ICP
BUILDING SOLUTIONS GROUP

COVID-19 & ReOpening: Mandate to Disinfect

Prepared for the PIRC– Available in MasterWorks

www.icpmasterworkscommunity.com

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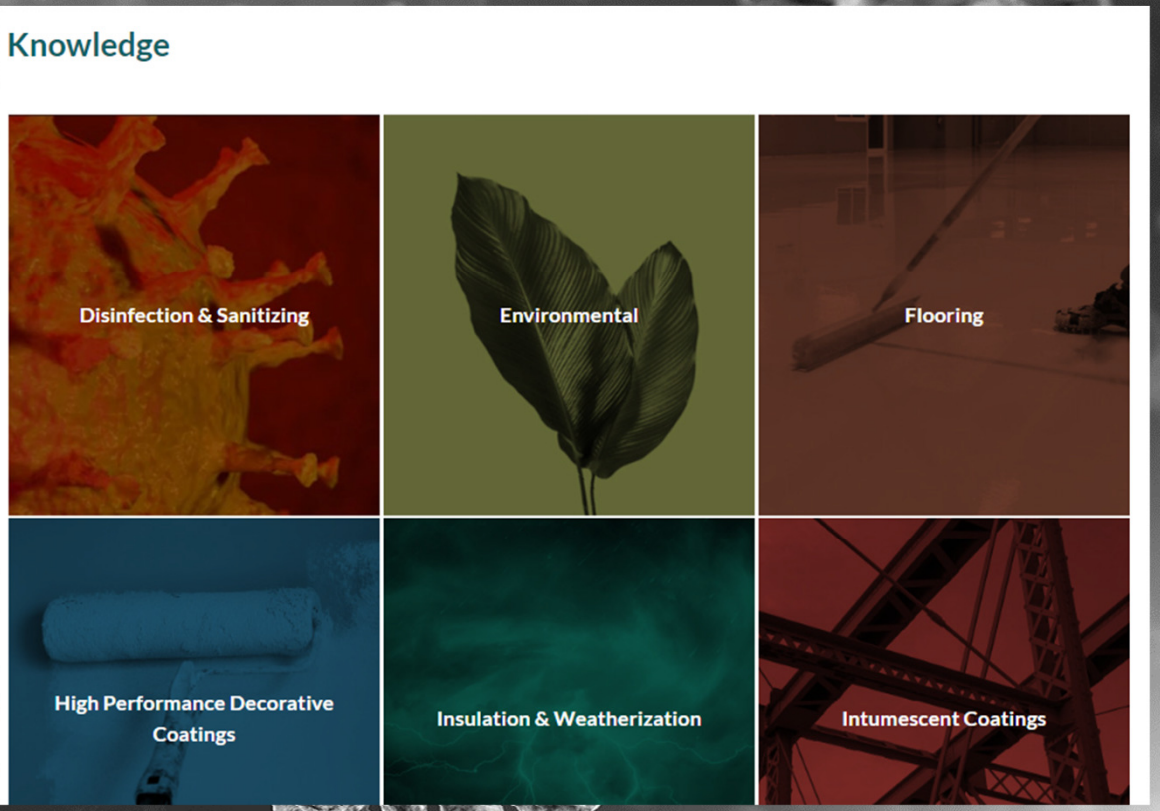
TO ACCESS A RECORDING OF THIS WORKSHOP & MORE



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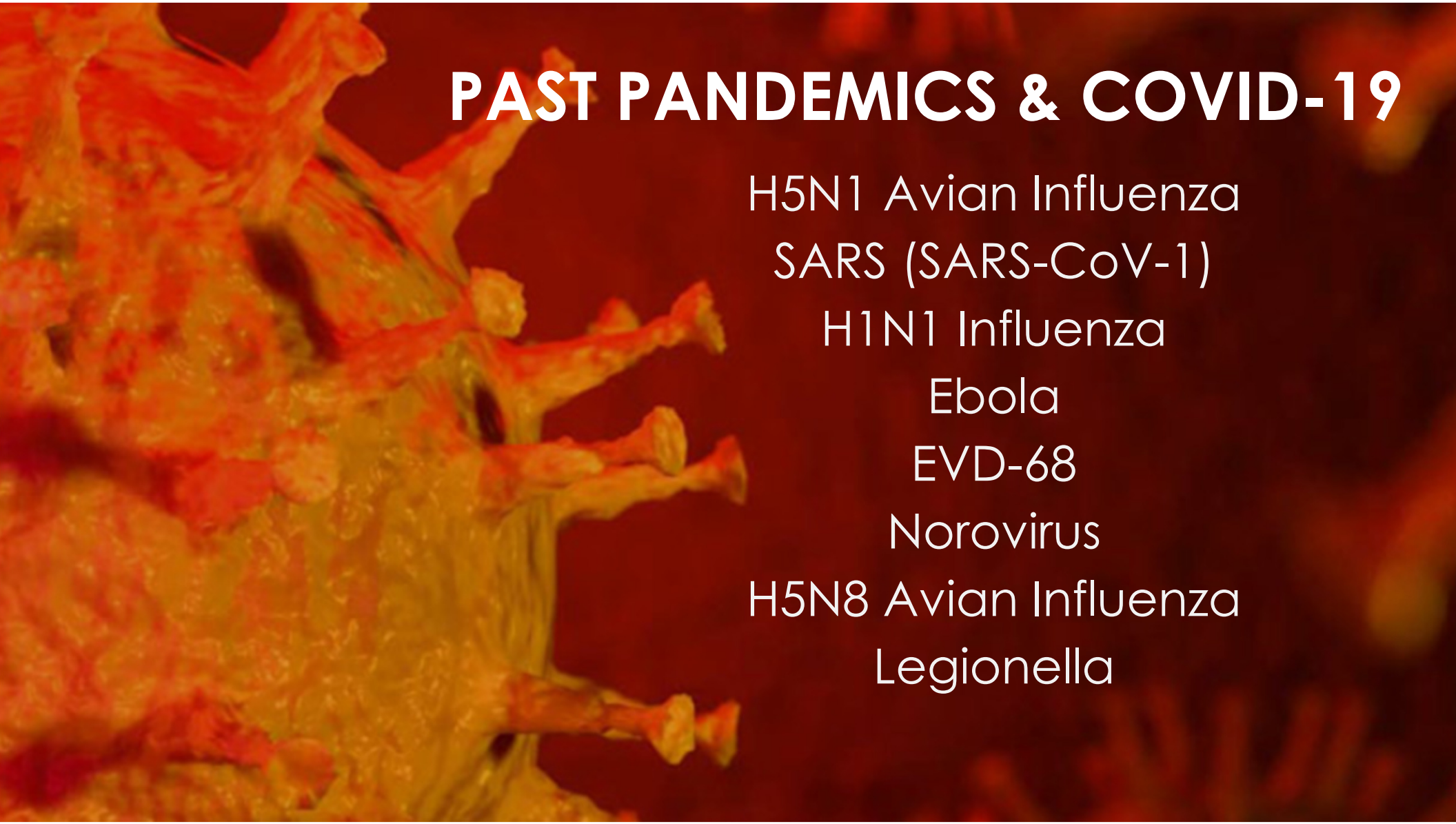

PAST PANDEMICS & COVID-19

H5N1 Avian Influenza

SARS (SARS-CoV-1)

H1N1 Influenza

Ebola

EVD-68

Norovirus

H5N8 Avian Influenza

Legionella

Epidemic

An *epidemic* is defined as "an outbreak of disease that spreads quickly and affects many individuals at the same time."

Pandemic

A *pandemic* is a type of *epidemic* (one with greater range and coverage), an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population.

What we will discuss:

- The Mandate to Disinfect
- Disinfectants: Fundamentals
- How the 2020 Pandemic & Disinfection fit together
- How disinfectants are used

mandate
man•date

man¦dāt

noun

1. an official order or commission to do something.
2. the authority granted by a constituency to act as its representative

unfunded mandate

concept

1. In the United States, federal mandates are orders that, often without adequate supporting funds, induce responsibility, action, procedure or anything else that is imposed by constitutional, administrative, executive, or judicial action for state and local governments and/or the private sector.

DISINFECTION – ESSENTIAL ACROSS REQUIREMENTS in federal and state guidance

SARS-CoV-2 Pandemic

COVID-19 is a new disease caused by a new strain of coronavirus which humanity has not encountered before, and against which human beings have little to no existing immunity or resistance

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COVID-19 – "Flattening the Curve"

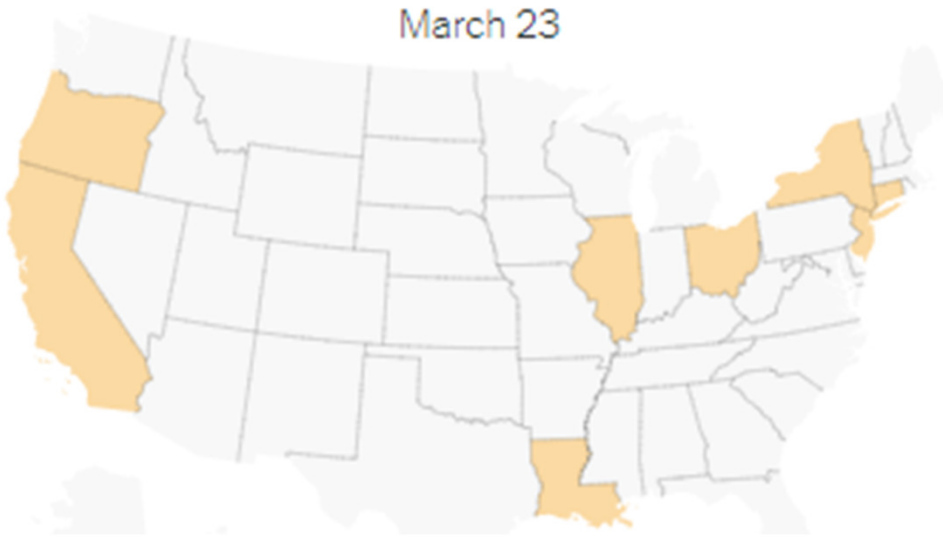
In late winter 2020: lockdown orders designed to ***"flatten the curve"*** – a method of reducing community spread by limiting interaction. Primary goal is to preserve the healthcare system. The degree of quarantine and social distancing varied greatly, as did enforcement.

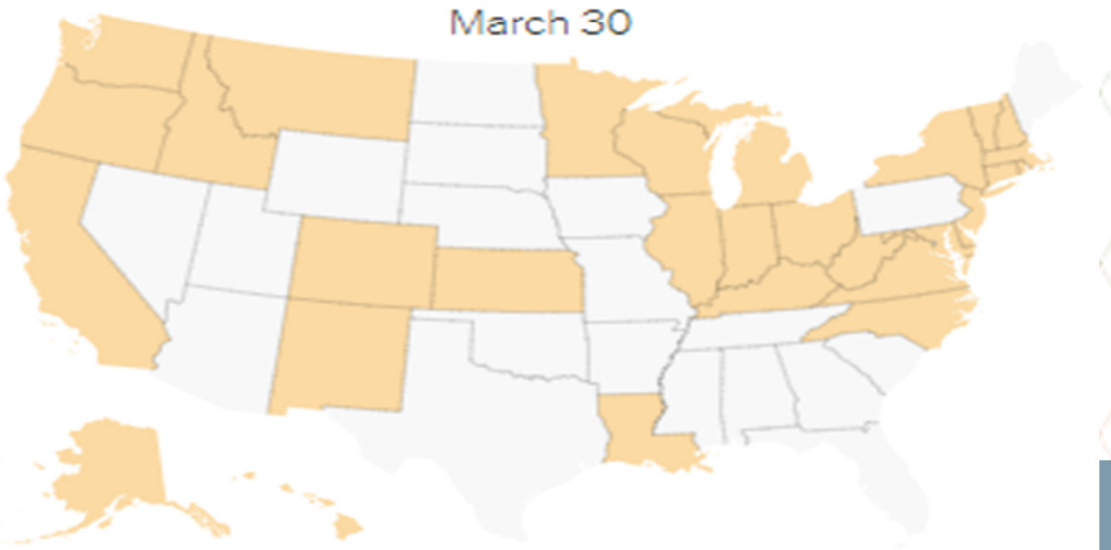
COVID-19 – Economic Impact

The economic consequences of COVID-19 in early 2020 have been drastic.

March: "Stay-at-Home" and shutdown orders quelled economic activity

May: levels of unemployment approximate the Great Depression of the 1930s.





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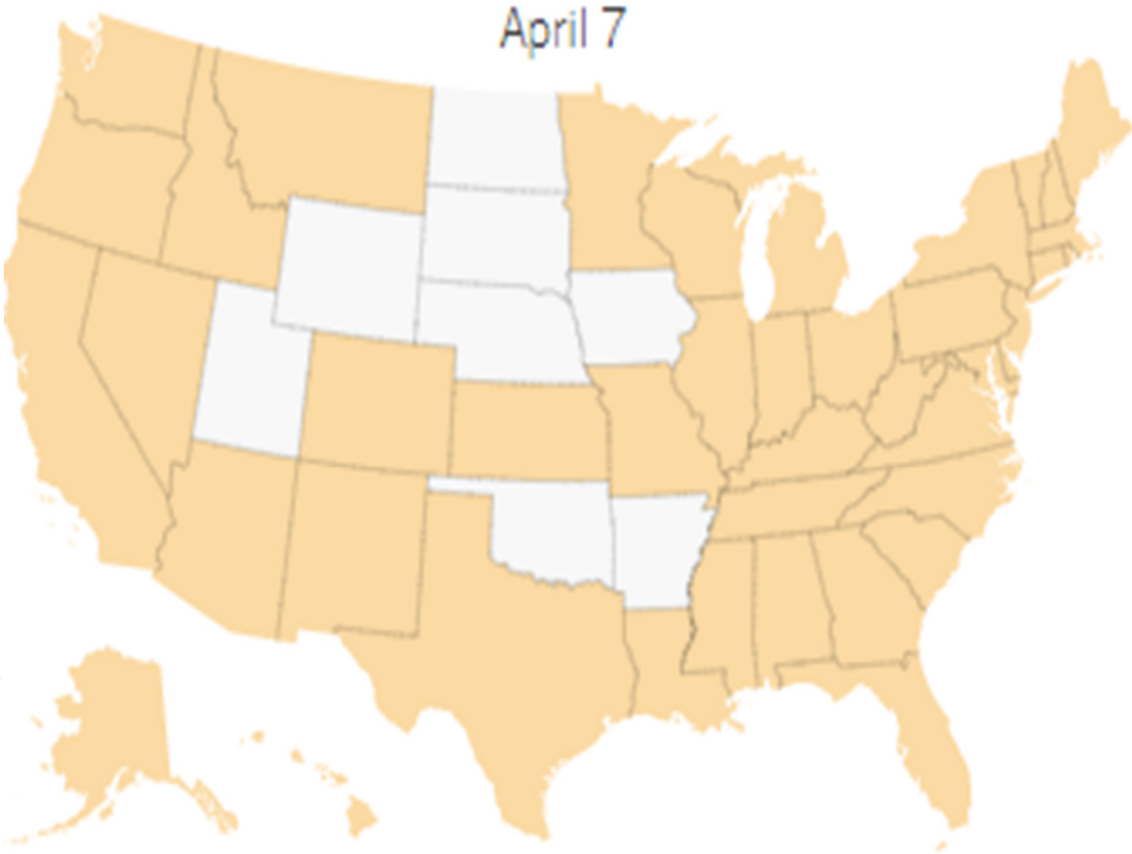
COVID-19 – Economic Impact

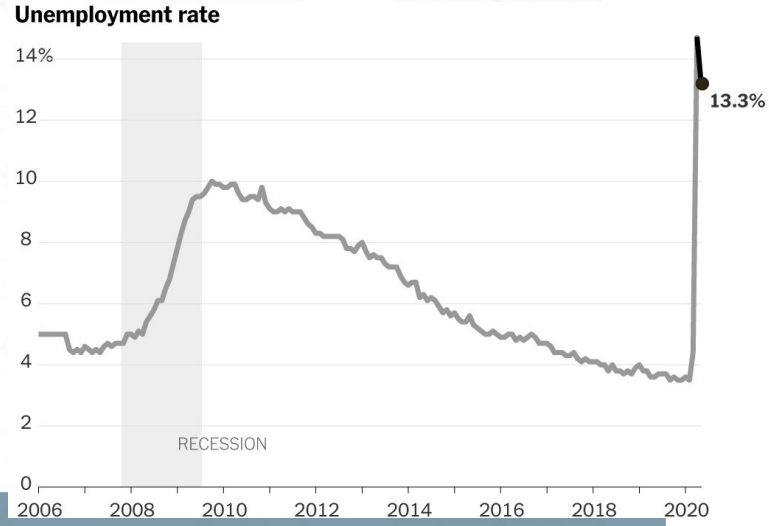
- THURSDAY, April 30, 2020 (HealthDay News) -- Social distancing guidelines crafted by the federal government to stem the spread of coronavirus expire on Thursday
- "They'll be fading out, because now the governors are doing it," Trump explained.
- More than half of the United States, at least 28 states, will be partially reopened by the end of the week when their stay-at-home orders end, *CNN* reported.

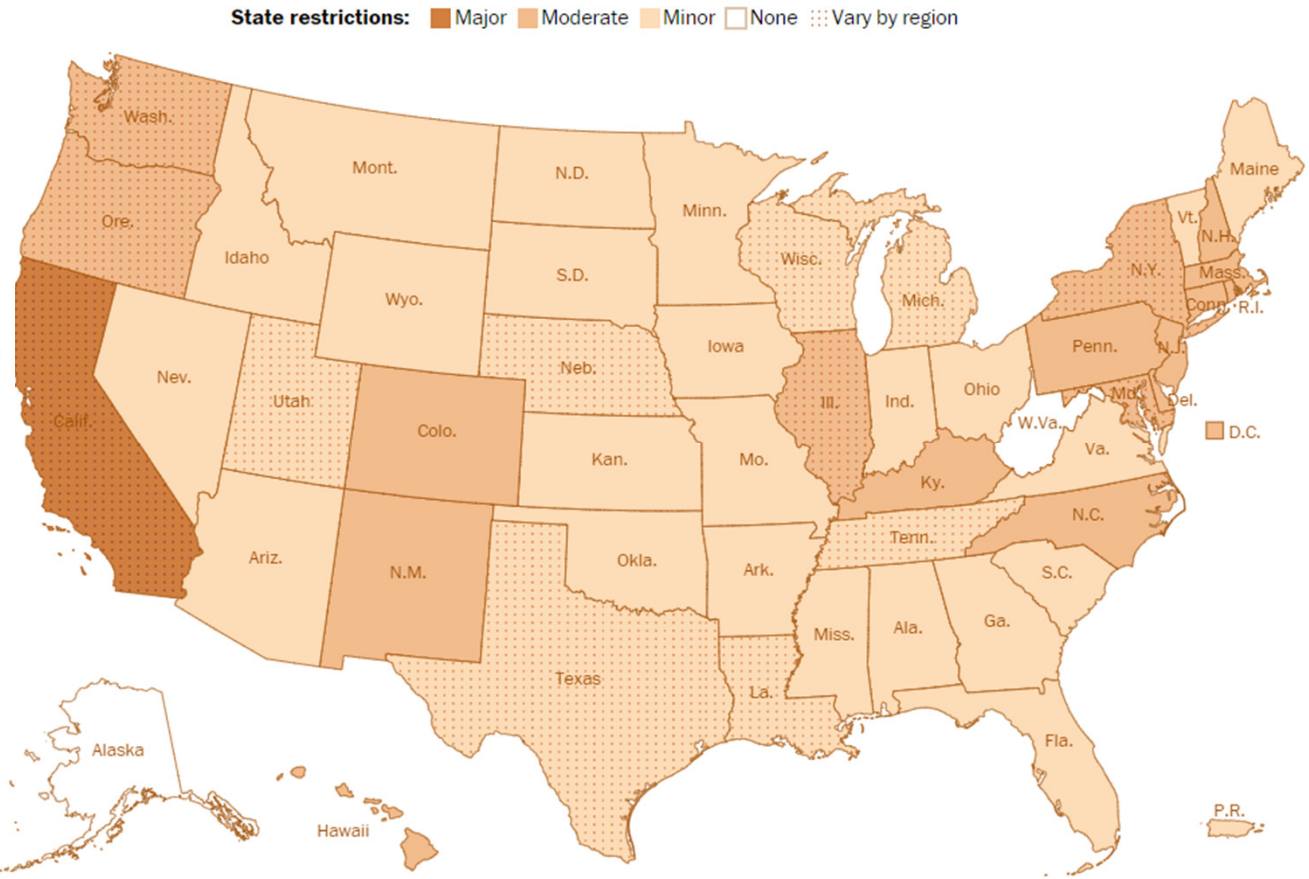


COVID-19 – Economic Impact

June 1 – all 50 US states in stages of reopening economic activity.

June 23: Unemployment 13.3%





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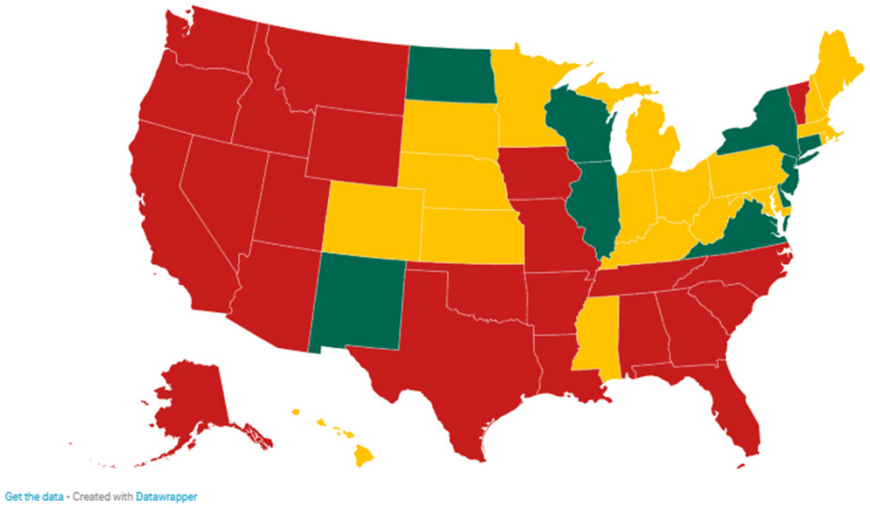
COVID-19 UNEVEN PROGRESS

June 17 v June 23

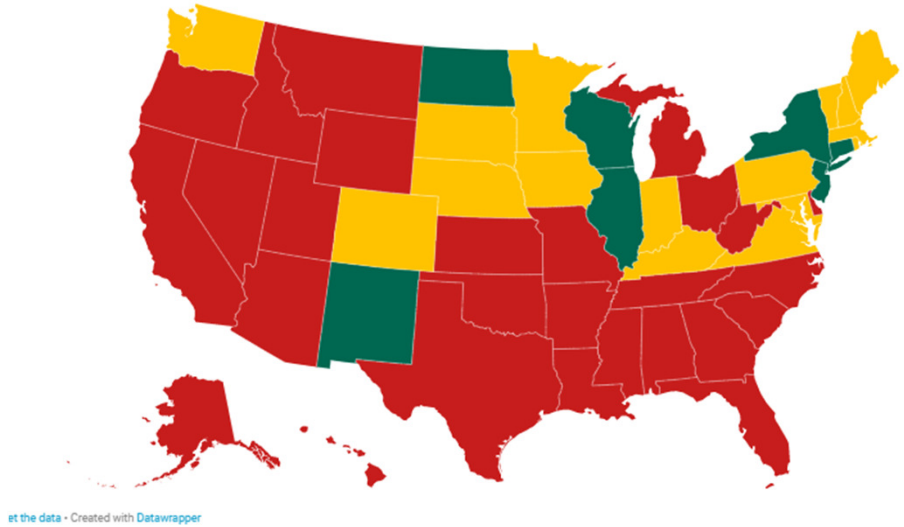


Get the data · Created with Datawrapper

RED Trending poorly

YELLOW Making progress

GREEN Trending better



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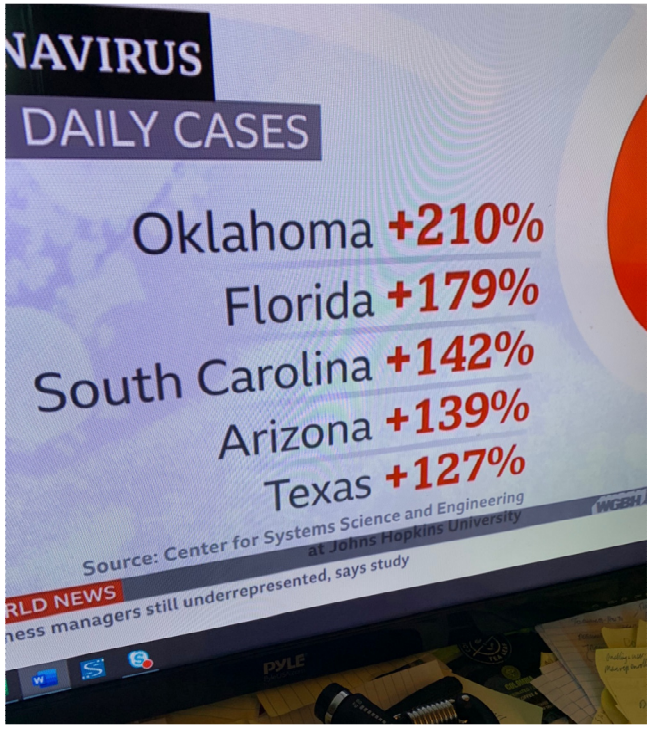
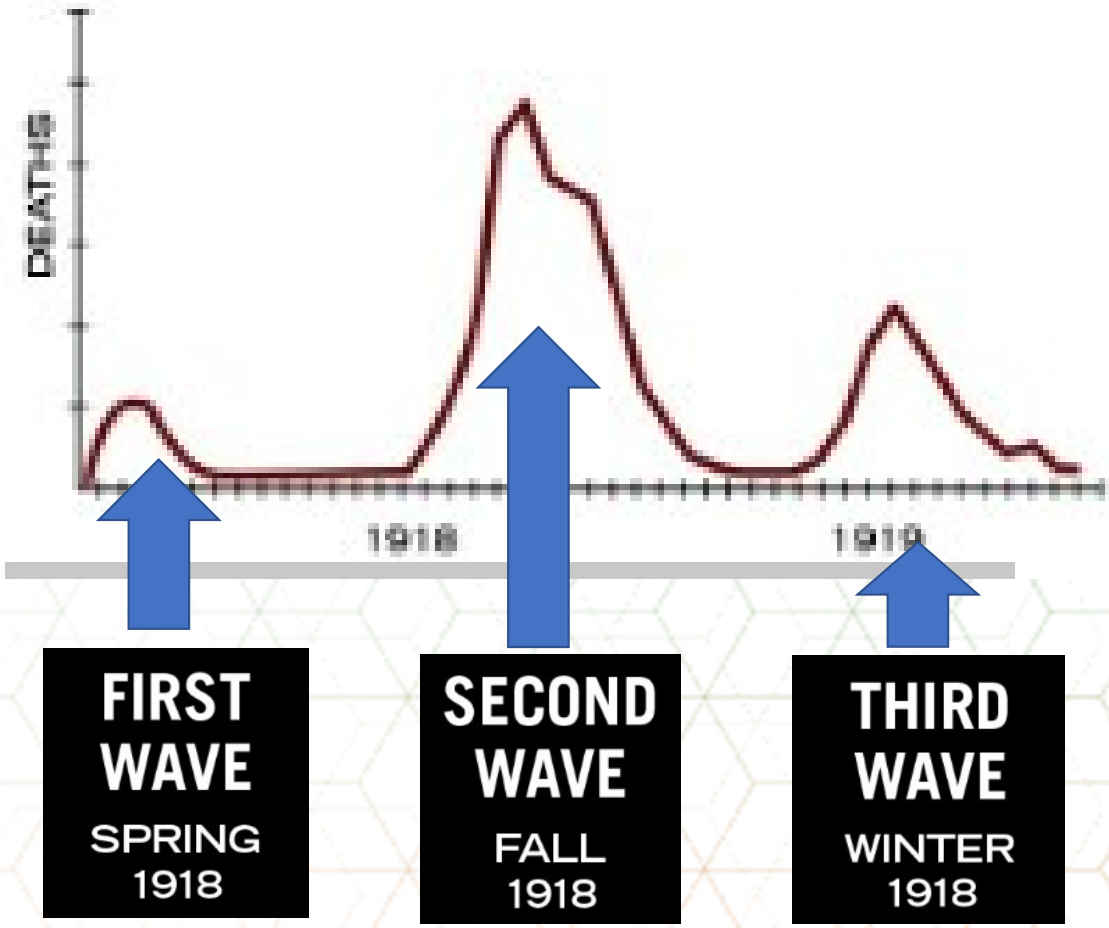
COVID-19 UNEVEN PROGRESS

Records Set June 21-22

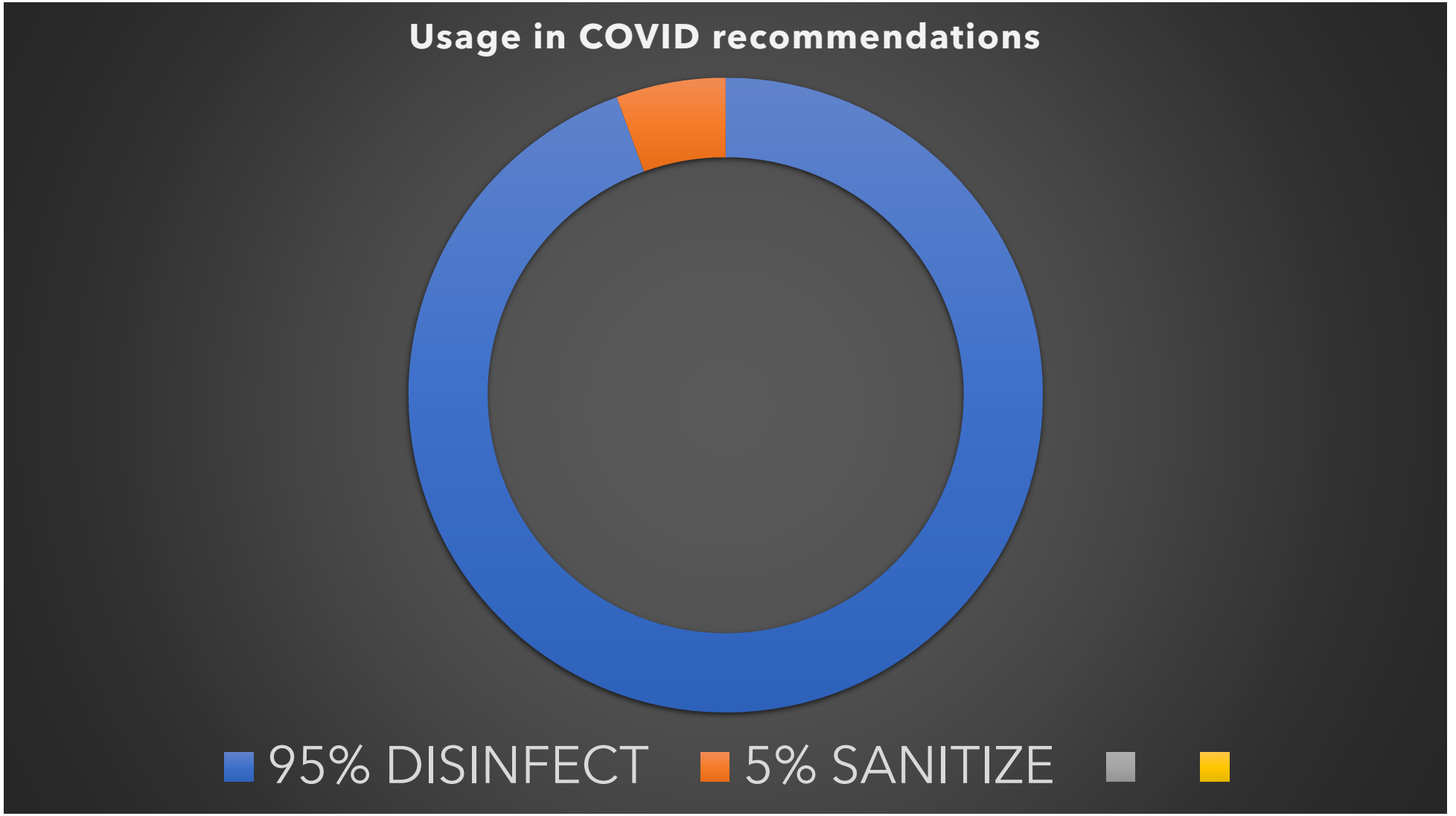


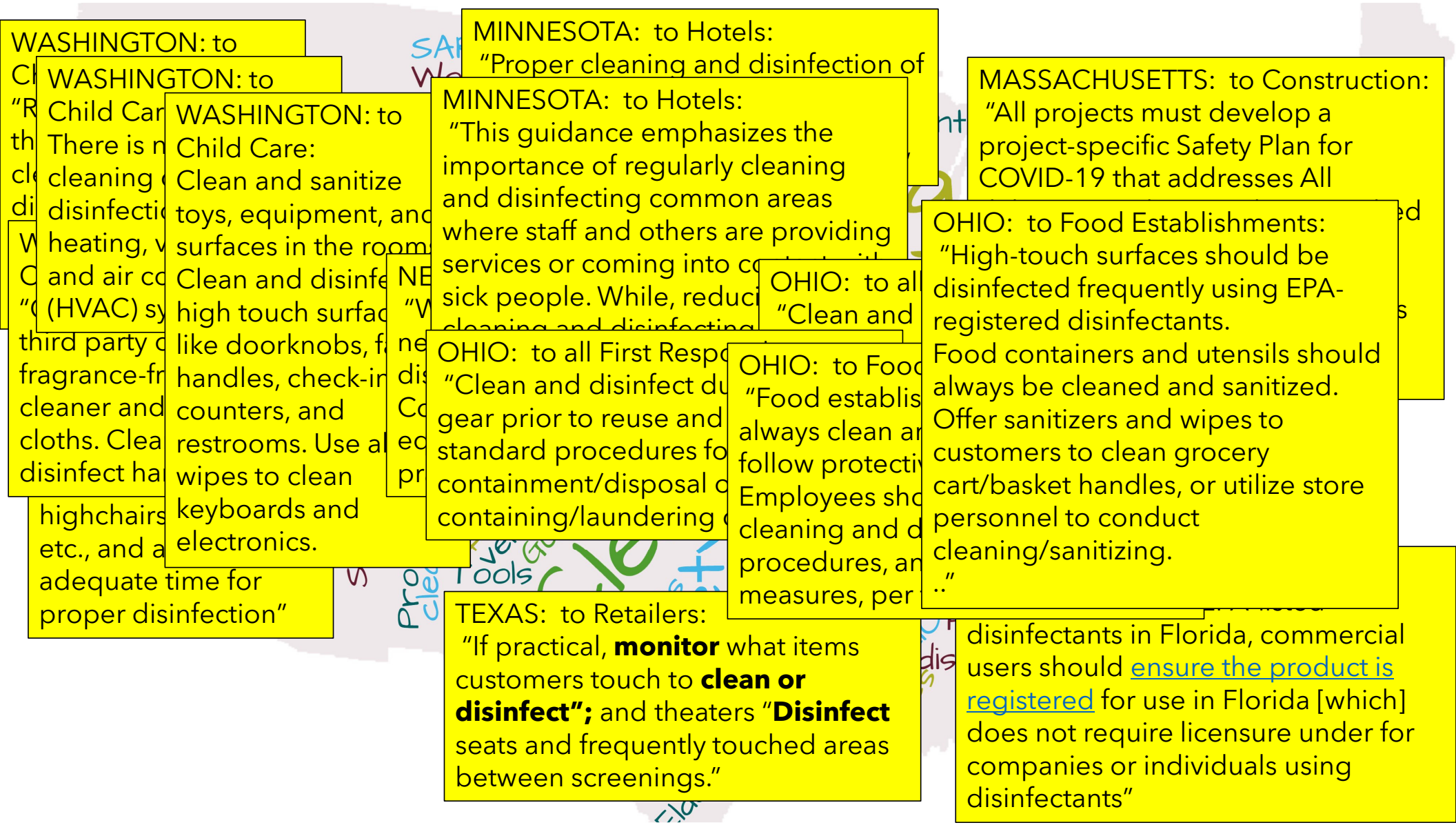
There were 3 different waves of illness during the pandemic, starting in March 1918 and subsiding by summer of 1919. The pandemic peaked in the U.S. during the second wave, in the fall of 1918. This highly fatal second wave was responsible for most of the U.S. deaths attributed to the pandemic.

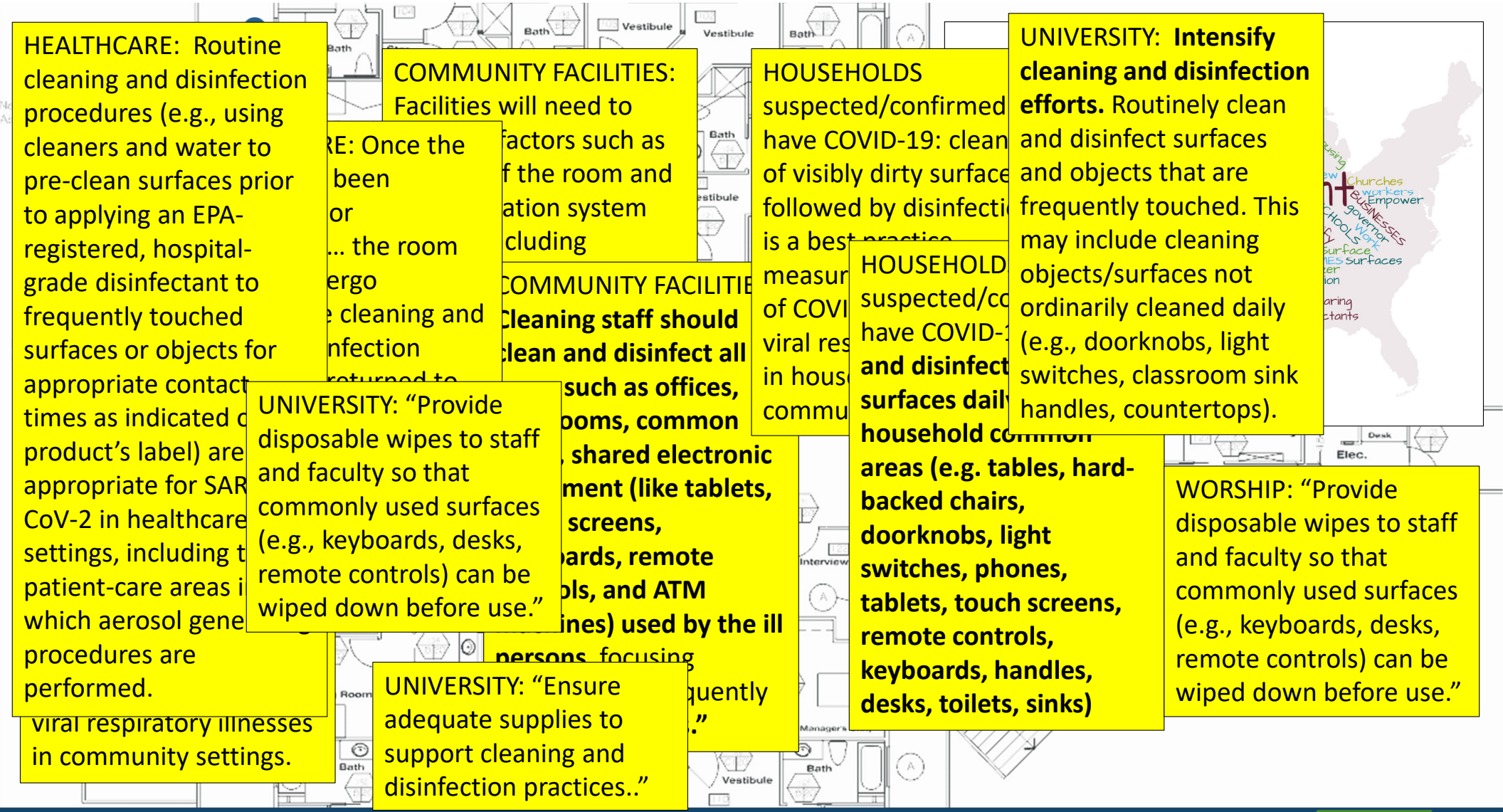


https://www.cdc.gov/flu/pandemic-resources/1918-commemoration/three-waves.htm

DISINFECTION – ESSENTIAL ACROSS REQUIREMENTS in federal and state guidance


Usage in COVID recommendations
95% DISINFECT
5% SANITIZE


WASHINGTON: to
WASHINGTON: to
Child Car
There is n
cleaning
disinfecti
heating, v
and air co
(HVAC) sy
third party c
fragrance-fr
cleaner and
cloths. Clea
disinfect ha
highchairs
etc., and a
adequate time for
proper disinfection"
WASHINGTON: to
Child Care:
Clean and sanitize
toys, equipment, and
surfaces in the room
Clean and disinfe
high touch surfac
like doorknobs, f
handles, check-in
counters, and
restrooms. Use al
wipes to clean
keyboards and
electronics.
MINNESOTA: to Hotels:
"Proper cleaning and disinfection of
MINNESOTA: to Hotels:
"This guidance emphasizes the
importance of regularly cleaning
and disinfecting common areas
where staff and others are providing
services or coming into co
sick people. While, reduci
OHIO: to all
"Clean and
OHIO: to all First Respo
"Clean and disinfect du
gear prior to reuse and
standard procedures fo
containment/disposal o
containing/laundering
OHIO: to Food
"Food establis
always clean ar
follow protecti
Employees sho
cleaning and d
procedures, an
measures, per
TEXAS: to Retailers:
"If practical, **monitor** what items
customers touch to **clean or
disinfect";** and theaters "**Disinfect**
seats and frequently touched areas
between screenings."
MASSACHUSETTS: to Construction:
"All projects must develop a
project-specific Safety Plan for
COVID-19 that addresses All
OHIO: to Food Establishments:
"High-touch surfaces should be
disinfected frequently using EPA-
registered disinfectants.
Food containers and utensils should
always be cleaned and sanitized.
Offer sanitizers and wipes to
customers to clean grocery
cart/basket handles, or utilize store
personnel to conduct
cleaning/sanitizing.
.."
disinfectants in Florida, commercial
users should ensure the product is
registered for use in Florida [which]
does not require licensure under for
companies or individuals using
disinfectants"


HEALTHCARE: Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact
times as indicated
product's label) are
appropriate for SAR
CoV-2 in healthcare
settings, including t
patient-care areas i
which aerosol gene
procedures are
performed.
viral respiratory illnesses in community settings.
COMMUNITY FACILITIES: Facilities will need to
factors such as
f the room and
ation system
cluding
RE: Once the
been
or
… the room
ergo
cleaning and
nfection
returned to
UNIVERSITY: "Provide disposable wipes to staff and faculty so that commonly used surfaces (e.g., keyboards, desks, remote controls) can be wiped down before use."
COMMUNITY FACILITIE
Cleaning staff should
lean and disinfect all
such as offices,
ooms, common
shared electronic
ment (like tablets,
screens,
ards, remote
ols, and ATM
ines) used by the ill
persons, focusing
quently
."
UNIVERSITY: "Ensure adequate supplies to support cleaning and disinfection practices.."
HOUSEHOLDS suspected/confirmed
have COVID-19: clean
of visibly dirty surface
followed by disinfecti
is a best practice
measur
of COVI
viral res
in hous
commu
HOUSEHOLD
suspected/co
have COVID-
and disinfect
surfaces dail
household co
areas (e.g. tables, hard-backed chairs, doorknobs, light switches, phones, tablets, touch screens, remote controls, keyboards, handles, desks, toilets, sinks)
UNIVERSITY: Intensify cleaning and disinfection efforts. Routinely clean and disinfect surfaces and objects that are frequently touched. This may include cleaning objects/surfaces not ordinarily cleaned daily (e.g., doorknobs, light switches, classroom sink handles, countertops).
WORSHIP: "Provide disposable wipes to staff and faculty so that commonly used surfaces (e.g., keyboards, desks, remote controls) can be wiped down before use."

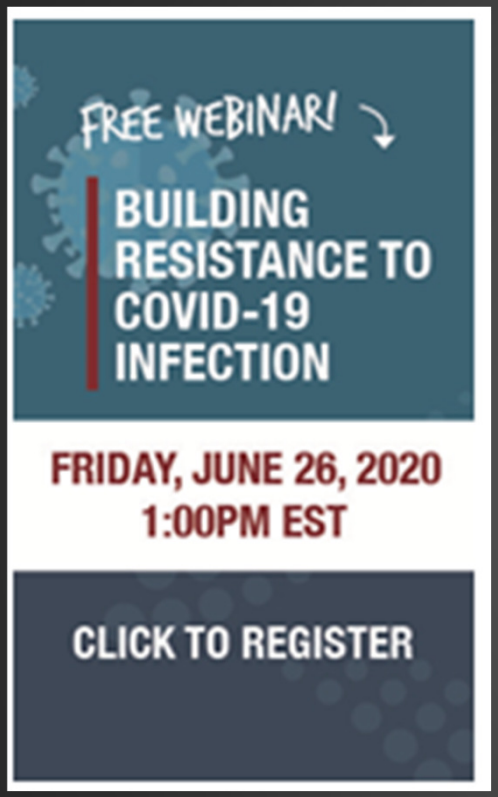
PANDEMIC CHANGES IN CONSTRUCTION

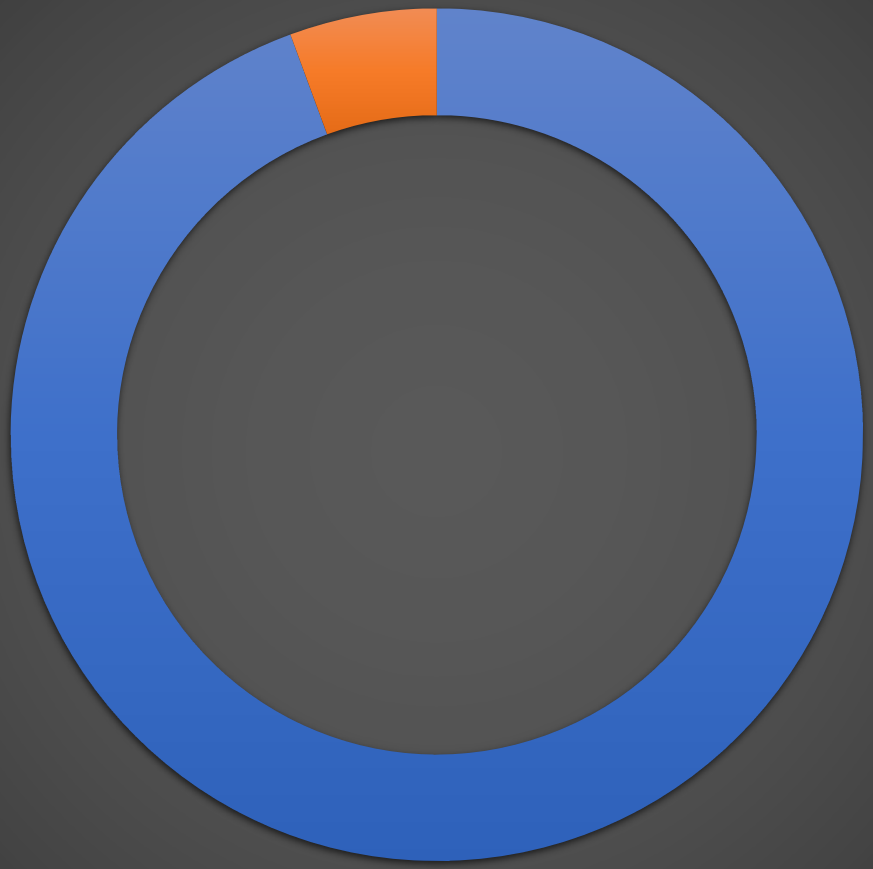
- NEW REQUIREMENTS:
  - COVID SAFETY PLAN
  - COVID OFFICER/SUPERVISOR
- ARCHITECTURE – NEW SPECIFICATIONS
  - 02 87 10 CORONAVIRUS MITIGATION
- COMMUNICATIONS
  - WORKER ED/EMPOWERMENT
- CHALLENGES
  - IDLING SIDE EFFECTS
  - MOLD
  - LEGIONELLA
  - SUPPLY CHAIN ISSUES CONTINUE

EXPECT TO SEE:

- COVID SAFETY PLAN
- MITIGATION STRATEGY:
  - Testing, tracking, isolation, social distancing
  - Strict site access (sign-in/out)
- COVID SWORN AFFIDAVIT
  - Intention statement: control environmental risk or potential risk of death, injury or illness to employees.

Usage in COVID recommendations





TENTATIVELY: MANDATE TO DISINFECT - A NATIONAL LEVEL DEEP DIVE INTO COVID RECOMMENDATIONS

JULY 10

95% DISINFECT 5% SANITIZE

Disinfectants

The Lens of Chemistry

- The choices of Chemistry, Delivery Method, and Owner Expectations related to pandemic surface hygiene impact:
  - How we clean
  - How we disinfect
  - How we prioritize our efforts

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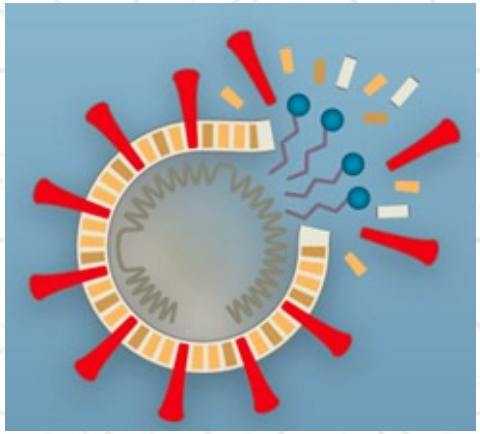
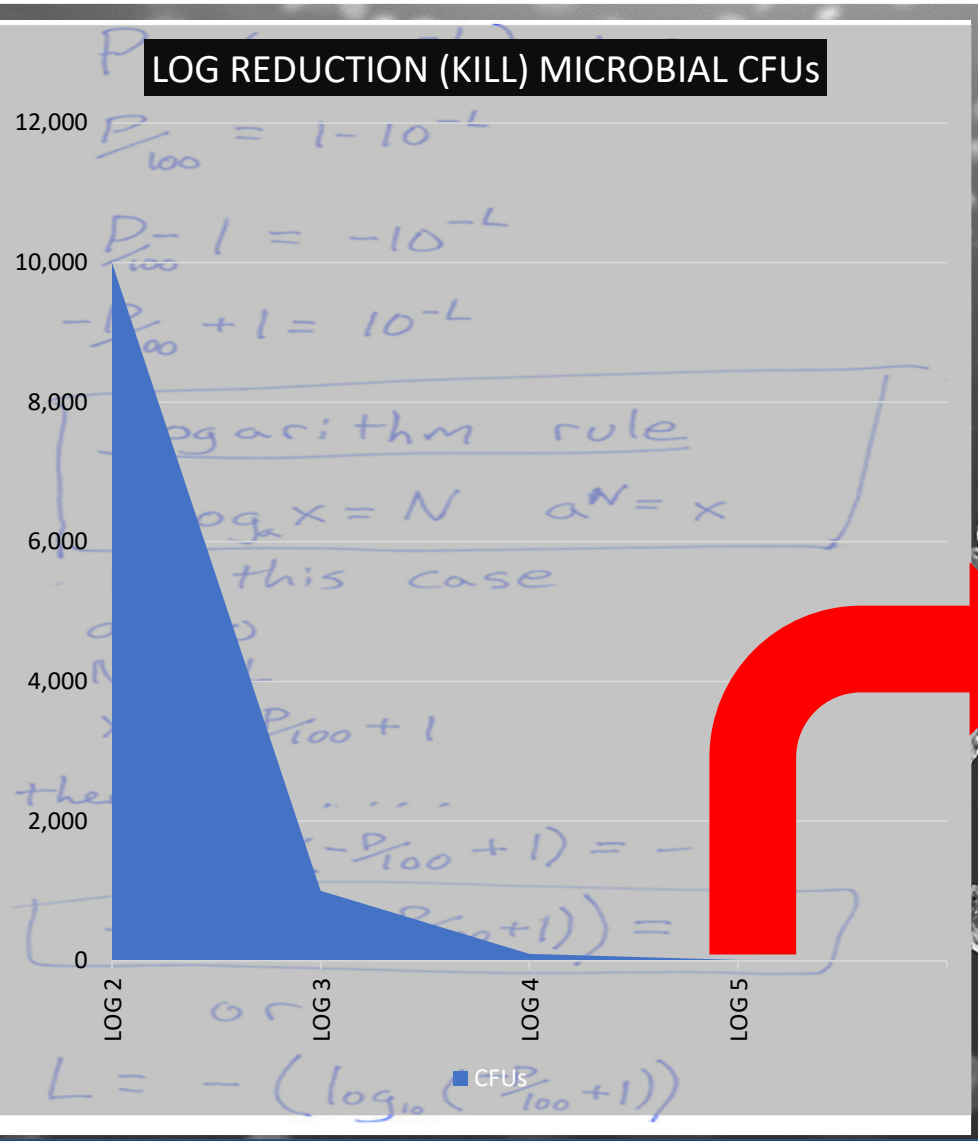
Disinfectants
Fundamentals

- Disinfectants are treatments for touchable surfaces in the indoor or outdoor built environment.
- Disinfectants kill targeted microorganisms.
- Disinfectants are infection control/public health tools integral to the control of disease.

Disinfectants
Fundamentals

- Disinfectants work by destroying the cell wall of microbes or interfering with their metabolism, or both.
- A liquid, water-like form is best for a disinfectant to deliver the active ingredient to the target microbe, and disrupt the cell membrane and processes.



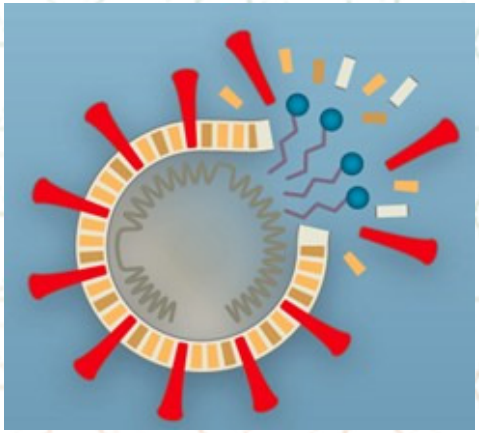


Example:

2. Sanitizing is valued…but LEAVES 1000
3. Disinfect, the term explicitly called out in COVID guidance, is equal to a 99.999% reduction. Or, 1M viable microbes are now no more than a statistically negligible 10.

Disinfectants
Fundamentals

- **Cleaning & Contact Time**
  - Kill requires contact between the active ingredient and target microbe.
  - Interference (dirt) is first removed (cleaning), then sufficient contact time for 99.999% effective.
  - For COVID activity, your contact time for disinfection is 10 minutes.



- No products have been tested or EPA-registered specifically against SARS-CoV-2 (COVID-19).

- This pathogen is not available for testing and standard methods for laboratory testing do not exist.

How does EPA know which products work on COVID-19 (SARS-CoV-2)?

While surface disinfectant products on USEPA or Health Canada Lists have not been tested specifically against SARS-CoV-2, the cause of COVID-19, EPA & Health Canada expects them to kill the virus because they:

- Demonstrate efficacy (e.g. effectiveness) against a harder-to-kill virus; or
- Demonstrate efficacy against another type of human coronavirus like SARS-CoV-2.

SWAG

Scientific

Wild

Ass

Guess

EPA LIST N & ShockWave RTU

- EPA REG. NO. 61178-2-73884
  - The 73884 is ICP-Fiberlock
- MASTER REGISTRANT: 61178-2
  - Their product name: Public Places
- ICP provides this chemistry to restoration and CAT recovery marketplace

List N was last updated on April 30, 2020.

EPA Registration Number 61178-2

Other Search Options | Clear

Show 25 entries | Export to PDF | Export to CSV

List N: Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2

EPA Registration Number	Active Ingredient(s)	Product Name	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)
61178-2	Quaternary ammonium	Public Places	Feline calicivirus	10

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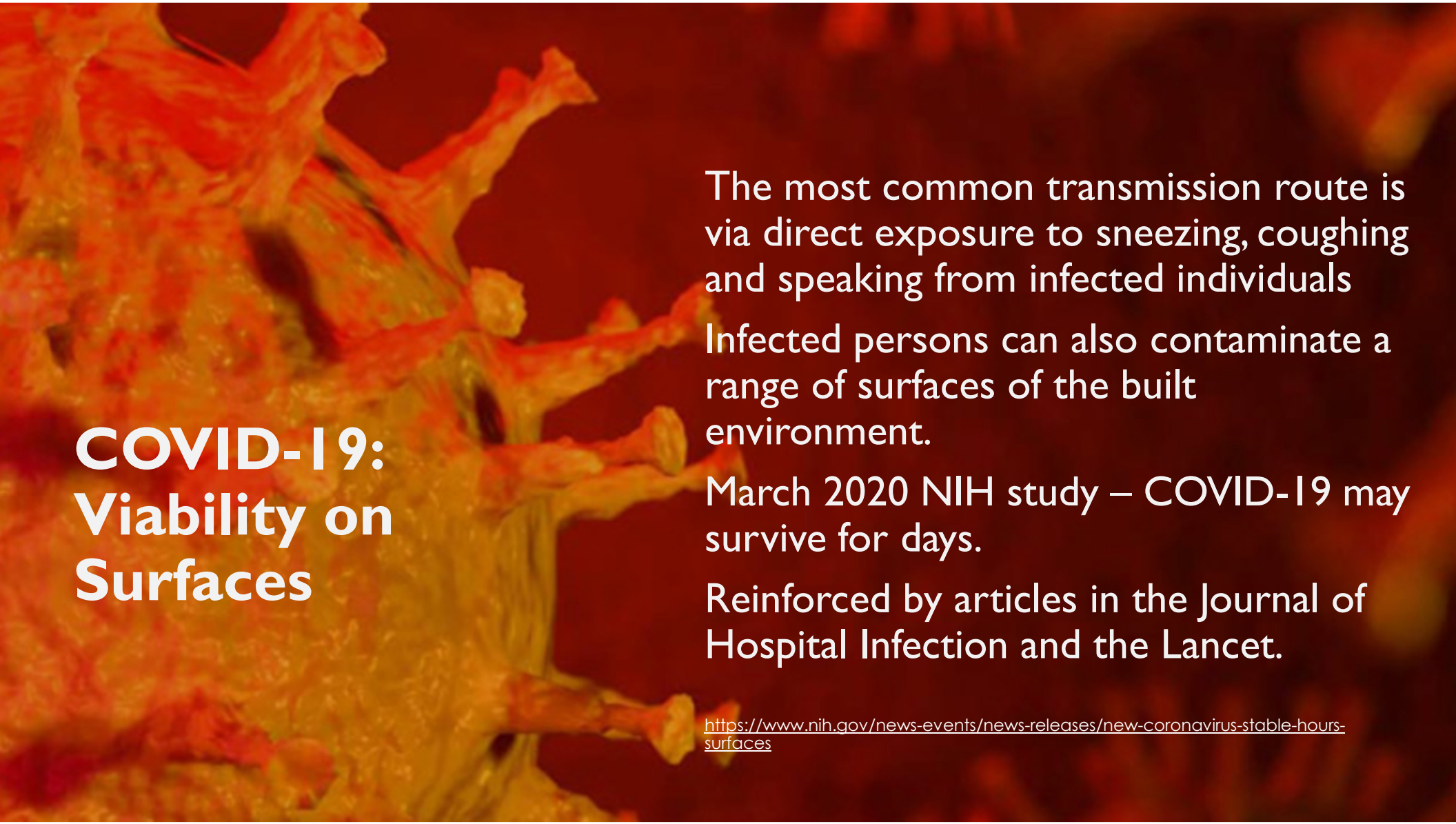
EPA LIST N - DEFERENCE

- All states and agency/institutions recommend starting with List N to select products
- CDC, FDA, OSHA
  - BAD EXAMPLE: CDC and the brief recommendation of the CBC list – since corrected by CDC

Time and Time Again- Contact

- EPA List N specifies contact name predicted necessary to kill the SARS-CoV-2 strain
- Often longer than sanitize time on published labels
- 10 minutes is benchmark because
  - We don't know for certain about new org
  - Cleanliness = absence of associated bacteria and fungi
    - That takes 10 minutes

Why Surfaces?



COVID-19: Viability on Surfaces

The most common transmission route is via direct exposure to sneezing, coughing and speaking from infected individuals

Infected persons can also contaminate a range of surfaces of the built environment.

March 2020 NIH study – COVID-19 may survive for days.

Reinforced by articles in the Journal of Hospital Infection and the Lancet.

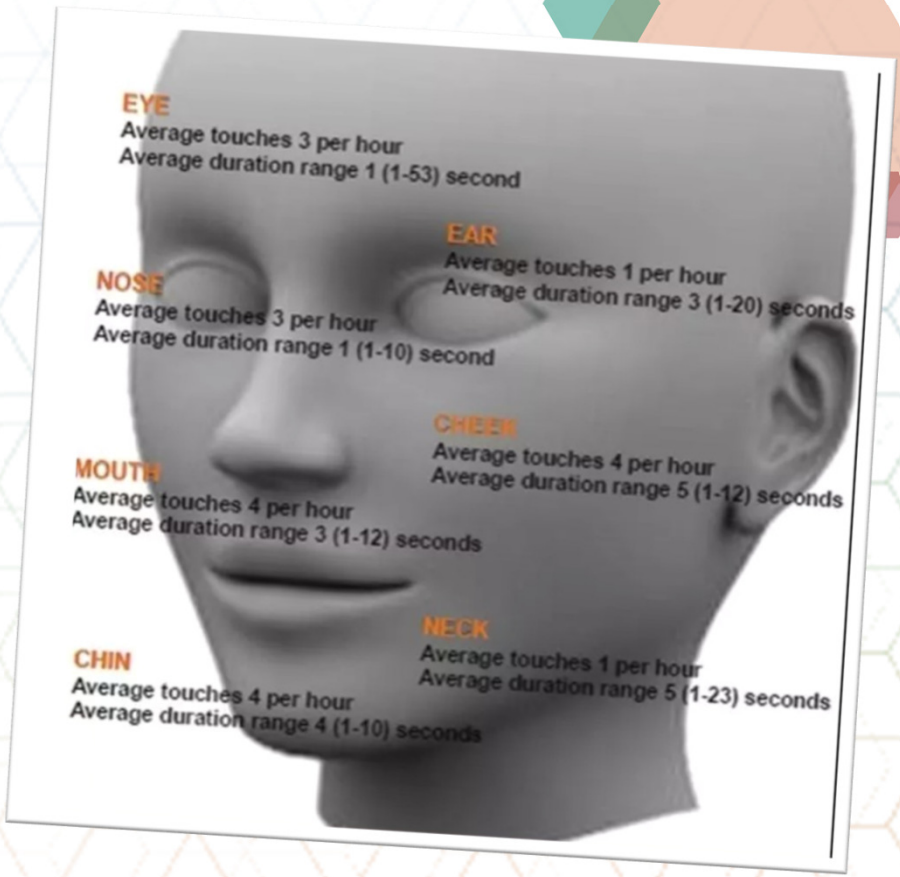
https://www.nih.gov/news-events/news-releases/new-coronavirus-stable-hours-surfaces

March 17, 2020
in the *New England Journal of Medicine*

	SARS-CoV-1 [SARS 2002-2004]	SARS-CoV-2 [2019-2020]	Influenza A & B [Annual]
Copper	8 hours	4 hours	6 hours
Porous (Cardboard, Cloth, Tissues, Paper)	8 hours	24 hours	8-12 hours Money in 1 study 8-17 days
Hard, Non-porous (Plastic)	3 days (72 hours)	3 days (72 hours)	1-2 days (24-48 hours)
Hard, Non-porous (Stainless Steel)	2 days (48 hours)	3 days (72 hours)	1-2 days (24-48 hours)

Journal of Hospital Infection

- Humans "touch their face with their own hands on average 23 times per h, with contact mostly to"
  - the skin (56%)
  - mouth (36%)
  - nose (31%)
  - eyes (31%)



Analysis: *CDC's Morbidity and Mortality Weekly Report (MMWR)* **found "*SARS-CoV-2 RNA was identified on a variety of surfaces in cabins of both symptomatic and asymptomatic infected passengers up to 17 days after cabins were vacated on the Diamond Princess but before disinfection procedures had been conducted.*"**

https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e3.htm?s_cid=mm6912e3_w

Relative Contagion	SARS-CoV-1 [SARS 2002-2004]	SARS-CoV-2 [COVID-19 2020]	Ebola [2018]
Infectious Viability (Plastic)	**3 days**	**3-9-17+ days**	**Up to 2 weeks**
Infectious Viability (Stainless Steel)	**2 days**	**3-9-17+ days**	**Up to 2 weeks**
R0 Value Contagiousness	**2.9**	**1.5-3.5**	**1.71-2.02**
Critical Transmission Factors	Symptomatic only; Closer direct contact for SARS & MERS vs COVID-19. Frequent HAIs	Non, pre-, and asymptomatic+symptomatic transmission; small/large respiratory droplets	Symptomatic & Visible symptoms; Bodily fluids (Blood,sweat, urine); direct contact
% Mortality [CFR Case Fatality Rate]	**9.6-15%** (MERS 34%) ['02-'03: 26 countries, more than 8000 infections, approximately 800 dead]	**1.4%** [177 countries, more than 1.9M infections, approximately 127K dead]	**50%** [2 nations; Current 2018 outbreak 3432 cases and 2249 deaths. US during 2014-16 outbreak: 11 cases; 2 deaths]

Asymptomatic Shed

- WHO Maria Van Kerkhove: June 8 - asymptomatic transmission"very rare."
- Van Kerkhove June 10: clarified referring only to patients who never show any symptoms at all
- WHO: 16% truly asymptomatic patients can infect others.
- (June 3) *Annals of Internal Medicine* - may be as high as 45 percent, and individuals can transmit the to others for an extended period."

Time and Time Again-Frequency

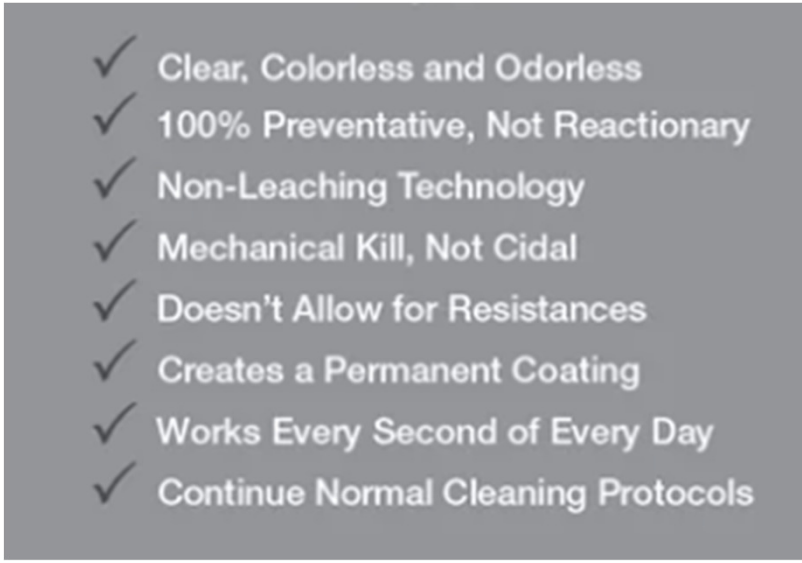
- Recommendations are all over the place
  - RE: clean for health/preventative; Not COVID cleanup
- Majority: routine, regular, intensify, increase = unhelpful?
- Majority: Daily (more like nightly)
- Customer/Public Interaction = Frequency due Transaction
  - Every use, shift, customer
  - Restaurant, Worship, Gym
- Starvation Strategy: 24 hrs, 72 hrs, wait as long as you can
- Arbitrary: 2 hours, 12 hours, 24 hours, Follow CDC weekly

Empowerment

- OSHA-right-to-know, General Duty Clause
  - Only sections of OSHA COVID guidance as enforceable
- Guests, Staff…all of the above
  - Training with disinfectants
  - Provide supplies (notably wipes – made or make your own)
- CDC: Regular cleaning staff can clean and disinfect community spaces.
- CDC: Ensure they are trained on appropriate use of cleaning and disinfection chemicals.

Guidelines, Specifications & Right Expectations


MICROSHIELD 360
HOME ABOUT SERVICES RESIDENTIAL CONTACT
OUR TECHNOLOGY
Home / Commercial / Our Technology
MICROSHIELD 360 ANTIMICROBIAL IS EPA REGISTERED AND FDA APPROVED FOR DIRECT FOOD CONTACT SURFACES
MicroShield 360 Antimicrobial Imparts Durable Biostatic Activity to the Surface of a Wide Variety of Substrates
STEP 1
Electrostatic Application
All solutions are applied electrostatically which reduces waste, improves coverage and eliminates human error.
STEP 2
MicroShield 360 Renew - Immediate Kill
A specially formulated disinfectant is applied to all surfaces and allowed to air dry. This preps the surface for MicroShield 360 Antimicrobial.
STEP 3
MicroShield 360 Antimicrobial - Preventative Protection
A proprietary coating formula that imparts a final biostatic finish to treated surfaces thereby not allowing bacteria
HIGHLIGHTS OF
OUR TECHNOLOGY
Clear, Colorless and Odorless
100% Preventative, Not Reactionary
Non-Leaching Technology
Mechanical Kill, Not Cidal
Doesn't Allow for Resistances
Creates a Permanent Coating
Works Every Second of Every Day
Continue Normal Cleaning Protocols


Clear, Colorless and Odorless
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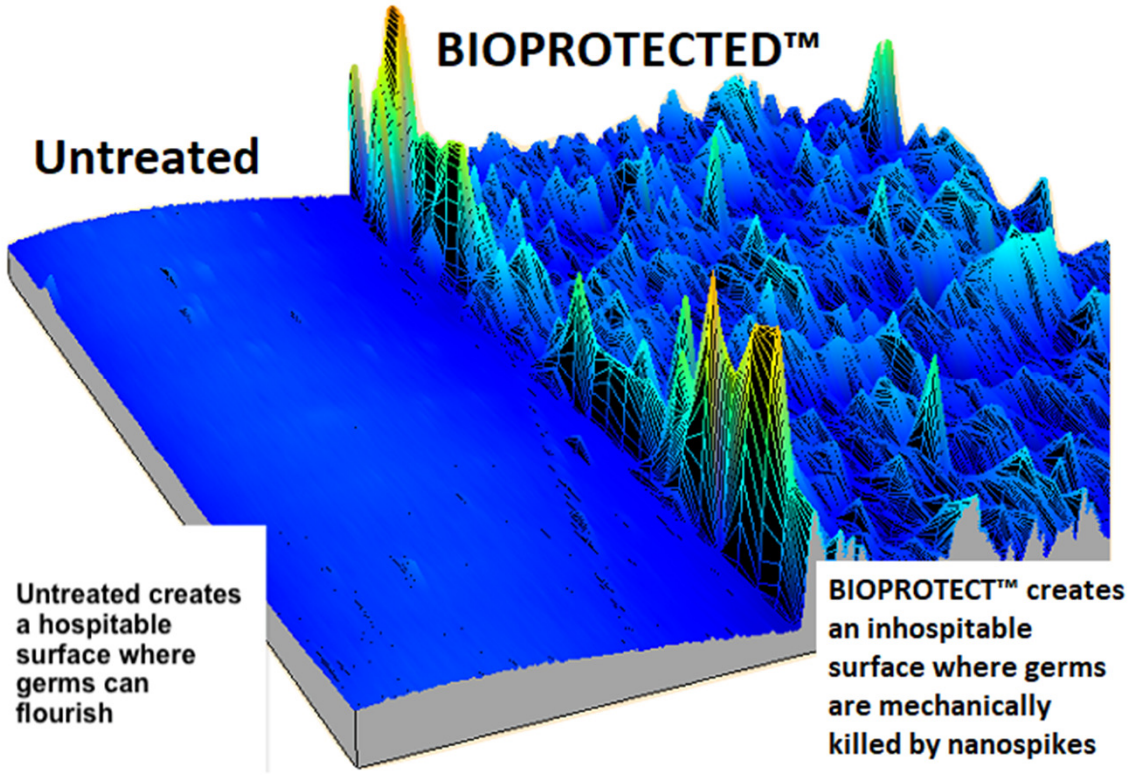

Once attracted, the molecular spikes pierce the cell and rupture its cell membrane, causing the odor causing bacteria, bacteria which cause staining and discoloration, fungi (mold and mildew), and algae to die.


THOR
DESI ROBOT
CLOTHING
DISINFECTION
COVID-19
STOP
VIRUS


XTREME
CUBES CORP


GameStop
power to the players
The
UPS Store

Snapshot in Time:
The 2nd Most Common Question

- Regular cleaning and disinfecting of public facilities is the key to infection control.
- Increased frequency is recommended during times of high illness among the occupants.
- Special attention should be paid to common "hot spot" or high touch points like door handles, faucets, water fountain knobs, or toys.

You cannot promise lifespan beyond disinfection.

Simple Guidelines for One Requirement

- There are no established guidelines or regulations for epidemic or pandemic. But there will be…
- For now, no licensing is required, and there is a chaotic mix of recommendations.
- The one requirement for the RESPONSIBLE/ACCOUNTABLE:
  - Clean and disinfect to extent necessary to mitigate against exposure of guests, customers, visitors, members and staff to the virus on touchable surfaces.

Simple Guidelines for One Requirement

An over simplified guideline:

- 3 STEPS:
  - **1.** If surfaces are visibly dirty, clean.
  - **2.** Apply disinfectant.
    - Ensure wet contact time, and adjust delivery method for size of space
  - **3**. Address potentially contaminated touch points such as doorknobs, toys, keyboards, etc. when clearing an area

Simple Guidelines for One Requirement

- Follow CDC: Clean from furthest point in a space towards nearest to exit and from high-to-low (all helps against cross-contamination and duplicate effort)

- WATCH THIS SPACE for ICP's new mitigation master format specification: 02 87 10 coronavirus mitigation

For assistance in the use of products in this section, contact ICP Group by calling (978) 623-9980, by email at info@icpgroup.com, or visit their website at www.icpgroup.com.

SECTION 02 87 10 - CORONAVIRUS DISINFECTION

PART 1 GENERAL

1.1 ABBREVIATIONS

A. Personal Protective Equipment: PPE.

1.2 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate with local and State health departments to ensure that current cleaning and disinfecting protocols and guidelines are followed, including identification of new potential cases of COVID-19.

1.3 SUBMITTALS

A. Informational Submittals:
1. Product Data: Manufacturer's descriptive data for materials proposed for use.

1.4 QUALITY ASSURANCE

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