community Risk <ul style="list-style-type: none"> • sustained disease transmission • widespread outbreaks • limited PPE supply, high demand • limited hospital capacity, high demand <hr/> Personal Risk <ul style="list-style-type: none"> • close contact with people outside of your immediate household 	<ul style="list-style-type: none"> • postpone non-essential and out of area travel • avoid gatherings of people from outside your household • remote work whenever available
ORANGE MEDIUM	Community Risk <ul style="list-style-type: none"> • evidence of community spread • elevated use of hospitals and ER • PPE supply is at risk <hr/> Personal Risk <ul style="list-style-type: none"> • church, restaurants, salon, tattoo/piercing parlor, elective medical procedures, school/childcare 	<ul style="list-style-type: none"> • minimize or postpone non-essential travel • avoid public gatherings where physical distancing is not possible • monitor for symptoms • enhanced safety measures for employees and customers
YELLOW LOW	Community Risk <ul style="list-style-type: none"> • sporadic imported cases • uptick in close contact transmission • single or isolated cluster outbreak <hr/> Personal Risk <ul style="list-style-type: none"> • bars, nightclubs, large events, gyms, close contact team sports, social and extended family gatherings 	<ul style="list-style-type: none"> • older adults, people with underlying medical conditions, and their caretakers limit close contact with the public • limit density of persons in a confined area - a minimum of 1 person per 64 square feet of space • use cloth face coverings in public where physical distancing is not possible
GRAY ROUTINE	Community Risk <ul style="list-style-type: none"> • heightened risk of importing COVID-19 • sporadic imported cases • sufficient PPE supply and hospital capacity <hr/> Personal Risk <ul style="list-style-type: none"> • grocery stores 	<ul style="list-style-type: none"> • wash hands frequently • cover cough and sneeze and then wash your hands • stay home when sick • clean and disinfect frequently touched surface areas daily • put distance between yourself and people outside your home (at least 6 feet)



For current COVID-19 information:

<https://phd3.idaho.gov/coronavirus/>

The COVID-19 Hotline is available Monday-Friday 8:00 AM-5:00 PM:

(208) 455-5411

Emergency Kit Checklist for Families:

<https://www.cdc.gov/childrenindisasters/checklists/kids-and-families.html>

Criteria for Movement between Health Alert Levels

USE OF DOCUMENT

This document establishes the criteria Southwest District Health (SWDH) will use to monitor COVID-19 disease trends and resources. The established criteria and related outputs will inform SWDH's Board of Health and guide decisions for moving between levels, placing or removing restrictions, or providing recommendations to local jurisdictions to place or remove restrictions.

GOAL

Southwest District Health aims to:

Mitigate the rapid spread of COVID-19 disease and related morbidity and mortality by reducing or maintaining the rate of R (the reproduction number of the virus), to prevent overwhelming first responders, the healthcare system, and personal protective equipment (PPE) supplies in our region.

CRITERIA

Epidemiology:

- New confirmed case trend: using calculated new daily cases per 10,000 population (seven day rolling average); + trend direction and rate (stratified by census tract or zip code, county, and/or district)
- Estimated death trend: New daily deaths per 10,000 population *100 (assuming benchmark 1-1.5% infection fatality rate) (seven day rolling average); + trend direction and rate (stratified by census tract or zip code, county, and/or district)
- New daily hospitalizations per 10,000 population (seven day rolling average); + trend direction and rate (stratified by census tract or zip code, county, and/or district)

Response Capacity:

- Testing, tracing, and monitoring (TTM)
- Use of other non-pharmaceutical interventions (e.g., social/physical distancing, face covers)
- Therapeutic capacity (e.g., hospital beds, ICU beds, ventilators, healthcare workforce)
- Protection capacity (capacity to identify and meet the needs of vulnerable populations (e.g., homeless, elderly, first responders))
- Disease surveillance capacity (e.g., funding and staffing for epidemiologists, contract tracers, and health monitors)

These COVID levels provide a map that helps decision-makers and community members know where they are and what mitigation strategies may be appropriated based on their community's level of disease spread. The grey level aligns with the CDC's low incidence plateau threshold. The levels communicate the intensity of effort needed for control of COVID at varying levels of community spread. In addition to paying attention to the levels, decision-makers should pay close attention to direction of trend and rate of change. While jurisdictions may plateau in yellow, in the orange level spread tends to have more velocity.

COVID Health Alert Level	Corresponding Community Mitigation Strategies
Red (High) >5 daily new cases per 10,000 people*	<p>At the red level, communities have reached a tipping point for uncontrolled spread and Southwest District Health <i>may</i> institute:</p> <ul style="list-style-type: none"> • education, information, and messages, AND/OR • recommendations for use of face coverings, AND/OR • recommendations for 1 person per 64 square feet of space, AND/OR • recommendations for remote work when available, AND/OR • recommendations to vulnerable populations to limit participation in high-risk for exposure activities like some team sports requiring close contact (e.g., football, basketball), attending events where physical distancing cannot be maintained (e.g., general admission concerts and other public entertainment events), family or social gatherings that bring people together from different households, AND/OR • recommendations limited visitation to long term care and correctional facilities.
Orange (Medium) 2.5-5 daily new cases per 10,000 people*	<p>At orange levels, community spread has accelerated. Southwest District Health <i>may</i> institute:</p> <ul style="list-style-type: none"> • education, information, and messages, AND/OR • recommendations for 1 person per 64 square feet of space, AND/OR • recommendations for use of face coverings, AND/OR • recommendations to vulnerable populations to limit participation in high-risk for exposure activities like some team sports requiring close contact (e.g., football, basketball) and attending events where physical distancing cannot be maintained (e.g., general admission concerts and other public entertainment events).
Yellow (Low) 1-2.5 daily new cases per 10,000 people*	<p>At yellow levels, there may be sporadic imported cases, uptick in close contact transmission, or isolated cluster outbreaks. Southwest District Health <i>may</i> institute:</p> <ul style="list-style-type: none"> • education, information, and messages • recommendations for 1 person per 64 square feet of space, AND/OR • recommendations for use of face coverings.
Grey (Routine) <1 daily new cases per 10,000 people*	<p>At the grey level, communities are on track for containment so long as they maintain routine levels of viral testing (i.e., this is not a reference to antibody testing) and contact tracing, sufficient to control spikes and outbreaks. Viral testing should be used both for symptomatic and asymptomatic individuals, with the latter needed to detect cases flowing from exposure, and to routinely screen for infections in congregate settings and other critical context scenarios (e.g., elective surgery, hospital admission without symptoms suggestive of COVID-19, etc.), or as requirements of disease surveillance programs.</p>

* The 7-day daily average incidence of new case range will be used along with other data thresholds to make decisions when considering moving between health alert levels and will not be used as a single indicator/cutoff/trigger to move to a higher or lower level.

Testing, tracing, and monitoring (TTM) Key Performance Indicators

Routine level of TTM resources are used in communities that are grey to contain spikes and outbreaks. For communities at the grey level, the goal is to have adequate TTM resources to stop community spread. It continues to be important to measure communities along all capability measures: TTM capability, other NPI capability, protection capability, treatment capability, and surveillance capability.

Surge levels of TTM resources are needed once there is community spread. Communities at the yellow level have spikes that may also indicate community spread. Jurisdictions at Orange and Red levels are contexts with higher community spread. These jurisdictions at orange or red need “surge” levels of TTM resources to drive the disease back. Once a community has progressed along the path toward zero and returned to grey level status, the levels of testing capacity and contact tracing it needed should dramatically decline.

A **mitigation surge** targets efforts and resources to broad and accessible testing, lowering the test positivity rate to <10%, and for 60% of positives not coming from critical context testing (e.g., congregate settings, elective surgeries, hospital admissions without symptoms suggestive of COVID-19, etc.) to have come from contact tracing.

A surge of testing and tracing resources is a temporary need; only the resources needed at the routine level are permanent until a vaccine becomes widely available, presuming effective and durable immunity.

Key Performance Indicators for Contact Tracing are as follows:

	Routine/Grey	Mitigations/Yellow, Orange or Red	Data Source
Contact Tracing			
Capacity			
Number of Tracers	1 tracers per 10k population (includes epidemiologists, contract tracers, and monitors)	2 tracers per 10k population with use of SaraAlert	Operations Section Chief/Epi Branch
Performance			
New COVID-19 cases with and without a known source	>90%	>80%	SaraAlert & Phone only database
Percent of cases with follow up initiated within 24 hours	95%	95%	NBS
New COVID-19 cases and time to follow up	24 hours	24 hours	SaraAlert & Phone only database
Percent of COVID-19 cases not traced to a known source	10%	30%	NBS
Percent of contacts with symptoms at time of trace (i.e., first contact by epi)	Close to zero	Close to zero	SaraAlert & Phone only database
Percent traced contacts in quarantine, isolation, or active monitoring	90%	90%	SaraAlert & Phone only database
Number traced contacts receiving supports (e.g., housing assistance or transfer for cohorting/isolation) <ul style="list-style-type: none"> • Homeless • LTCF residents • First responders • Healthcare workers 	24 hours of diagnosis	12 hours of diagnosis	SaraAlert or Epi Team Lead or Liaison
Percent of symptomatic traced contacts tested*	90%	90%	SaraAlert, phone only database, NBS, & Epi Team Lead
*asymptomatic screening may be recommended when resources and reliable testing is available			

Key Performance Indicators for Viral (PCR) Testing are as follows:

	Maintenance/ Grey Level	Mitigation/Yellow, Orange, Red Levels	Data Source
Viral Testing			
Capacity			
Access	Anyone should be able to access a test regardless of symptoms	Anyone should be able to access a test regardless of symptoms	Testing Branch or County Emergency Manager
Supply	Sufficient to test for therapeutic purposes; hot spot testing purposes; contact tracing purposes for several links of the chain following from an index case to further positives to their contacts, and so on; surveillance purposes; and critical context purposes.	Sufficient to test for therapeutic purposes, hot spot testing purposes, surveillance purposes, and critical context purposes.	Testing Branch or County Emergency Manager
Performance			
Turnaround time	24 hours	24 hours	NBS
Positive Test Ratio	<1%	Less than 10%	DHW

TIMELINE FOR MEASUREMENTS

Data to support the corresponding Health Alert Level and any related mitigation strategies will be posted each Monday and Thursday by no later than noon.

Data will be provided at the county level and by town or city within SWDH except in areas where the population size is too small to report accurate data. Additionally, some data will be available at only the district level (e.g., ED utilization and hospitalization).

Health Alert Level determinations will be made on Mondays based on the prior two weeks starting on a Sunday and ending on a Saturday. At least two full weeks will be spent in a level before determinations to move to a more or less restrictive level will be made.

Determinations to move to a higher alert level may be made *at any time* if any of the criteria below are met:

- Crisis standards of care are implemented
- Senior leadership at a local hospital indicates that further increases in cases in the community will overwhelm local hospital capacity
- Epidemiologic evidence of a new or emerging significant risk to the public's health

REFERENCES

Idaho Stay Open Plan (Draft)

Key Metrics for COVID Suppression: A framework for policy makers and the public. July 1, 2020.
https://globalepidemics.org/wp-content/uploads/2020/06/key_metrics_and_indicators_v4.pdf



COVID-19 Health Alert Levels: Data for Deciding the Health Alert Level

QUANTITATIVE DATA

Syndromic

- Emergency room utilization by individuals with COVID-like illness
- Number of persons under monitoring (these are people who have been exposed to COVID-19, but not yet developed symptoms)

Epidemiologic

- Number of new case trend (confirmed and probable): Newly daily cases per 10,000 population (seven-day rolling average)
- Number of long-term care facilities with COVID-19 cases currently under investigation, monitoring, or testing

Healthcare

- Number of hospitalizations of individuals diagnosed with COVID-19
- 10-day supply of personal protective equipment (PPE) in hospitals
- Number of healthcare workers sick with COVID-19

QUALITATIVE DATA

Healthcare: Concerns raised by organizations (e.g., long-term care facilities, hospitals, or first responders) regarding COVID-19 observations and trends, ability or capacity to respond, or ability to secure necessary PPE or other medical resources.

Local Elected Officials: Concerns raised by town, city, or county elected officials on behalf of their constituents regarding impacts to health, safety, well-being and community vitality.

Epidemiologic: Descriptive data on incidence of new cases, cluster outbreaks, and levels of community transmission within defined geographic areas (e.g., city, sub-region, county).

GEOGRAPHIC BOUNDARIES

Health Alert Levels will be established for each county and for some towns or cities within the respective county using census tract or zip code data. Southwest District Health includes:

- Adams County
- Canyon County
- Gem County
- Owyhee County
- Payette County
- Washington County

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TIMELINE FOR MEASUREMENTS

Data will be posted to the SWDH Tableau Dashboard each Monday and Thursday, by 12 noon.

Health Alert Level assessments will be made on Mondays based on the prior two weeks data (assessing 7-day averages of quantitative data points), starting on a Sunday and ending on a Saturday. At least two full weeks will be spent in a Health Alert Level before determinations to move to a lower less severe level (e.g., from High to Medium). Southwest District Health will utilize *Criteria for Movement between Health Alert Levels* to guide decisions on movement between levels.

HEALTH ALERT LEVEL GREY - ROUTINE

Health Alert Level Grey is determined when some or all of the following COVID-19 thresholds are met.

Data Point	Threshold
Emergency department (ED) utilization by individuals with COVID-like illness	<ul style="list-style-type: none"> no reported ED utilization data from the population, OR sporadic visits (>14 days apart), AND visits are imported or associated with an exposure within a household
Number of persons under monitoring	<ul style="list-style-type: none"> no reported close contacts under monitoring, OR close contacts under monitoring are associated with imported cases¹ or exposures within a household
Number of new cases (confirmed and probable): Newly daily cases per 10,000 population (seven-day rolling average)	<ul style="list-style-type: none"> in rural/frontier communities²: number of new cases occur sporadically (>14 days apart), OR in suburban/urban communities³: number of new cases are primarily imported or associated with an exposure within a household, OR <1 daily new case per 10,000 people
Number of long-term care facilities with COVID-19 cases currently under investigation, monitoring, or testing	<ul style="list-style-type: none"> no long-term care facilities have cases under investigation, monitoring, or testing, OR a case is imported, but no additional cases are reported within the facility following 14 days since last exposure
Number of hospitalizations of individuals diagnosed with COVID-19	<ul style="list-style-type: none"> no hospitalizations from the population, OR hospitalizations are due to imported cases, OR hospitalizations are due to household transmission associated with an imported case
10-day supply of personal protective equipment (PPE) in hospitals	<ul style="list-style-type: none"> 10 days of PPE available to local area hospital(s)
Number of healthcare workers sick with COVID-19	<ul style="list-style-type: none"> no reported cases in healthcare workers, OR confirmed imported case in a healthcare worker, OR healthcare worker was exposed to a household member that imported the disease
Healthcare industry input	no concerns raised by a healthcare industry (e.g., long-term care facilities, hospitals, or first responders) regarding their observations, ability or capacity to respond, or ability to secure necessary PPE or other medical resources.
Local elected official input	no concerns raised by town, city, or county elected officials on behalf of their constituents regarding impacts to health, safety, well-being, and community vitality.
Epidemiologists' input	descriptive data indicate limited risk of importing COVID-19 to a specific geographic area or sporadic cases are identified.

¹ Imported case(s) refer to individuals exposed to COVID-19 outside of the defined jurisdiction (e.g., city, sub-region, county, state)

² Populations less than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

³ Populations greater than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

HEALTH ALERT LEVEL YELLOW – LOW

Health Alert Level Yellow is determined when some or all of the following COVID-19 thresholds are met.

Data Point	Threshold
Emergency department (ED) utilization by individuals with COVID-like illness	<ul style="list-style-type: none"> low-volume visits (day(s) between visits or <5 visits/day), OR visits are imported or associated with an exposure within a household or shared living space
Number of persons under monitoring	<ul style="list-style-type: none"> < 10 close contacts under monitoring/day, OR close contacts under monitoring are associated with imported cases¹ or exposures within a household
Number of new cases (confirmed and probable): Newly daily cases per 10,000 population (seven-day rolling average)	<ul style="list-style-type: none"> in rural/frontier communities²: number of new cases occur sporadically, OR in suburban/urban communities³: number of new cases/day 1-2.5 daily new cases per 10,000 people, OR new cases are associated with a single or isolated cluster outbreak
Number of long-term care facilities with COVID-19 cases currently under investigation, monitoring, or testing	<ul style="list-style-type: none"> no long-term care facilities have cases under investigation, monitoring, or testing, OR a case is imported, but no additional cases are reported within the facility following 14 days since last exposure
Number of hospitalizations of individuals diagnosed with COVID-19	<ul style="list-style-type: none"> < 5 hospitalizations from the population, OR hospitalizations are due to imported cases, OR hospitalizations are due to household transmission associated with an imported case
10-day supply of personal protective equipment (PPE) in hospitals	<ul style="list-style-type: none"> more than 10 days of PPE available to local area hospital(s)
Number of healthcare workers sick with COVID-19	<ul style="list-style-type: none"> < 1 reported case/day in healthcare workers
Healthcare industry input	no concerns raised by a healthcare industry (e.g., long-term care facilities, hospitals, or first responders) regarding their observations, ability or capacity to respond, or ability to secure necessary PPE or other medical resources.
Local elected official input	no concerns raised by town, city, or county elected officials on behalf of their constituents regarding impacts to health, safety, well-being, and community vitality.
Epidemiologists' input	descriptive data indicate sporadic imported cases within a specific geographic, occasional close contact transmission, and/or single or isolated cluster outbreaks.

¹ Imported case(s) refer to individuals exposed to COVID-19 outside of the defined jurisdiction (e.g., city, sub- region, county, state)

² Populations less than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

³ Populations greater than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

HEALTH ALERT LEVEL ORANGE - MEDIUM

Health Alert Level Orange is determined when some or all of the following COVID-19 thresholds are met.

Data Point	Threshold
Emergency department (ED) utilization by individuals with COVID-like illness	<ul style="list-style-type: none"> elevated ED visits (daily visits or <10 visits/day)
Number of persons under monitoring	<ul style="list-style-type: none"> < 20 close contacts under monitoring/day, OR close contacts under monitoring are associated with social gatherings/events
Number of new cases (confirmed and probable): Newly daily cases per 10,000 population (seven-day rolling average)	<ul style="list-style-type: none"> in rural/frontier communities²: number of new cases occur < 14 days apart, OR in suburban/urban communities³: number of new cases/day 2.5-5 daily new cases per 10,000 people, OR community spread is identified, OR multiple cluster outbreaks
Number of long-term care facilities with COVID-19 cases currently under investigation, monitoring, or testing	<ul style="list-style-type: none"> one or more long-term care facilities have a case(s) under investigation, monitoring, or testing, OR disease transmission is occurring within a facility but contained to one area/unit/hall
Number of hospitalizations of individuals diagnosed with COVID-19	<ul style="list-style-type: none"> < 10 hospitalizations from the population
10-day supply of personal protective equipment (PPE) in hospitals	<ul style="list-style-type: none"> current supply or ability to reorder PPE may be at risk
Number of healthcare workers sick with COVID-19	<ul style="list-style-type: none"> < 2 reported cases/day in healthcare workers
Healthcare industry input	elevated concern by a healthcare industry (e.g., long-term care facilities, hospitals, or first responders) regarding their observations, ability or capacity to respond, or ability to secure necessary PPE or other medical resources.
Local elected official input	elevated concerns raised by town, city, or county elected officials on behalf of their constituents regarding impacts to health, safety, well-being, and community vitality.
Epidemiologists' input	descriptive data indicate community spread, meaning confirmed cases are uncertain of where they were exposed to the disease.

¹ Imported case(s) refer to individuals exposed to COVID-19 outside of the defined jurisdiction (e.g., city, sub-region, county, state)

² Populations less than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

³ Populations greater than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

HEALTH ALERT LEVEL RED - HIGH

Health Alert Level Red is determined when some or all of the following COVID-19 thresholds are met.

Data Point	Threshold
Emergency department (ED) utilization by individuals with COVID-like illness	<ul style="list-style-type: none"> elevated ED visits (daily visits or >10 visits/day)
Number of persons under monitoring	<ul style="list-style-type: none"> > 20 new close contacts under monitoring/day
Number of new cases (confirmed and probable): Newly daily cases per 10,000 population (seven-day rolling average)	<ul style="list-style-type: none"> in rural/frontier communities²: number of new cases occur < 7 days apart, OR in suburban/urban communities³: number of new cases/day > 5 daily new cases per 10,000 people, OR sustained community spread, OR widespread outbreaks
Number of long-term care facilities with COVID-19 cases currently under investigation, monitoring, or testing	<ul style="list-style-type: none"> one or more long-term care facilities have a case(s) under investigation, monitoring, or testing, OR uncontained disease transmission is occurring within a facility
Number of hospitalizations of individuals diagnosed with COVID-19	<ul style="list-style-type: none"> > 10 hospitalizations in a defined population, OR increasing trend or predictive modeling indicates possible implementation of Crisis Standards of Care Plans
10-day supply of personal protective equipment (PPE) in hospitals	<ul style="list-style-type: none"> current supply or ability to reorder PPE may be at risk, OR consideration being given to implement Crisis Standards of Care due to lack of PPE
Number of healthcare workers sick with COVID-19	<ul style="list-style-type: none"> > 2 reported cases/day in healthcare workers, OR consideration being given to implement Crisis Standards of care due to healthcare worker shortage
Healthcare industry input	concern by a healthcare industry (e.g., long-term care facilities, hospitals, or first responders) regarding their observations, ability or capacity to respond, or ability to secure necessary PPE or other medical resources.
Local elected official input	concerns raised by town, city, or county elected officials on behalf of their constituents regarding impacts to health, safety, well-being, and community vitality.
Epidemiologists' input	descriptive data indicate sustained community spread and/or widespread outbreaks.

¹ Imported case(s) refer to individuals exposed to COVID-19 outside of the defined jurisdiction (e.g., city, sub-region, county, state)

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³ Populations greater than 20,000 in Adams, Canyon, Gem, Owyhee, Payette, and Washington Counties

Special Board of Health Meeting

7/23/2020

Public Comment from Local Hospitals

Saint Alphonsus

Re: Comment Letter for Southwest District Health Board – Saint Alphonsus

Via e-mail @ publichealthidaho@phd3.idaho.gov)

July 17, 2020

Dear Southwest District Health Board Members:

I had looked forward to presenting comments to all of you today during your board meeting, but due to the unfortunate circumstances leading to cancellation of the meeting, I'm writing to provide some of the comments and data I had planned to deliver during my presentation.

As you may know, our leadership team at Saint Alphonsus has been working closely with our healthcare partners across the valley throughout this pandemic and held a joint press conference on Tuesday (see link for full video: <https://youtu.be/Gglu0KNutqs>). We join with our colleagues at St. Luke's in mourning the loss of Canyon County nurse practitioner Samantha Hickey to the COVID virus. This is a tremendous loss to our community and a stark reminder to all of us, that COVID can affect even the young and healthy, that our frontline healthcare workers are doing nothing short of heroic work, and we send our heartfelt condolences to Samantha's family and colleagues.

We are seeing alarming increases in COVID cases and hospitalizations. The COVID train has left the station. If we do not reverse this trend, we are heading for a crisis like has been seen in New York, Arizona, and Texas. August will be too late, we must take action now.

Our region is experiencing a very high prevalence per capita of new COVID cases. As a reference point, only a couple months ago during the first wave we experienced, our active case rate was 7 per 100,000, and in the past couple months the rate has increased to over 300 cases per 100,000 population. In the space of a month we have seen our positive test rate increase from 3.4% to 20% across our Saint Alphonsus facilities. We are also having a corresponding increase in COVID patients worsening to the point that they require hospitalization. Our Nampa Intensive Care Unit is now 50% full of COVID-19 patients.

The youngest critically ill patient we have cared for at Saint Alphonsus was 21 years old, and has done well but had a difficult course of care. The largest growth in COVID positive patients is in the age group under 30 years old – we would like to see that change.

Since March we have been on a roller coaster of ups and downs – and while we are experienced in dealing with emergencies, this has been a sustained emergency that has required pulling our colleagues away from providing other services to be “all hands on deck” addressing COVID readiness, response and recovery for months on end.

We stood up an extensive incident command infrastructure (over 200 colleagues) early on as COVID was emerging nationally (before COVID was even in Idaho), and while we were briefly able to back off to meeting 3 times/week in May after the initial wave subsided, we recently resumed daily incident command meetings due to the surge we are all experiencing.

We have experienced tremendous growth in volumes of COVID inpatients across our health system and have grave concerns about the slope of this trajectory:

- 4 weeks ago: 3 inpatients, zero in our Nampa hospital
- 3 weeks ago: 8 inpatients, zero in our Nampa hospital
- 2 weeks ago: 13 inpatients, zero in our Nampa hospital
- 1 week ago: 28 inpatients, 2 of those in our Nampa Hospital in our ICU
- This week: 58 inpatients, 9 of those in our Nampa Hospital in our ICU
- Next week: We anticipate 50+ patients and more than 50% of our Nampa ICU dedicated to COVID patients. At this rate we will no longer have traditional ICU beds available in 2-3 weeks.

Based on our predictive modeling, we are looking at a potential doubling of COVID inpatient volume by mid-August, which would consume at least half of our total inpatient capacity, in the midst of trauma season and ongoing need for capacity for other health conditions. We have an opportunity to change that trend.

On the testing front, one month ago we were testing 20-40 people per day at our testing sites, and as of last week we were up to 800 tests per day and had to scale back our testing criteria to focus only on symptomatic patients because we must focus on those who require confirmation of COVID to receive appropriate treatment. New and experimental therapeutics do show some promise but are not without risks. Convalescent plasma and remdesivir do have toxicities so we must be certain we are giving them to patients we are certain have COVID.

Early on we shut down our elective procedures to focus on COVID readiness, and while we were in the shelter-in-place period we saw significant flattening of the curve and reduced inpatient COVID admissions to a point where we could start to focus on recovery and ramp elective procedures back up. Now we are again in the midst of considering shutting down and limiting elective procedures given the surge in new cases and hospitalizations, so we can again fully focus our resources on readiness and response during this surge period.

We have seen the supply chain getting stronger for Personal Protective Equipment (PPE); however we are starting to see fractures once again in the supply chain regarding pharmaceuticals, PPE and testing reagent. We are dependent on what is happening nationally and these shortages impact our ability to be able to test and care for people in a timely manner.

In conclusion, the numbers are frightening, the trends are concerning, but we have opportunity to do something about it as a community. Our healthcare workers need the community's help. We want to be able to have the availability to respond to all the community's healthcare needs from heart attacks to cancer, to orthopedic injuries, without having to be all-consumed by the pandemic.

We are asking for the community to be more diligent in wearing face coverings, keeping physical distancing, and being disciplined about washing hands. Evidence shows that adherence to these practices will reduce the COVID burden and help us to keep our economy moving and avoid unnecessary death in our communities.

We are also calling on our partners in public health with the Southwest District Health Board to demonstrate leadership by mandating wearing face coverings in public places where distancing cannot be maintained.

Thank you for your service to the residents of Health District, and I look forward to the opportunity to speak with you once the meeting is rescheduled.

Sincerely,

Travis P. Leach | MBA

President

Saint Alphonsus Medical Center Nampa

4300 E. Flamingo Ave., Nampa, ID 83687

Office: 208-205-0055 | Travis.Leach@saintalphonsus.org

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[#SaintAlsForLife](#)

Valor Health

Valor Health is an independent, county-owned critical access health system serving Emmett, Gem County, and surrounding areas. We are the main health provider for this demographic area serving about 18,000 people.

- Current status
 - We are the only location in Gem County assessing patients and testing for COVID.
 - Most of our testing had been for Gem County residents. Recently we have seen an increased demand for testing from Ada and Canyon residents due to lack of testing access in their areas.
 - Our percent positivity has been increasing rapidly and is now up to 9%.
 - Our frontline team has been testing non-stop for 4 months – we are running into fatigue issues. Additionally, these frontline staff are at higher risk for exposure and have been out of work multiple times either related to symptoms or fatigue. We have limited back-up providers and staff. We are concerned about managing this situation long term, especially if it worsens.
 - We had a large influx this past weekend in emergency patients coming in for COVID related symptoms. This past week 21% of patients presented with COVID related symptoms. Two of those patients were transferred to larger hospital for more intensive care. For perspective, we usually have 2-3 total patients daily in our small hospital.
 - We are expecting another uptick in testing and cases related to a recent community event over the weekend. There are other large events in the upcoming weeks.
- At one point during this pandemic we had 41% of our workforce out of work or actively monitoring for COVID symptoms. Currently 28% are out or being monitored and 3% of our employees are testing positive (that is out of 22% total employees tested).
- Gem County, until recently, had been fairly “untouched” by COVID with limited positive cases. In the last 4 weeks the cases have increased 83% with 33% increase in just the last 4 days.
- Risks –
 - Long term exposure and testing put our providers/staff at risk of exposure and exhaustion.
 - Roll back of taking care of patients for reasons other than COVID and doing limited procedures, including surgeries, would be concerning for those high-risk patients needing care and would be a significant negative impact on our financial survival.

The situation is getting worse and we will not be able to keep up. We support a mandatory masking order in order to decrease the rate of spread in our community.

Thanks.

Brad Turpen, FACHE, FACMPE
Chief Executive Officer
1202 E. Locust
Emmett, ID 83617
(208) 999-3870

Weiser Memorial

For those that aren't that familiar with Weiser Memorial Hospital, we are an independent, taxing district critical access hospital serving Washington County and surrounding areas.

- Current status – WMH along with our Family Medical Clinic are assessing patients and testing for COVID. There is another medical clinic in Weiser (2 Rivers Medical Clinic). They assess their patients for COVID, but any patient needing testing is sent to our lab.
 - In the last week, apx 10% of the patients presented for covid related symptoms in our ED, the Family Medical Clinic walk-in clinic tested apx 62% for COVID.
 - We have had 91 positives out of 1044 we have swabbed and tested for (8.7% positive).
 - We have 0 COVID inpatients. We have had a total of 2 COVID inpatients with an ave length of stay at 1.5 days.
 - We have had a one staff member (physician) contract COVID, community acquired (now fully recovered).
 - Currently we have 2 employees quarantined. Both are being tracked as community spread.
- Risks/Concerns –
 - Front line Providers and staff at risk of exposure and exhaustion.
 - PPE supplies, specifically gowns and medium gloves.
 - Testing Reagent supply (low nationwide and how that will affect us)
 - If schools reopen in the fall, how will the workforce potentially be affected? Parents (staff) will have to quarantine with children for up to 14 days potentially affecting staffing levels.

We share the position of others that for us to prevent this from reaching crisis mode, we need to slow the spread and that is through masking, proper hand hygiene and social distancing. It is disheartening to me that we would need a mandate for people to do the right thing, but that appears to be where we are headed.

Steven D Hale, FACHE

Chief Executive Officer

Weiser Memorial Hospital

645 E. 5th St

Weiser, ID 83672

O:208-549-4450

C: 808-282-6001

shale@weiserhospital.org

West Valley

July 21, 2020

Dear Southwest District Health Board Members:

Thank you for gathering to discuss a very serious situation facing our area. This pandemic has been ever evolving for all us, full of many unknowns. What we do know is that right now we are seeing a significant surge in COVID-19 patients. While at this time we are managing the current volumes we are very concerned that the current trajectory will exhaust our capacity very quickly.

The increase in community spread of COVID is affecting our hospital in multiple ways:

1. Hospitalizations
 - a. We have admitted 53 patients since March. 92% of those were admitted since June 24.
 - b. We admitted 15 patients last week and are on pace to exceed that this week.
 - c. We currently have 13 inpatients with 5 in the ICU. This is roughly 25% of our overall census and 35% of our ICU census. This has been a fairly typical distribution of the patient status. We have had as many as 4 of our 6 ventilators in use at one time.
2. Emergency Department visits
 - a. In May we were seeing an average of 2 patients a day with COVID-like symptoms that met criteria to be tested. In June that average was 6 per day. July is currently averaging at nearly 12 patients per day.
 - b. Our overall positive rate is 16.6% since March. In July, 28% of the patients presenting with respiratory symptoms are positive. March through May nearly 0% of the patients presenting with respiratory symptoms were positive.
3. Staff shortages
 - a. We have more ill calls than usual which further affects our ability to care for patients. We currently have 24 employees out of work – over the last several weeks this number has been as high as 33 and as low as 19.
 - b. Many employees have been affected by COVID – whether it's themselves or someone they care for.
 - c. Most of our employees who have become sick with COVID have been exposed in the community.
4. Personal Protective Equipment
 - a. We have ample supply of masks, but we have exhausted our primary supply of isolation gowns. We have a temporary substitute and are working to replenish those resources to keep our staff protected. The material used to make disposable isolation gowns is in short supply – that material is also used to make hair coverings and shoe covers.
5. Procedures

- a. We are beginning to reduce scheduled procedures and some outpatient services due to staffing and the need to limit activity within the hospital.
- b. If volumes continue to rise we will likely need to further reduce non-urgent services. While these are scheduled in advance, they are all necessary.

We share the position of others that for us to prevent this from reaching crisis mode, we need to slow the spread and that is through masking and social distancing.

The science behind masking is clear. The purpose of wearing masks in the community is to protect others. This virus is not like every other virus – it is highly contagious, it can be spread by asymptomatic carriers, and most people do not get dangerously sick. However, for those who do get severely ill, there are no good therapies or treatments and the mortality rate is much higher than other respiratory illnesses. While we can all agree if you're sick, you should stay home, the problem is that many who don't feel sick may also be spreading the disease unknowingly. Wearing masks will allow us to keep businesses open and our economy functioning.

It saddens me that we need a mandate for people to do the right thing, but if people aren't going to wear masks and businesses aren't going to require masks, then we need to take action to protect our community and our economy.

Thank you for your time.

Sincerely,

A handwritten signature in black ink, appearing to read "Betsy Hunsicker", with a long horizontal flourish extending to the right.

Betsy Hunsicker

West Valley Medical Center

Chief Executive Officer

St. Luke's Comments for Southwest District Health Board of Health Meeting
Submitted July 22, 2020

St. Luke's appreciates the opportunity to provide comments to the Southwest District Health Board of Health as the Board considers implementation of measures to mitigate the substantial spread of COVID-19 within the District, and in particular, in Canyon County. St. Luke's experience indicates that the level of spread and the lack of community compliance with mitigation efforts are creating a crisis in Canyon County and the greater Treasure Valley. We strongly support the implementation of measures that will impact the ongoing exponential increase in cases in the community: including a requirement for face coverings, limitations on mass gatherings, and limitations on visitation to congregate living facilities. We have attached our FAQs related to face coverings for your reference. We have seen that many more people wear face coverings when mandated than when only recommended, even without enforcement.

We are seeing an alarming increase in the number of coronavirus cases in Idaho and in Canyon County specifically.

- In the first 110 days of Idaho's Covid-19 experience (March 13 through June 30), we had 5,552 confirmed cases. For the first 20 days in July, we have 8,800, or 60% + of cases.
- In Canyon County, 2,175 of the 3,493 cases (62.27%) have been reported July 5-July 21. Last week alone, 1,045 cases were reported for Canyon County. Of the testing done by St. Luke's for the two weeks 7/6-7/20, we had a positivity rate of 20.34% for Nampa. Systemwide, the rate was approximately 15%.
- Hospitalizations are increasing rapidly. At St. Luke's, we have seen a dramatic increase in COVID patients:
 - June 26: 20 COVID-19 related admissions
 - July 2nd: 40 (53.8% increase from prior week)
 - July 7th: 51 (27.5% increase from prior week)
 - July 14: 77 (51% increase from prior week)
 - July 21st: 95 (23% increase from prior week)

On Monday of this week, St. Luke's experienced an all-time high of 100 COVID hospitalizations. On Tuesday morning, our ICUs in Nampa and Meridian were both full (except for one ICU bed in Meridian that is kept open for patients who "code," meaning require resuscitation). In addition to COVID patients, our ICUs continue to care for other critical patients, including those who have suffered heart attacks and strokes. **Any increase in COVID activity is added on top of this activity.** It does not decrease any other emergent or urgent health care needs. The rate of rise in COVID activity in our communities is staggering. Over the last three weeks, our ICUs have consistently had approximately 30% more patients than we had at the same time last year. We have consistently had at least 100% more patients on ventilators.

We can shift resources to provide more beds for COVID patients, but this is dependent upon not doing other things and is dependent upon being able to staff those beds with healthcare workers. Our staff are members of our communities, too, and as this pandemic spins out of control in Idaho, they are being infected. In order to protect our patients, infected coworkers cannot be used, so our capacity to increase care will be limited by staff absences. On Tuesday of this week we had 234 staff out of work due to illness or quarantine. ICU staff require specialized training and experience, meaning we cannot

simply replace an ICU nurse with a nurse who has not had that training. We are working to bring “traveling” nurses into our facilities to augment our staff.

Our projections suggest COVID-19 related admissions will double approximately every 2 weeks. We expect no change in the exponential increase in positive cases and hospitalizations unless there is a change in behaviors in the community. On July 21, Idaho reported 556 cases compared with 431 reported in Utah, yet Utah has twice the population of Idaho.

The Harvard Global Health Institute has launched a COVID Risk Level map and COVID suppression guidance for policy makers and the public. The risk dashboard rates states and counties using a color scale based on a 7-day moving average of cases per 100,000 people: green (“on track for containment”) < 1 case/100,000 average over the most recent 7-day period; yellow (“community spread”) = 1 to 9 cases; orange (“accelerated spread”) = 10 to 24 cases; and red (“tipping point”) = 25 cases or more/100,000. The guidance further indicates:

The framework also allows for a breadth of options for what to do beyond TTSI (testing, tracing and supported isolation) when jurisdictions are at yellow and orange levels. Public officials need to make strategic decisions suitable to their context. Once a community reaches the red risk level, stay-at-home orders become necessary again. The framework also draws attention to the need to focus on suppression at every risk level.
(<https://globalepidemics.org/key-metrics-for-covid-suppression/>)

For the most recent period (ending 7/20/2020), Idaho is one of 11 states rated as red, with a 7-day average of 34.9 cases/100,000 people. Canyon County, also rated as red, had the highest rate in the state with a 7-day average of 75.3 cases per 100,000 people – more than 3 times the “tipping point” threshold. Recognizing that a stay-at-home order is not under consideration, it is critically important that some community mitigation measures be implemented immediately to avoid (if possible) having the experience that we are witnessing in other states, including Florida, Texas and Arizona.

Today, St. Luke’s still has capabilities within the system to support needs arising in Canyon County, but if we do not reverse the trend, we are headed for a crisis; we do not see anything that is reversing the trend as of yet. The hospitalizations and ICU admissions follow the surge in cases by one to several weeks. Due to the significant increases in hospitalizations and ICU admissions that we are already seeing, we have suspended the addition of elective cases beginning on July 20. We have not yet taken the step of cancelling already scheduled elective (meaning non-emergency) cases, as we did in March shortly before the Stay-Home Order was issued.

We know how to reverse the trend. We are asking that:

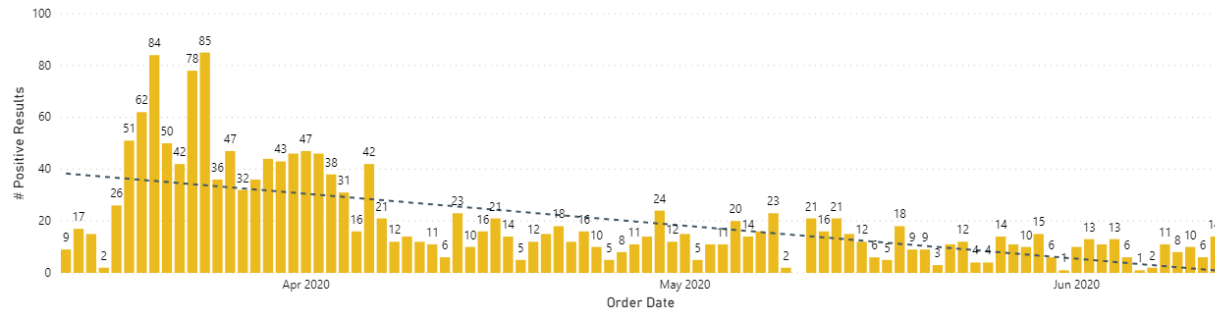
- face coverings be required in public, in addition to the recommendation to maintain social distancing and wash hands often;
- the size of mass gatherings be limited and those gatherings be required to implement precautions as outlined in the Idaho Rebounds plan; and
- visitation to congregate living facilities be restricted.

We do not want to go backward; we do not want the economy closed; we do not want to see schools close, as these also have major impact on health and wellness, but if we do not change our behavior as a community, we are likely headed there.

COVID Positive Results for Testing Done by St. Luke's

By Ordering Date: March 13 - June 12

Total Positive by Order Date

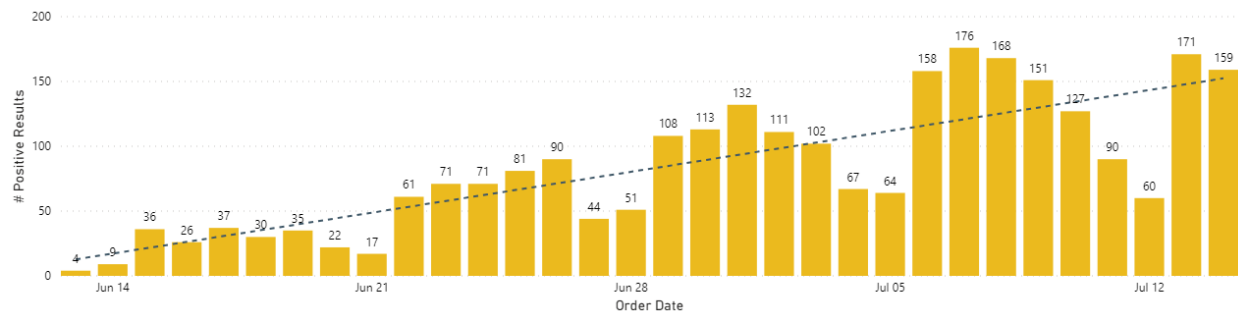


COVID Testing

Data as of 7/22/20, 10:33 AM

By Ordering Date: June 13 - July 14

Total Positive by Order Date



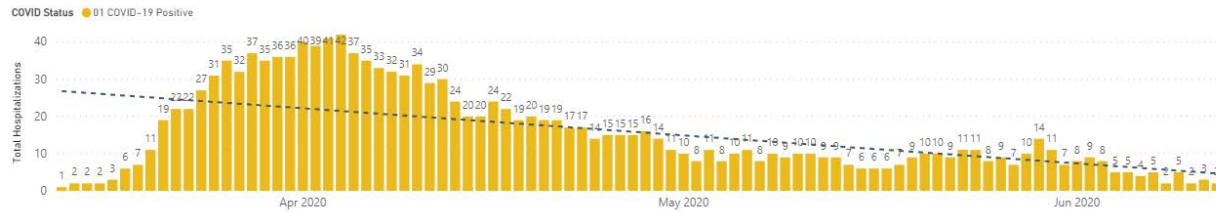
COVID Testing

Data as of 7/22/20, 10:33 AM

COVID Positive Hospitalizations at St. Luke's

March 13 – June 12

COVID-19 Associated (Positive = Rule-Out) Hospitalizations



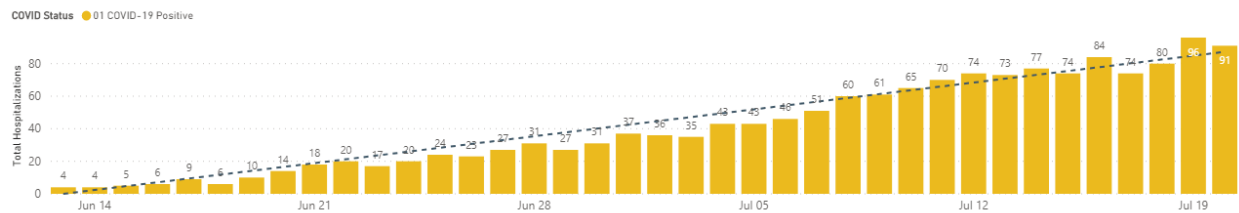
Inpatient | ED Occupancy

Data as of 7/22/20, 10:44 AM

Filtered by **COVID Status** (is 01 COVID-19 Positive), **CENSUS_DTTM** (is on or after 3/13/2020 12:00:00 AM and is before 6/13/2020 12:00:00 AM)

June 13 – July 20

COVID-19 Associated (Positive = Rule-Out) Hospitalizations



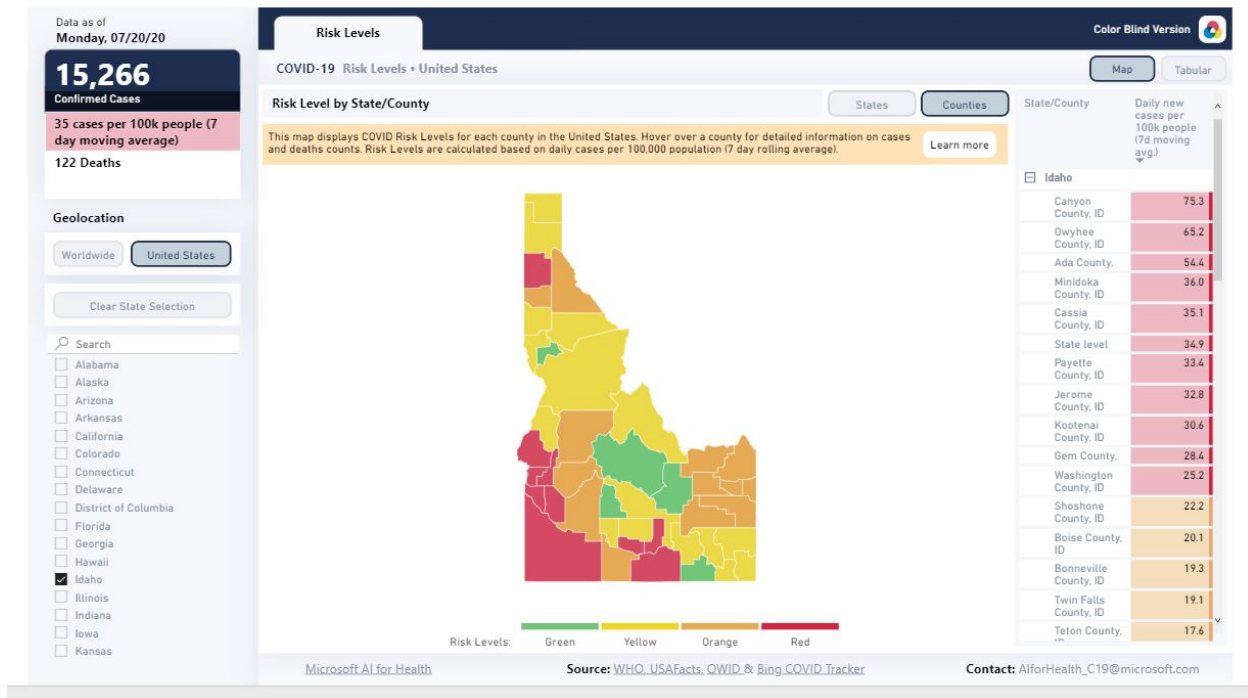
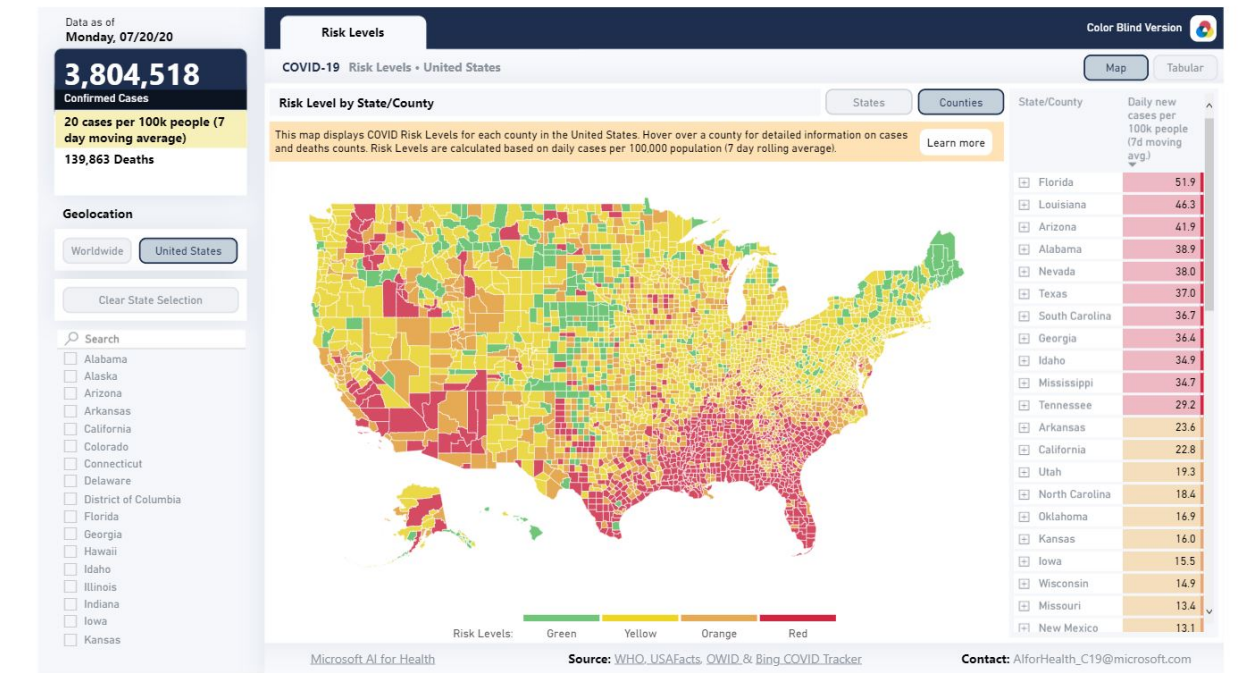
Inpatient | ED Occupancy

Data as of 7/22/20, 1:34 PM

Filtered by **COVID Status** (is 01 COVID-19 Positive), **CENSUS_DTTM** (is on or after 6/13/2020 12:00:00 AM and is before 7/21/2020 12:00:00 AM)

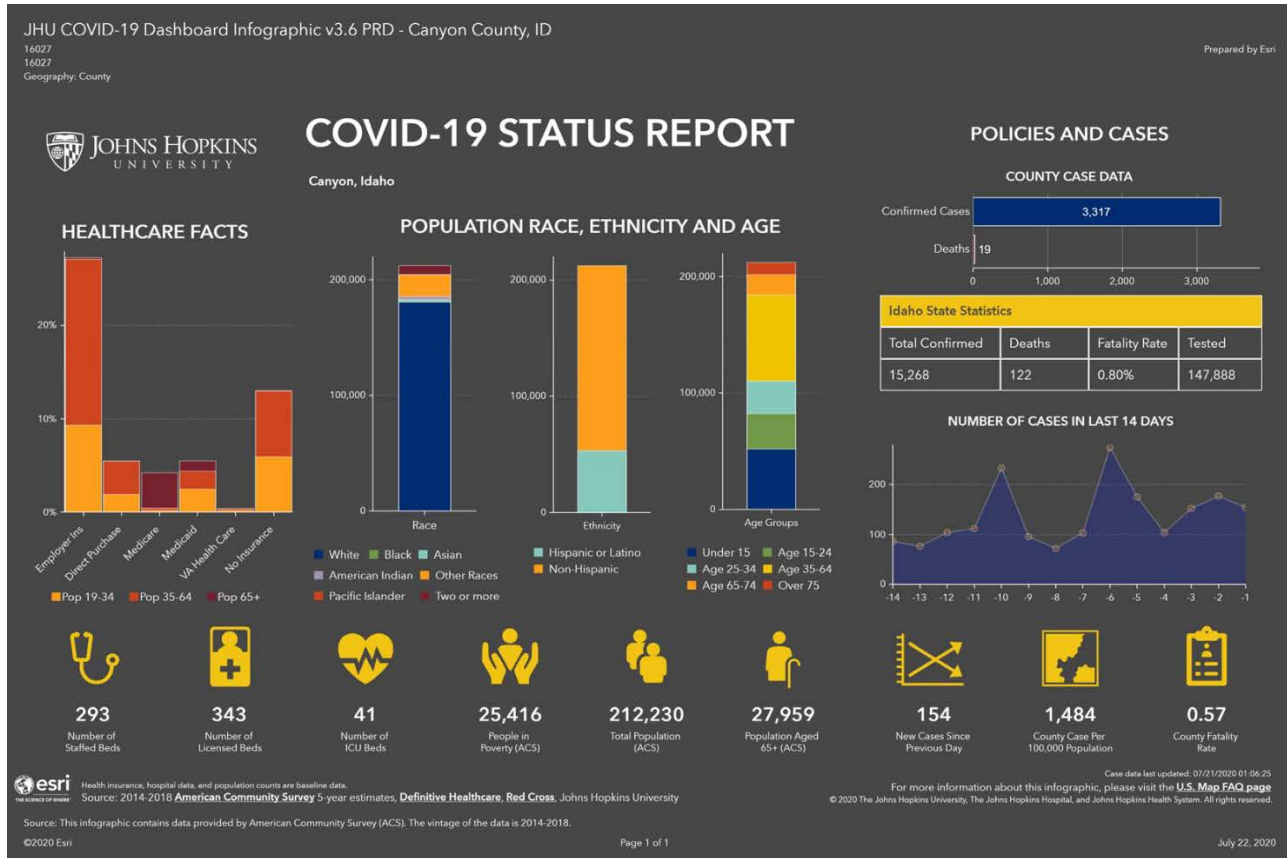
Harvard Global Health Institute Risk Level Maps

From <https://globalepidemics.org/key-metrics-for-covid-suppression/> on 7/22/2020



Johns Hopkins University COVID-19 Status Report for Canyon County, ID

From <https://coronavirus.jhu.edu/us-map> on 7/22/2020



How do face coverings work to stop the spread of COVID-19?

SARS-CoV-2, the virus that causes COVID-19, is spread largely through respiratory droplets generated when an infected person coughs or sneezes. Research shows that viral shedding starts during a 2-to-3-day period before symptoms appear, when virus levels in the body are at their highest. Additional research shows regular speaking is sufficient to expel virus-carrying droplets. Though research is ongoing, it is increasingly clear that transmission of SARS-CoV-2 from pre-symptomatic (infected, but have not yet developed symptoms) and asymptomatic persons (infected, and will not develop symptoms) plays a significant role in the spread of this virus in the general population.^[i] Wearing a face covering creates an effective barrier against these droplets. There is much scientific evidence to support this claim, and the evidence is growing weekly. See below under effectiveness for details.

^[i] He X, et al. *Temporal dynamics in viral shedding and transmissibility of COVID-19*. *Nat Med* 2020;26:672–5.

Do face coverings protect those wearing them or those around them?

Probably both. Primarily, face coverings help to reduce the chance of droplets traveling from you to others. Epidemiologically, this means they are an effective method of “source control.” In addition, there is evidence to suggest you may reduce your own risk of catching COVID-19 by wearing a face covering. Cloth and surgical masks should NOT be used to protect the wearer by filtering the air they breathe, though both do provide some partial protection against breathing in respiratory droplets. ^[ii] ^[iii]

^[ii] Konda, et al. *Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks*. *ACS Nano* 2020;14: 6339–6347.

^[iii] Zhao, et al. *Household Materials Selection for Homemade Cloth Face Coverings and Their Filtration Efficiency Enhancement with Triboelectric Charging*. *Nano Lett.* 2020, 20, 7, 5544–5552.

If we are practicing physical distancing, do we still need to wear face coverings?

There are the “Three W’s” to help prevent the spread of COVID-19: **W**earing a face covering, **W**atching your distance, and **W**ashing your hands. While all are important, the first two are the most important. In addition, you can think about mask wearing as a way of creating physical distancing even when you are on the move. The droplets you breathe out as you move about in spaces are largely caught by the mask, creating the effect of physical distancing even when that might not be possible.

Why it is important to wash your hands?

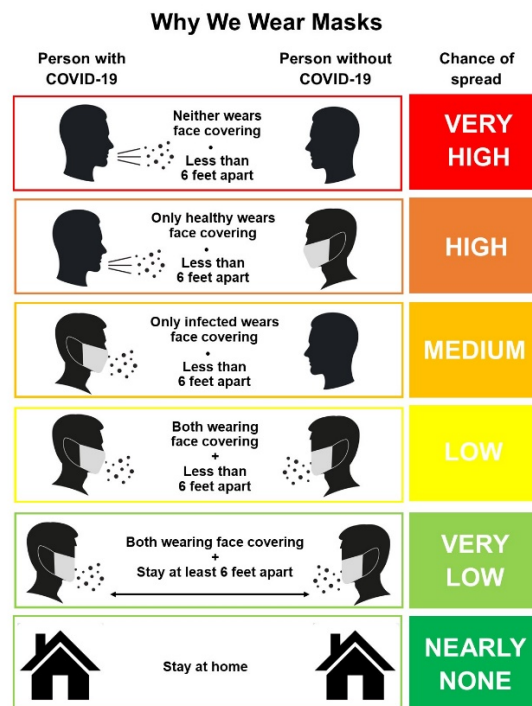
The virus can live on surfaces for varying amounts of time. It is very easy for us to touch things and then touch your face, nose, or mouth and infect yourself with the virus. Washing your hands for 20 seconds or longer, with soap, helps to kill the virus and keep your hands clean and free of germs.

Does everyone need to wear a face covering to stop transmission in the community and region?

When using cloth face coverings, the personal protection is derived from their use by all members of the community. With wearing a mask, the concept is risk reduction rather than absolute prevention.^[i]

[i] Mueller, et al. *Assessment of Fabric Masks as Alternatives to Standard Surgical Masks in Terms of Particle Filtration Efficiency*. Found at: <https://www.medrxiv.org/content/10.1101/2020.04.17.20069567v2.full.pdf>

Recent modeling from the Institute of Health Metrics and Evaluation has suggested that if 95% of people wore coverings, we could avoid 33,000 deaths by October 1. In addition, wearing face coverings is more impactful in reducing the spread than Stay-at-Home Orders or strict lockdowns.



How do you wear a face covering?

A face covering should be worn over both the mouth and nose, covering below the chin. It should have a close fit to your face, not too snug and not too loose. Before you put on your face covering, ensure it and your hands are clean. An excellent video to mask wearing is available at <https://www.pbs.org/video/how-well-do-masks-work-ke2qje/>.

Does it matter what type of face covering I am wearing?

For masks to be effective, they must be worn consistently and correctly, fitting closely to the face, and be made of fabrics that are effective in filtering respiratory droplets made by breathing, talking and coughing. A good double layered cloth face mask is very effective. If available, a surgical mask will achieve similar results. The most important factor is if they fit comfortably covering the nose and mouth. A covering that is not worn properly is ineffective. N95s are not necessary unless used in medical situations. Any face masks with valves, such as some N95s, are not recommended due to the ability to transmit from the carrier out through the valves, thus not protecting those around you. If you wear a valved mask, you must also wear a surgical or cloth mask to protect those around you.

I am not a high-risk or vulnerable person, why do I have to wear face coverings?

First, serious illness and even death are not limited to vulnerable individuals, they are just more common in that group. We have had life-threatening cases requiring mechanical ventilation in people without underlying conditions and even people younger than 18 years old. Second, it is important because you may be infected and not know it, thus shedding the virus during critical periods to the people around you, and some of these people will become infected and continue to spread the virus. Our best option for stopping the virus, saving lives, keeping kids in school, and keeping businesses open is for all of us to do our part.

How effective are face coverings or other prevention methods in preventing the spread of COVID-19?

There really is no question that masks are safe and are helpful in containing COVID-19. Approximately 40% of COVID-19 infections are caused by asymptomatic people or those who have not yet experienced any symptoms. Since we don't know who may be infected, or if we ourselves are infected, wearing a face covering and physical distancing are the top two prevention methods. Laboratory and real-world studies show that wearing face coverings reduces the risk of transmitting COVID-19 significantly, up to an 85% reduction in some studies. The lines of evidence come from basic science and real-world applications.

In the basic science realm, a recent study demonstrated that individuals who had non-COVID-19 coronavirus infection (causes the common cold) demonstrated that wearing a surgical mask significantly reduced the amount of coronavirus emitted in droplets and aerosols into the air around the infected patient. This coronavirus virus (similar in size to the coronavirus that causes COVID-19) was detected in up to 40% of respiratory droplets in surrounding air samples from individuals NOT wearing face masks. No coronavirus was detected in air samples collected from participants wearing face masks.^[i] In addition, homemade face coverings made from household fabrics may be less effective compared with commercially manufactured cloth and surgical masks, but they still can substantially limit dispersion of exhaled infectious respiratory particles, including respiratory droplet-sized particles containing COVID-19.^[i]

^[i] Leung, et al. *Respiratory virus shedding in exhaled breath and efficacy of face masks. Nature Medicine.* 2020.26:676–680.

[i] Verma, et al. *Visualizing the effectiveness of face masks in obstructing respiratory jets. Phys Fluids* (1994). 2020;32(6):061708. doi:10.1063/5.0016018

Real world examples include case series as well as larger studies.

Among the case series, a well-known case study describes a man who flew from China to Toronto and subsequently tested positive for COVID-19. He had a dry cough and wore a mask on the flight, and all 25 people closest to him on the flight tested negative for COVID-19.[ii] In another noteworthy case series, cotton facial coverings or masks were required in a county in Missouri. One hair stylist (A) developed COVID and transmitted it to a coworker (B) with whom she took non-mask wearing breaks with between clients. Otherwise both stylists wore masks while working with clients. Even though these stylists worked for a combined total of 13 days and with 139 clients while infected with COVID, none of their clients or other stylists, who were also required to wear masks or cloth facial coverings, developed COVID. However, 4 of 4 household contacts of stylist A did get COVID infection (masks presumably were not worn when at home).[iii]

[i] Schwartz, et al. *Lack of COVID-19 transmission on an international flight. CMAJ* 2020. 19(15);E410.

[iii] *MMWR / July 14, 2020 / Vol. 69*

Larger studies have also shown benefits in populations of people. A recent meta-analysis by Liang, et al estimated that masks could reduce viral infections by 80% in HCP and 47% in the community. However, they noted that studies from Asia suggest greater benefit from masks likely due to greater consistency in use compared to studies done in Western countries.[i] A meta-analysis by Chu, et al [ii] estimated a possible 85% reduction in transmission with the use of any N95, mask, or 12-16 layer cotton mask in HCP and about a 44% reduction for mask use in the community.

[i] Liang M, et al. *Travel Med and Infect Dis* 2020 <https://doi.org/j.tmais.2020.101751>.

[ii] Chu, et al. *Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. Lancet* 2020; 395: 1973–87.

Finally, studies have been conducted on the effectiveness of policies or mandates around mask use. In a study of the largest health care system in Massachusetts, a leadership-mandated policy of universal masking for all HCWs and patients on rates of SARS-CoV-2 infection was evaluated. At the time universal masking was started (late March 2020), new infections in HCWs was increasing exponentially, reaching 21.3% of overall staff (increase of 1.2% per day). Following universal masking, positive test results began to drop after two weeks to 14.7%, and 11.5% by four weeks (about 0.5% per day). The authors rightly note that other community-wide and hospital-specific interventions (distancing, washing hands, testing, etc.) also played a role, but only after universal masking was in effect for one week did infections in HCWs start to decline.[i] And in an additional recent study, COVID-19 growth rates before and after face mask mandates were compared in 15 states and the District of Columbia, demonstrating that required mask use led to a slowdown in daily COVID-19 infections. In the first five days after a mandate, the daily growth rate slowed by 0.9% compared to before mandate. At three weeks, the daily growth rate had slowed by 2% (keeping in mind that overall infection rates were 10-15%).[i]

[i] Lyu, et al. *Community Use of Face Masks And COVID-19: Evidence from A Natural Experiment of State Mandates in the US. Health Affairs* 2020. 39;8: 1–7. doi: 10.1377/hlthaff.2020.00818

[i] Wang, et al. *Association between universal masking in a health care system and SARS-CoV-2 positivity among health care workers. JAMA. Published online July 14, 2020. doi:10.1001/jama.2020.12897*

Do I need to wear a face covering when I am in my car, walking in my neighborhood or riding my bike?

In your car, no, unless there is a vulnerable person in the car with you that you do not generally have close contact with (e.g. someone you do not live with). Any time you are in public and physical distancing becomes a challenge, face coverings should be worn.

Should I clean my face covering or change to a new one?

Face coverings should be washed regularly if they made of reusable materials (e.g. cloth), depending on the frequency of use. Cloth face coverings can be effectively cleaned in a washing machine on a normal setting. One-time use masks should be changed out frequently.

Why don't young children have to wear face coverings?

Children are half as likely to become infected from exposure as adults. Additionally, they are less likely to have a severe case or even have symptoms. Finally, they appear to be less likely to infect others. Since young children (2 and under) are at risk of airway issues with face coverings and because they have such a low risk of contracting or spreading the disease, it is not recommended they wear face coverings. Older children should wear them when around others.

Special Board of Health Meeting

7/23/2020

Literature Review and Summary

Evidence for wearing a mask to prevent COVID-19

Dr. Clay Roscoe, Medical Director

Southwest District Health

Evidence Summary

N95s, medical/surgical masks and cloth facial coverings can reduce the spread of COVID-19 as evidenced from studies of influenza and other viruses from the coronavirus family (e.g. SARS and MERS), as well as case reports of COVID-19 exposures in community settings, healthcare settings, and experimental settings. For masks to be effective they have to be worn consistently and correctly, fitting closely to the face, and be made of fabrics that are effective in filtering respiratory droplets made by breathing, talking and coughing. Use of face coverings in health care and community settings must also be coupled with other actions that are part of an effective risk reduction plan, including:

- minimizing exposure to non-household contacts
- frequent hand washing
- maintaining a physical distance of at least 6 ft when in public spaces with other people
- coordinated testing and rapid contact tracing

When using cloth face coverings in the general population, the personal protection is derived from their use by all members of the community, as the purpose is risk reduction rather than absolute prevention.ⁱ

Methods

A literature search on evidence and benefits of N95s, medical masks, and cloth facial coverings was conducted using Pubmed between July 1-20, 2020, based on studies published since December 31, 2019. Below is a summary of the evidence based on a select, rapid review.

Background

SARS-CoV-2, the virus that causes COVID-19, is spread largely through respiratory droplets generated when an infected person coughs or sneezes. Research shows that viral shedding starts during a 2-to-3-day period *before* symptoms appear, when virus levels in the body are at their highest. Additional research shows that regular speaking also may be sufficient to expel virus-carrying droplets. Though research is ongoing, it is extremely likely that transmission of SARS-CoV-2 from presymptomatic (infected, but have not yet developed symptoms) and asymptomatic persons (infected, and will not develop symptoms) plays a significant role in the spread of this virus in the general population.ⁱⁱ

Presently, CDC and the World Health Organization recommend face coverings for the general public as a way to limit the spread of COVID-19. Earlier in the pandemic, both organizations recommended face coverings only for symptomatic individuals with suspected or confirmed COVID-19 disease, and the change in guidelines may have created confusion among the public about the utility of masks. The recommendation changing to everyone wear should wear face coverings when in public was influenced by rising cases of COVID-19 over time, better understanding that both pre-symptomatic and asymptomatic individuals can spread COVID-19, and growing evidence that face coverings are effective at limiting the spread of COVID-19 in both healthcare and community settings.^{iii iv}

Research evidence that face coverings (cloth masks, surgical masks, and N95 respirators) help prevent spread of infectious respiratory droplets.

Cloth masks and surgical masks primarily act as a simple barrier *to prevent* respiratory droplets from traveling into the air to other people when the person wearing the mask coughs, sneezes, talks, etc. This form of mask-wearing is called source control. N95 respirators, on the other hand, are designed *to protect* the wearer from these respiratory droplets and is a form of respiratory protection (often referred to as PPE).

The main reason the CDC recommends the general public wear cloth face masks for COVID-19 is to: a.) increase source control; and b.) preserve supplies of surgical masks and N95s for use with healthcare providers working on the frontlines of the pandemic.^v Cloth and surgical masks should NOT be used to protect the wearer by filtering the air they breathe, though both do provide some partial protection against breathing in respiratory droplets.^{vi vii}

A meta-analysis by Liang, et al estimated masks could reduce viral infections by up to 80% in health care providers (HCP) and 47% in the community. However, they noted that studies from Asia suggest greater benefit from masks likely due to greater consistency in mask use, compared to studies done in Western countries.^{viii} A meta-analysis by Chu, et al^{ix} estimated a possible 85% reduction in transmission with the use of any N95 mask or 12-16 layer cotton mask in HCP, and up to 44% reduction with using a face covering in the community settings.

Another study demonstrated that individuals who had non-COVID-19 coronavirus infection (causes the common cold) who wore a surgical mask significantly reduced the amount of coronavirus emitted in droplets and aerosols into the air around them. This common cold coronavirus is similar in size to COVID-19, and was detected in up to 40% of respiratory droplets in surrounding air samples from individuals NOT wearing face masks, while no coronavirus was detected in air samples collected from participants wearing surgical masks.^x

Homemade face coverings made from household fabrics may be less effective, compared to commercially manufactured cloth and surgical masks, but they still can substantially limit dispersion of exhaled infectious respiratory particles, including respiratory droplet-sized particles containing COVID-19.^{xi}

Additional evidence for wearing face coverings to prevent COVID-19 comes from real-world scenarios:

A recent study compared COVID-19 growth rates before and after face mask mandates in 15 states and the District of Columbia and demonstrated that required mask use led to a slowdown in daily COVID-19 infections. In the first five days after a mandate, the daily growth rate slowed by 0.9%, compared to before mandate. At three weeks, the daily growth rate had slowed by 2% (keeping in mind that overall infection rates were 10-15%).^{xii}

Another study in the United States, 421 HCP were exposed to two patients with initially unrecognized COVID-19. Among the 421, eight (2%) became ill and tested positive for SARS-CoV-2 virus, all of who also had insufficient PPE during aerosolizing procedures (e.g. intubation of a patient needing to be placed on a ventilator machine) involving SARS-CoV-2 infected patients.^{xiii}

A study of the largest health care system in Massachusetts evaluated the effect of a mandated policy of universal masking for all HCPs and patients on the rate of SARS-CoV-2 infection. At the time universal masking was started (late March 2020), new infections in HCPs was increasing exponentially, reaching 21.3% of overall staff (increase of 1.2% per day). Following universal masking, positive test results dropped to 14.7% by two weeks, and 11.5% by four weeks (about 0.5% per day). The authors rightly note that other community-wide and hospital-specific interventions (distancing, washing hands, testing, etc.) also played a role, but only after universal masking was in effect for one week did infections in HCPs start to decline.^{xiv}

A well-known case study describes a man who flew from China to Toronto and subsequently tested positive for COVID-19. He had a dry cough and wore a mask on the flight, and all 25 people closest to him on the flight tested negative for COVID-19.^{xv}

Cotton facial coverings or masks were required in a county in Missouri. One hair stylist (A) developed COVID-19 and transmitted it to a coworker (B) with whom she took non-mask wearing breaks with between clients. Otherwise both stylists wore masks while working with clients. Even though these stylists worked for a combined total of 13 days and with 139 clients while infected with COVID-19, none of their clients or other stylists, who were also required to wear masks or cloth facial coverings, developed COVID-19. However, 4 of 4 household contacts of stylist A did get COVID-19 infection (masks presumably were not worn when at home).^{xvi}

How many people need to wear masks to reduce community transmission?

The more people who wear masks, the more effective they are at cutting down spread of COVID-19. However, one recent simulation by public health researchers predicted that 80% of the population wearing masks would do more to reduce COVID-19 spread than a strict lockdown.^{xvii}

A forecast from the Institute of Health Metrics and Evaluation suggests that 33,000 deaths in the US could be avoided by October 1 if 95% of people wore masks in public.^{xviii}

A meta-analysis of 216 observational and comparative studies estimated you can reduce your own risk of infection by up to 67% by wearing a face covering (not including N95 respirators). This study also demonstrated that protection is further enhanced when combined with physical distancing, hand washing and eye protection.⁹

At this critical juncture when COVID-19 is resurging, wearing masks is an effective way to reduce virus spread. Wearing a mask when in public with others can be considered a civic duty, a way for all Idahoans to help each other stay healthy, and a small sacrifice that relies on a highly effective, low-tech, evidence-based solution that can decrease the spread of COVID-19 in our community.^{xix}

ⁱ Mueller, et al. *Assessment of Fabric Masks as Alternatives to Standard Surgical Masks in Terms of Particle Filtration Efficiency*. Found at: <https://www.medrxiv.org/content/10.1101/2020.04.17.20069567v2.full.pdf>

ⁱⁱ He X, et al. *Temporal dynamics in viral shedding and transmissibility of COVID-19*. *Nat Med* 2020;26:672–5.

ⁱⁱⁱ Furukawa, et al. *Evidence supporting transmission of severe acute respiratory syndrome coronavirus 2 while presymptomatic or asymptomatic*. *Emerg Infect Dis*. 2020;26(7). doi:10.3201/eid2607.201595

^{iv} Brooks, et al. *Universal Masking to Prevent SARS-CoV-2 Transmission—The Time Is Now*. *JAMA*. Published online July 14, 2020. doi:10.1001/jama.2020.13107

^v CDC. *Considerations for Wearing Cloth Face Coverings*. July 16, 2020. Found at: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html>

^{vi} Konda, et al. *Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks*. *ACS Nano* 2020;14: 6339–6347.

^{vii} Zhao, et al. *Household Materials Selection for Homemade Cloth Face Coverings and Their Filtration Efficiency Enhancement with Triboelectric Charging*. *Nano Lett*. 2020, 20, 7, 5544–5552.

^{viii} Liang M, et al. *Travel Med and Infect Dis* 2020 <https://doi.org/j.tmais.2020.101751>.

^{ix} Chu, et al. *Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis*. *Lancet* 2020; 395: 1973–87.

^x Leung, et al. *Respiratory virus shedding in exhaled breath and efficacy of face masks*. *Nature Medicine*. 2020.26:676–680.

^{xi} Verma, et al. *Visualizing the effectiveness of face masks in obstructing respiratory jets*. *Phys Fluids* (1994). 2020;32(6):061708. doi:10.1063/5.0016018

^{xii} Lyu, et al. *Community Use of Face Masks And COVID-19: Evidence from A Natural Experiment of State Mandates in the US*. *Health Affairs* 2020. 39;8: 1–7. doi: 10.1377/hlthaff.2020.00818

^{xiii} Bays, et al. *Two cases of community acquired COVID in California*. *Infect Control Hosp Epidemiol* 2020 <http://doi.org/10.1017/ice.2020.321>.

^{xiv} Wang, et al. *Association between universal masking in a health care system and SARS-CoV-2 positivity among health care workers.* JAMA. Published online July 14, 2020. doi:10.1001/jama.2020.12897

^{xv} Schwartz, et al. *Lack of COVID-19 transmission on an international flight.* CMAJ 2020. 19(15);E410.

^{xvi} MMWR / July 14, 2020 / Vol. 69

^{xvii} De Kai et al. *Universal Masking is Urgent in the COVID-19 Pandemic: SEIR and Agent Based Models, Empirical Validation, Policy Recommendations.* arXiv:2004.13553v1. 22 Apr 2020. Accessed at: <https://arxiv.org/pdf/2004.13553.pdf>

^{xviii} IHME. *New IHME COVID-19 Model Projects Nearly 180,000 US Deaths.* June 24, 2020. Found at: <http://www.healthdata.org/news-release/new-ihme-covid-19-model-projects-nearly-180000-us-deaths>

^{xix} Brooks, et al. *Universal Masking to Prevent SARS-CoV-2 Transmission—The Time Is Now.* JAMA. Published online July 14, 2020. doi:10.1001/jama.2020.13107