

COVID-19 Weekly Updates Mondays at 4 PM ET



Before we begin

If you have any questions about COVID-19 or information presented in this webinar, please email our taskforce at

covid19tf@iafc.org



INTRODUCTION OF PANELISTS

Chief Gary Ludwig, IAFC President

Dr. Jim Augustine, MD, FACEP, IAFC COVID-19 TF, EMS Section Representative

Mr. Ken LaSala, IAFC Director of Government Relations

Chief Tom Jenkins, IAFC President 2018-19, Chair Lessons Learned Work Group

AND SPECIAL GUESTS

Fire Chief Steve Pegram, Chair Economic Crisis Task Force

Christina Baxter PhD, Emergency Response Tips, LLC



Fire Chief Gary Ludwig

IAFC President



Dr. James Augustine MD, FACEP

Member COVID19 Task Force



Coronavirus What we are Learning

- Patient symptoms on EMS presentation = wide
- Pulse Oximetry is the best monitor device for the patient to determine "how sick"
- Symptom checking and a thermometer are the best way to check if our members are sick
- Changes in Resuscitation are occurring



Patient Approach - Resuscitation

- Scout person what is the history?
- No mouth-to-mouth
- Compressions and Electricity
- Minimize spray from the patient
- Intubation versus "Other Airway"
- Termination of Resuscitation



The EMS Challenges

- Update on Resuscitation
- The (short) title is below, and the link is: https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.120.047463

10.1161/CIRCULATIONAHA.120.047463

- Interim Guidance for Basic and Advanced Life Support in Adults, Children, and Neonates With Suspected or Confirmed COVID-19: From the Emergency Cardiovascular Care Committee and Get With the Guidelines®-Resuscitation Adult and Pediatric Task Forces of the American Heart Association in Collaboration with the American Academy of Pediatrics, American Association for Respiratory Care, American College of Emergency Physicians, The Society of Critical Care Anesthesiologists, and American Society of Anesthesiologists:
- Supporting Organizations: American Association of Critical Care Nurses and National EMS Physicians
- Running Title: Edelson et al.: Interim Guidance for Life Support for COVID-19



Workforce Safety

Personnel Health and Safety

- –Station common areas surgical/personal masks
- Checking personnel health
 on arrival for shift or
 response symptoms first,
 then temperature
- Health monitorprocess/forms each staffmember

"What we can't do during a battle, is lose our forces."

Employee:								E	xposure	Date:				
Presumptive		Date:					Con	firmed		Date				
	Da	y 1	Da	y 2	Da	y 3	Da	y 4	Da	y 5	Da	y 6	Da	y 7
Symptom/Time	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000
Your Temperature														
Runny Nose														
Sore Throat														
Dry Cough														
Runny Eyes														
Fever														
Short of Breath														
Any Other Symptoms?														
	Da	y 8	Da	y 9	Day	/ 10	Day	/ 11	Day	12	Day	/ 13	Day	14
Symptom/Time	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000	0800	2000
Your Temperature														
Runny Nose														
Sore Throat														
Dry Cough														
Runny Eyes														
Fever														
Short of Breath														
Any Other Symptoms?														



CDC Guidance Update. April 8

Interim Guidance for Implementing Safety Practices for Critical Infrastructure Workers Who May Have Had Exposure to a Person with Suspected or Confirmed COVID-19

To ensure continuity of operations of essential functions, CDC advises that critical infrastructure workers may be permitted to continue work following potential exposure to COVID-19, provided they remain asymptomatic and additional precautions are implemented to protect them and the community.

A potential exposure means being a household contact or having close contact within 6 feet of an individual with confirmed or suspected COVID-19. The timeframe for having contact with an individual includes the period of time of 48 hours before the individual became symptomatic.

Critical Infrastructure workers who have had an exposure but remain asymptomatic should adhere to the following practices prior to and during their work shift:

- Pre-Screen: Employers should measure the employee's temperature and assess symptoms prior to them starting work. Ideally, temperature checks should happen before the individual enters the facility.
- Regular Monitoring: As long as the employee doesn't have a temperature or symptoms, they should self-monitor under the supervision of their employer's occupational health program.
- Wear a Mask: The employee should wear a face mask at all times while in the workplace for 14 days after last exposure. Employers can issue facemasks or can approve employees' supplied cloth face coverings in the event of shortages.
- Social Distance: The employee should maintain 6 feet and practice social distancing as work duties permit in the workplace.
- Disinfect and Clean work spaces: Clean and disinfect all areas such as offices, bathrooms, common areas, shared electronic equipment routinely.

If the employee becomes sick during the day, they should be sent home immediately. Surfaces in their workspace should be cleaned and disinfected. Information on persons who had contact with the ill employee during the time the employee had symptoms and 2 days prior to symptoms should be compiled. Others at the facility with close contact within 6 feet of the employee during this time would be considered exposed.

Employers should implement the recommendations in the Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 to help prevent and slow the spread of COVID-19 in the workplace.

Additional information about identifying critical infrastructure during COVID-19 can be found on the DHS CISA website or the CDC's specific First Responder Guidance page.

INTERIM GUIDANCE

This interim guidance pertains to critical infrastructure workers, including personnel in 16 different sectors of work including:

- Federal, state, & local law enforcement
- 911 call center employees
- Fusion Center employees
- Hazardous material responders from government and the private sector
- Janitorial staff and other custodial staff
- Workers including contracted vendors in food and agriculture, critical manufacturing, informational technology, transportation, energy and government facilities

ADDITIONAL CONSIDERATIONS

- Employees should not share headsets or other objects that are near mouth or nose.
- Employers should increase the frequency of cleaning commonly touched surfaces.
- Employees and employers should consider pilot testing the use of face masks to ensure they do not interfere with work assignments.
- Employers should work with facility maintenance staff to increase air exchanges in room.
- Employees should physically distance when they take breaks together. Stagger breaks and don't congregate in the break room, and don't share food or utensils.

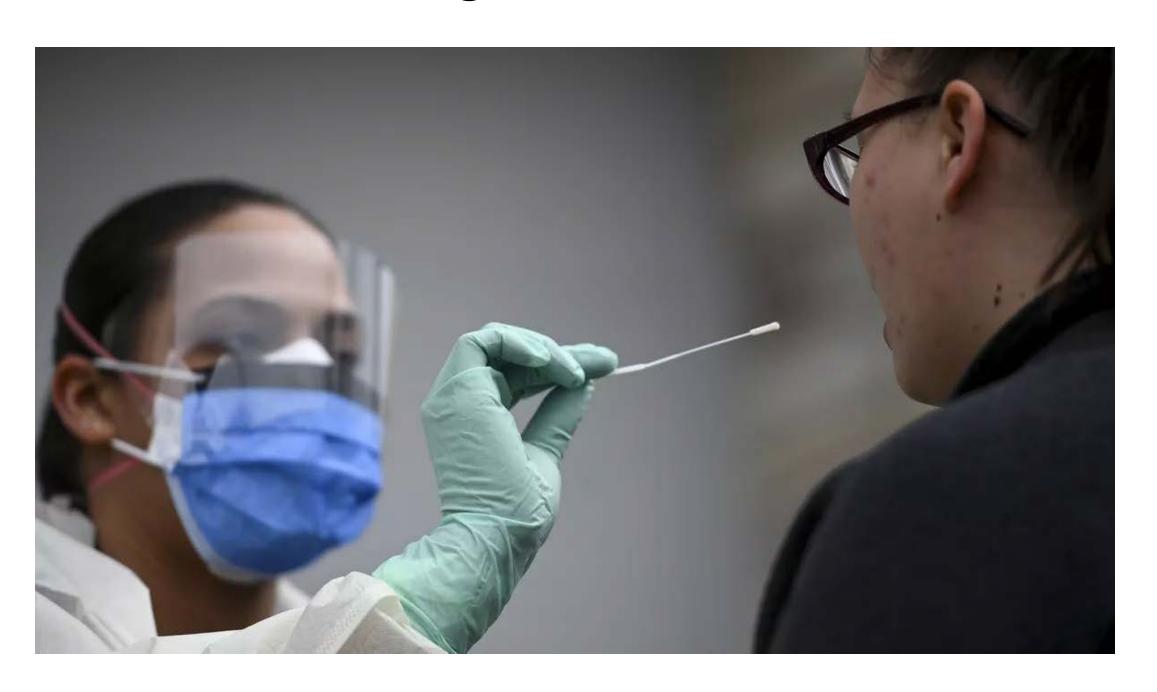






Testing for the Virus

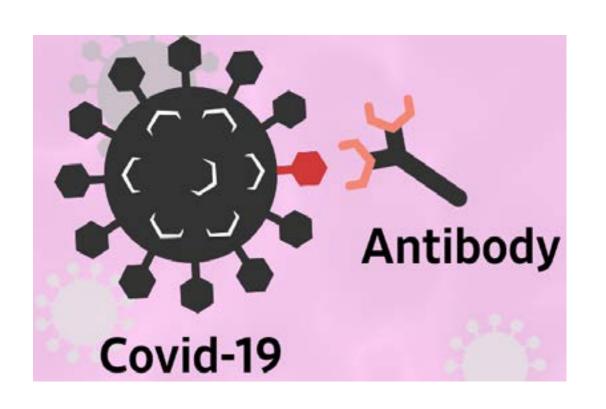
- PCR = Polymerase Chain Reaction
- A method to analyze for a short sequence of RNA
- A swab of nose or throat
- Some with rapid answers





Testing for Antibodies

- Antibody Testing
- IgM
- IgG

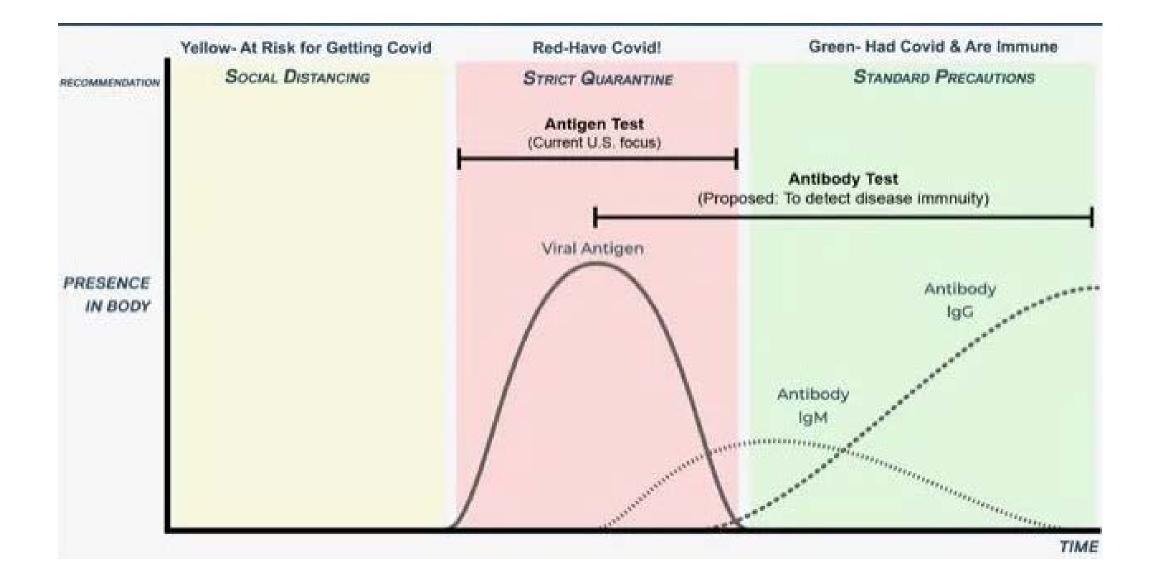




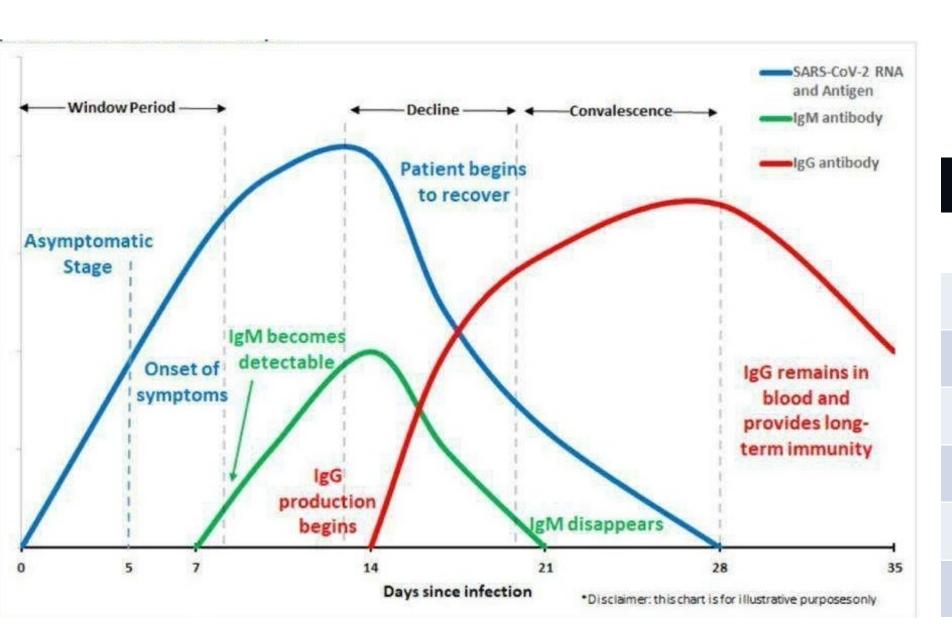


Testing for Antibodies

 Some with rapid answers





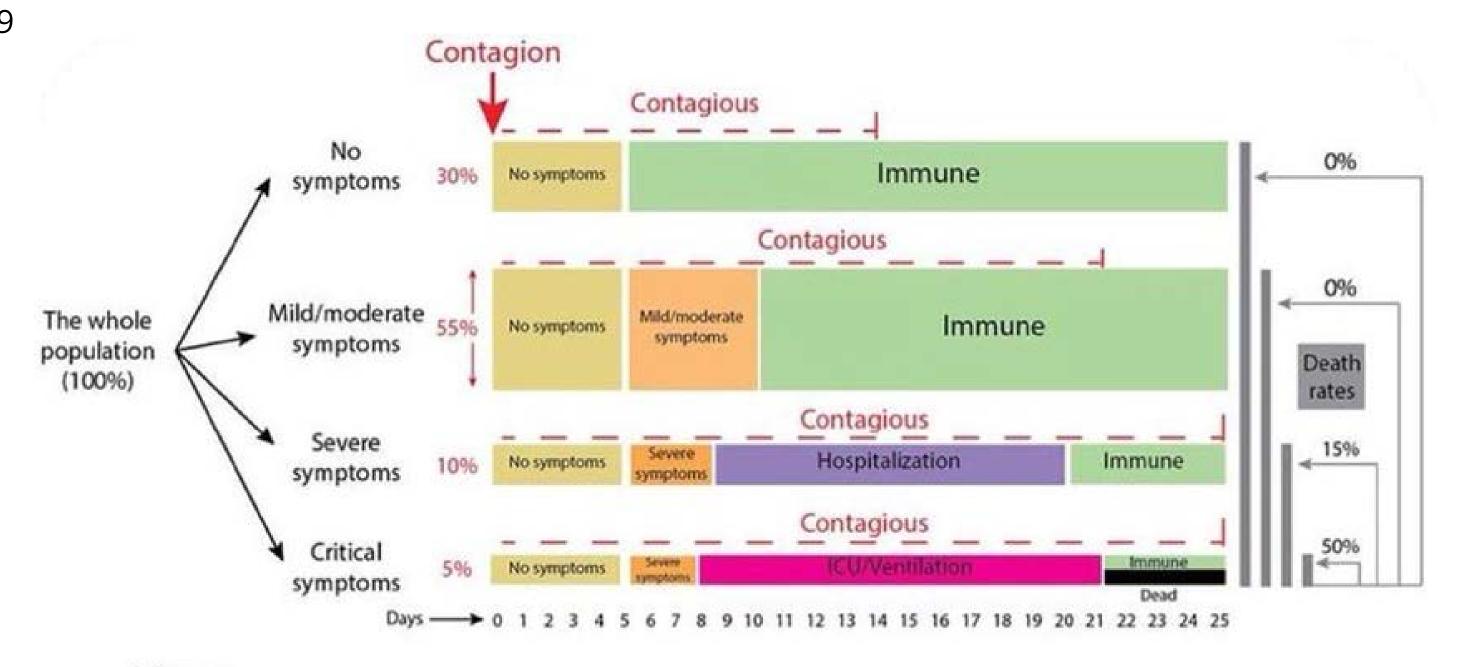


COVID Testing Sequence

- Testing is becoming available
- Some with rapid answers looking for the virus
- Then the application of antibody tests

Test Results		ts	Clinical Significance				
PCR	lgM lgG						
+	-	-	Infected, window before antibodies				
+	+	-	Infected, early stage				
+	+	+	Infected, active stage				
+	-	+	Infected, late stage or recurrent				
-	+	-	Early stage infection, PCR false negative				
-	-	+	Prior infection, with durable immunity				

Time Sequence

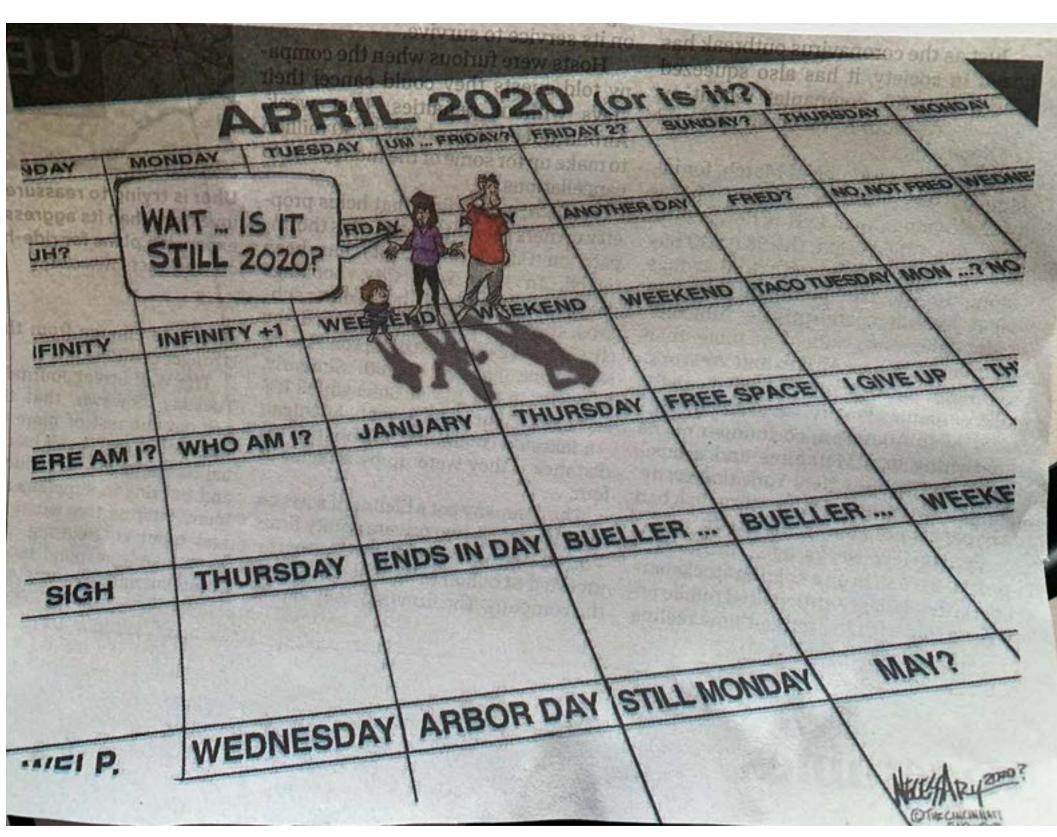


References:

- The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application. Lauer SA et al. Ann Intern Med. 2020 Mar 10.
- Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand. Neil M Ferguson et al. Imperial College COVID-19 Response Team. 16 March 2020.
- 3. Viral dynamics in mild and severe cases of Covid-19. Yang Liu et al. The Lancet, March 19, 2020.



When Will This End?





Ken LaSala

IAFC Government Relations Director



Government Relations

CMS Funding to Fire and EMS organizations

Discussed supply chain issues with USFA

4th COVID-19 Bill

Direct Funding to Reimburse Fire & EMS Departments for COVID-19 Response Expenses

Repeal of T-Band Auction

Protect Jobs of Volunteer Fire & EMS



Fire Chief Steve Pegram
Goshen (IN) Fire Department
Chair Economic Crisis Task Force



Economic Task Force

Goals for the Economic Task Force at this point:

To help fire and EMS chiefs' access local, state and especially federal funding being made available in response to the coronavirus pandemic.

To help fire and EMS chiefs plan and prepare for the economic impact of the pandemic on our communities, both internally at our departments and externally in our communities.



CARES ACT

Non-Profit 501(c)(3) and 501(c)(4) Eligible
Volunteer Departments who pay personnel may be eligible for
Paycheck Protection Program (PPP)

Up to 2 million Dollar Loans for Working Capitol (2.75% Interest Rate)



AFG Grant

100 Million Dollars
Specific for COVID19 PPE Only
FEMA GO Application
Reimbursement and Future Purchase
Late march open date



Member Survey / Dashboards

Survey on Economic Impact of COVID

Two Areas of interest or concern

- 1. Cost of Response
- 2. Impact on Local Economy/Budgets



Dr. Christiana Baxter

CEO, Emergency Response TIPS, LLC

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Currently available research supports the possibility that SARS-CoV-2 could be spread via bioaerosols generated directly by patients' exhalation.

- National Academy of Sciences Standing Committee on Emerging Infectious Diseases1

Current data suggests:

- Bioaerosols collected > 6', but <14' from patients were positive with SARS-CoV- $2^{2,3,4}$
 - Viral load from patients in ICU > patients in General Wards⁴
 - Highest airborne concentration recorded while patient receiving oxygen via nasal canula²
- Cross-contamination from gloves and footwear is significant^{3,4}
 - High touch surfaces are consistently contaminated (computer mice, trash cans, bed rails, doorknobs).

Currently available evidence supports the use of Airborne Isolation Precautions



PPE Escalation

STANDARD Gloves

(long enough to interface with

Eye Protection (as needed)

> Mask (as needed)

Impermeable Gown (as needed)

CONTACT

Gloves

coveralls)

Eye Protection (glasses or goggles)

Mask (ASTM F2100 Level 2 or 3)

Coveralls

DROPLET

Gloves

(long enough to interface with coveralls)

Eye Protection

(glasses or goggles)

Mask

(ASTM F2100 Level 2 or 3)

Fluid-Resistant Gown or Fluid-Resistant Gown or Coveralls

AIRBORNE

Gloves

(long enough to interface with coveralls)

Eye Protection

(non-venting goggles)

N95 Respirator (or greater)

Fluid-Resistant Gown, Coveralls, or NFPA 1999 Ensemble

VIRAL PATHOGEN

NFPA 1999 Multi-Use Ensemble

OR

NFPA 1994 Class 4 Ensemble

OR

Greater



PPE – Balancing the Risk

	Recommended Best Practice	Minimum Acceptable Protection	Last Resort
Phase 1 When Respirator Supplies are Available	 N/R/P-100 filtering facepiece respirator (FFR) OR air purifying respirator (APR) or powered air purifying respirator (PAPR) with P100 canister Filters used once and replaced between patients 	 N/R/P-95 filtering facepiece respirator APR or PAPR with chemical adsorption canister using a P100 pre-filter Interchange of filters and masks that are not certified together is not approved. 	Not Applicable
Phase 2 When Respirator Supplies are Low	 Use a medical mask OVER the N95 to extend its use. Replace the medical mask between patients. Utilize emergency rule to allow for APR/PAPR canister interchangeability Use masks beyond their "expiration date" 	 Consider reusing your FFR (store in non-plastic bag between uses) Consider reusing your APR/PAPR canisters (wipe (not spray) down with disinfectant and store in humidity-free environment) DO NOT SPRAY FILTER MEDIA 	 Prioritize protection by exposure risk: > 6' from patient = no mask 3'-6' = medical mask < 3' = N95 or greater
Phase 3 When Respirator Supplies are Depleted	 Decontaminate FFPs and reuse (do not share FFPs and APR/PAPR filters between people – maintain individual issue) Microwave Generated Steam for 1 minute on each side at 1100-1250W (2 min total); Consider placing a paper towel between FFP and glass plate to prevent melting; Consider placing FFP on container containing 50 mL of water to generate steam Ultraviolet Germicidal Irradiation (UGVI) for 15 minutes on each side using a device fitted with a 40W UV-C bulb. 	utility masks)	 Consider homemade respiratory products using common fabric materials (note that the protection level will be minimal, at best) Requires the use of a reusable and cleanable faceshield to minimize direct exposure with droplets



EMS Escalation

STANDARD

Assess patient from 6', if possible

Provide patient with mask (if exhibiting respiratory symptoms)

Adjust level of precaution as necessary

Utilize Exhaust fan in EMS transport unit

CONTACT

ALL STANDARD PLUS:

Consider plastic sheets (between patient and stretcher)

Not all GI illnesses require droplet precautions

(assume C. diff, norovirus, or others until ruled out)

DROPLET

ALL STANDARD AND CONTACT PLUS:

Consider isolating the driver compartment if performing aerosol producing procedures

(airway suction, intubation, aerosolized medication administration)

Increase ventilation in patient compartment

(place air or heat on non-recirculating cycle and/or open windows)

AIRBORNE

ALL STANDARD, CONTACT, AND DROPLET PLUS:

Isolate immediate area & minimize personnel

Minimize personnel exposed to infectious persons

Isolate driver from patient OR driver dons N95 (minimum)

Consider Portable Isolation Units or Ambulance Draping **VIRAL PATHOGEN**

ALL STANDARD, CONTACT, DROPLET, and AIRBORNE



Decontamination Escalation

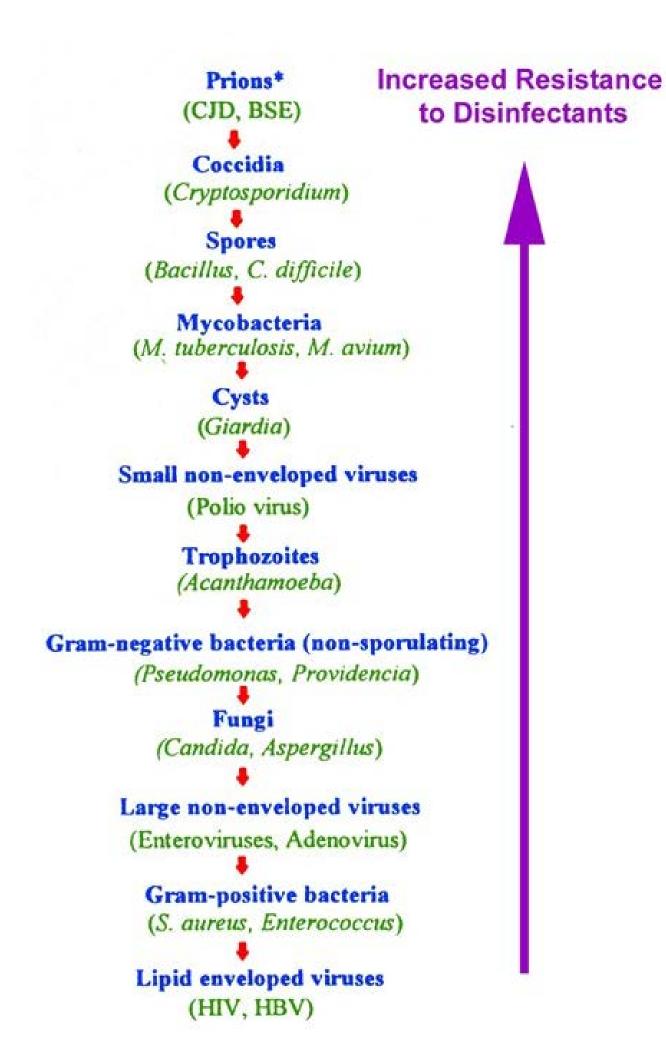
STANDARD	CONTACT	DROPLET	AIRBORNE	VIRAL PATHOGEN
Wash hands	Wash hands	Wash hands	Wash hands	Wash hands
Clean surfaces	Clean surfaces	Clean surfaces	Clean surfaces	Clean surfaces
Disinfect surfaces (EPA-registered)	Disinfect surfaces (EPA-registered)	Disinfect all impacted areas (EPA-registered)	Disinfect all impacted areas* (EPA-registered) (Inspect PPE for visible	Disinfect all impacted areas* Peracetic acid-based decontamination)
		Inspect PPE for visible contamination (decon prior to doffing)	contamination (decon prior to doffing)	Inspect PPE for visible contamination (decon prior to doffing)

^{*}Remember, adjacent areas could also be impacted



Selecting a Disinfectant

- Rapid action, even at low concentrations
- Broad-spectrum activity without toxicity
 - Kill claim for Clostridium difficile (C. diff.)
 - Hard to destroy
- pH neutral
 - Can be used clothing and sensitive equipment
- Low odor
- Multi-year shelf-life
 - Dry materials have longer shelf-lives, but require water to be added
- Easy to mix or use
- Affordability and availability





FDA Emergency Use Authorization Issued March 24, 2020

Certification/ Class	N95	FFP2	KN95	P2	1 st Class	DS	N95
Country	USA	EU	China	AU/NZ	Korea	Japan	Mexico
Standard	NIOSH-42C-FR84	EN-149-2001	GB2626-2006	AS/NZ 1716:2012	KMOEL-2017-64	JMHLW- Notification-214, 2018	NOM-116-2009
Filter performance	≥ 95%	≥ 94%	≥ 95%	≥ 94%	≥ 94%	≥ 95%	≥ 95%
Test Agent	NaCl	NaCl and paraffin oil	NaCl	NaCl	NaCl and paraffin oil	NaCl	NaCl and paraffin oil
Flow rate	85 L/min	95 L/min	85 L/min	95 L/min	95 L/min	85 L/min	85 L/min
Total inward leakage (TIL) ¹	N/A	≤ 8% leakage (arithmetic mean)	≤ 8% leakage (arithmetic mean)	≤ 8% leakage (arithmetic mean)	≤ 8% leakage (arithmetic mean)	Measured and reported in Users Guide	N/A
Inhalation resistance (max. pressure drop)	≤ 343 Pa (at 85 L/min)	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min) ≤ 500 Pa (clogging)	≤ 350 Pa (at 85 L/min)	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min)	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min)	≤ 70 Pa (w/valve) (at 40 L/min) ≤ 50 Pa (no valve) (at 40 L/min)	≤ 343 Pa (at 85 L/min)
Exhalation resistance (max pressure drop)	≤ 245 Pa (at 85 L/min)	≤ 300 Pa (at 160 L/min)	≤ 250 Pa (at 85 L/min)	≤ 120 Pa (at 85 L/min)	≤ 300 Pa at 160 L/min	≤ 70 Pa (w/valve) (at 40 L/min) ≤ 50 Pa (no valve) (at 40 L/min)	≤ 245 Pa (at 85 L/min)
Exhalation valve leakage requirement	Leak rate ≤ 30 mL/min at -245 Pa	N/A	Depressurization to 0 Pa ≥ 20 sec at -1180 Pa	Leak rate ≤ 30 mL/min at -250 Pa	Visual inspection after 300 L/min for 30 sec	Depressurization to 0 Pa ≥ 15 sec at -1470 Pa	N/A
CO2 clearance requirement	N/A	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	N/A

¹Tested on human subjects performing a series of exercises

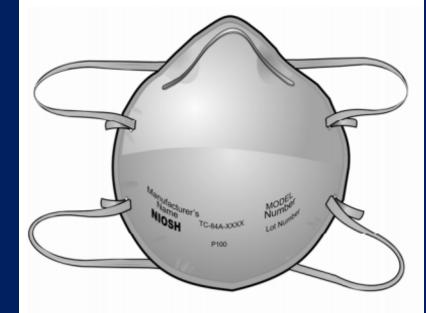


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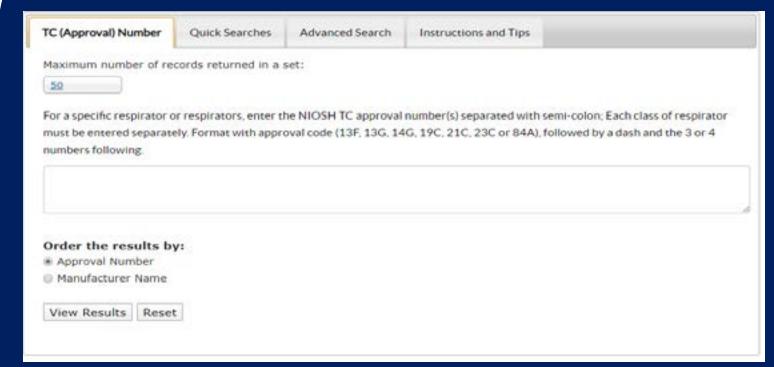
Verification of NIOSH-Approved N95 Claims

Required Elements:

- (1)Name of approval holder, manufacturer, or registered trademark
- (2) NIOSH in block letters or the NIOSH logo
- (3)TC Number (TC-84A-XXXX) (NIOSH Testing and Certification approval number)
- (4)Filter Designation (filter series (N/R/P) and filter efficiency level (95/99/100)(5)Model Number
- *Lot number is *recommended* on the mask and *required* on the packaging.
- **All manufacturers are required to have elements 1
- 5 above [REF: DHHS Letter to All Manufacturers dated 9/3/2008]



<u>Search the NIOSH Certified Equipment List:</u> https://wwwn.cdc.gov/niosh-cel/



- Use the full TC number to search (84A-XXXX)
- If you do not have a TC number available, go to the Advanced Search Tab
 - Under Schedules, select 84A
 - Under **Protections**, select **N95** under the particulate section
 - Under **Manufacturer or Brand**, select the appropriate **name** from the list.
 - If you don't see the manufacturer's name immediately, type in the first few letters and let the computer search for you as many companies use shortened names on their products, yet the full name is used during certification



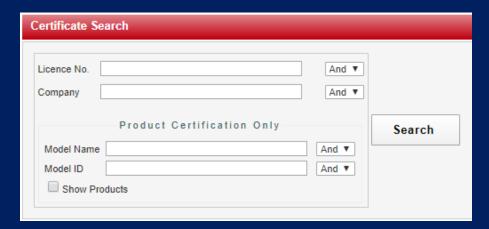
Certified Product

iafc.org/covid19

Verification of AU/NZ-Approved P2 Claims

Search the SAI Global website:

https://register.saiglobal.com/default.aspx?stype=power



- Fill out the search criteria with the information you have available.
- When you <u>do not choose</u> "Show Products" you end up with information about the company, its location, the license number, and the relevant SAI standards.

Search Nortal				
1 to 10 of 18 records found				
Company / Fredhig Nate	120	Licence No.	Manded	
3M Australia Pty Limited	Quilified, NSH	SAR0014	ADACS 1001 (1967	
3M Australia Pty Limited	Guideline, NSW	5863213	45 625 1716 2802 25 625 1716 2812	
3M Australia Pty Limited	Quietore. NSVI	5MH3213	AS/NOTS 1307 1 2018 AS/NOTS 1337 1992	
3M Australia Pty Limited	Quietters NOV	SMEGGE	ASACS 1279,2002	
3M Australia Pty Limited	Outstand, NSVV	509/216/3	AS/NCTS 1716 2003 AS/NCTS 1716 2012	
3M Australia Pty Limited	Quiettest, NSW	5560001848	ISEA.209.1	
3M Australia Pty Limbed:	North Ryon, NSW	\$89925454	ASACS 1714-2012	
3M Australia Pty Ltd	Strenuter, NSIV Suitford, NSIV	CENCHOS	100.14001.2015	
3M Avelralia Pty Ltd	Strenuter NSVI Quilding NSVI	OHSZ1166	AS/NZS 4001,2001	
3M Australia Pty CM	Strenyder, NSW Guidfort, NSW	060903	59 881-386	

• Select the License Number to see the current status, expiration date, original date of certification, the SAI standards that they are certified to, and a link to their license certificate.



Scroll down to the Standard of Interest



• Scroll further down to Product of Interest.

800 2000	Half(1/2) facepiece Disposative	PS	REP 1900	No valve. Moulded sup type with 2 affactment bands	Uniquile	Universal	FilterCartridge(Work) Particle	2 Apr 2012
#DE 2009,GW	Half(1/2) facepièce- Disposable	P2	RDP 2000 GV	Mounted mask with two retention straps and activated carbon layer. Valved	Umaate	Universal	Filter/Cartridge(Work) Particle	2 Apr 2012
800 2005.V	Half(1/2) facepiece- Disposable	P2	RDP 2009 V	Valve. Moulded sup-type with 2 attachment bands.	Unitedle	Universal	Filter/Cartridge(Work) Particle	2 Apr 2012
806.25	Half(1/2) facepiece- Disposable	P2	ROPIE	No valve. Moulded our type with 2 attachment bands	Protector	Universal	Filter/Cartridge(Work) Particle	2 Apr 2012
nor at	Half(1/2) faceprece- Draposatile	P2	PDP 2P	No varie. Horizontal flat find with 2 attachment bands	United	Universal	Filter/Cartridge(Work) Particle	2 Apr 2012
mon.zx	Half(1/2) faceprece- Disposable	P2	RDP ZV	Valve. Moulded sup type with 2 attachment bands.	Protector	Universal	Pillan/Cartrilge(Work) Particle	2 Apr 2012

- Select the Product of Interest. The information provided includes:
 - Model ID
 - Face piece or head covering type (1/2 facepiece-disposable
 - Filter or cartridge type/class (P2)
 - Facepiece/head-covering description
 - Model name
 - Size facepiece/head-covering
 - Facepiece/head-covering filtration type
 - Accessories or comments
 - Distributor(s)

Model ID.	RDP 2F
Face Piece / Head Covering Type	Half(1/2) facepiece-Disposable
Filter or Cartridge Type/Class	P2
Filter or Cartridge Model Number	RDP 2F
Facepiece/Headcovering Description	
Model Name	Unisafe
Size Facepiece/fleadcovering	Universal
Facepiece/Headcovering-filtration type	Filter(Cartridge(Work) Particle
Accessories or Comments	
Distributor(s)	Currently no distributors for this product



COVID-19 Weekly Updates

Email: covid19tf@iafc.org