Resources-
PPE and Testing as We Reopen

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UPDATE: ASA and APSF Joint Statement on Perioperative Testing for the COVID-19 Virus

June 3, 2020

Patients who are infected with SARS-CoV-2, the virus responsible for the COVID-19 disease, have higher perioperative morbidity and mortality.[1-3] Unexpected progression to acute respiratory distress syndrome, cardiac injury, kidney failure and even deaths has been observed in patients infected with SARS-CoV-2 who have undergone surgical procedures.[1, 4] Additionally, aerosolizing procedures place operating room staff at greater risk of being infected with SARS-CoV-2. As a result, a robust screening and testing program to detect SARS-CoV-2 is essential for the safety of patients, health care workers and the general public.

American Society of Anesthesiologists

apsf Anesthesia Patient Safety Foundation

- All patients should undergo screening
  - Exposure to Covid-19 patient in past 14 days
  - Fever, cough, shortness of breath, loss of taste/smell, headache, chills, muscle aches in past 14 days
  - GI symptoms have been reported
- Test if local/regional prevalence or positive screening
- Currently antibody testing does not have a role in perioperative setting or risk stratification
- Positive tests for elective surgery: delay until no longer infectious and demonstrate recovery
  - CDC test based strategy
    - Resolution of fever
    - Improvement in respiratory symptoms
    - Two negative result 24 hours apart
  - CDC non test based strategy
    - At least 72 hours fever free
    - 72 hours since improvement in respiratory symptoms
    - 10 days since symptom onset
- Sufficient recovery not defined
  - Assessment of cardiopulmonary system/METS recommended
- Review PPE guidance from CDC, ASA & other societies

Perioperative Testing Practices

Elective

- Tests 24 hours to 5 days prior
  - Majority 24-72 hours
  - Nasopharyngeal
- Test good for admission as long as patient remains asymptomatic
  - One group reported up to 30 days
- Majority reschedule if no test
  - Some perform rapid if available
- Exceptions:
  - Result did not return
  - Lack of test site

Urgent

- Rapid tests if available
- Full PPE if rapid test not available
  - Negative pressure room if available
  - Adequate air turnover time if positive pressure room
  - HEPA filters if available
- Staff out of room until airway secured & extubation

Emergent

- No test
- Full PPE
  - Usually all OR members
- Test intra op to de-escalate post op

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Point of Care Testing

World Health Organization

Health Topics | Countries | Newsroom | Emergencies

Home / Newsroom / Commentaries / Detail / Advice on the use of point-of-care immunodiagnostic tests for COVID-19

Advice on the use of point-of-care immunodiagnostic tests for COVID-19

Scientific Brief

8 April 2020

- Rapid and easy to use
- Does not require lab
- Sputum, throat swab, blood
- "At present, based on current evidence, WHO recommends the use of these new point-of-care immunodiagnostic tests only in research settings"
- PCR testing of respiratory tract samples is recommended method
- Additional research needed for other testing methods

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VCH Testing Process

Outpatient

- Ordered by surgery or pre op clinic
  - Days to weeks in advance
  - Within 72 hours of DOS
- Outpatient testing locations vs on-site
  - Able to test infants/young children?
- Two days before surgery
  - Pre op clinic runs report to review results
  - Positive: review urgency with surgeon
  - Wait 2 weeks and need 2 negative tests 24 hours apart vs 10 days symptom free vs 4-6 week wait
- Day before surgery
  - Exceptions (up to 30 per day for institution, 10 for VCH periop)
  - Rapid test pre-approvals (max 5 to allow for add on cases)
  - List of outstanding tests, contact patients
- Day of surgery
  - Rapid test if exception
  - 2-4 hours for results
  - Tests have different reagents depending on method (NP, OP, nares)
    - Reagent availability may vary day to day

Inpatient

- ER vs Floor/ICU
  - Transfer to Covid-19 unit if positive
- Dashboard of Covid-19 pending/positive patients
  - Airway team
- Ordered by surgical team/proceduralist
- Rapid test if urgent
- No test if emergent
  - Tested intra op
- Exception:
  - In-born NICU babies of Covid-19 negative mothers

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Where discovery brings hope

COVID Exposure & Testing Guidelines

*caring for a patient with COVID when wearing appropriate AGP PPE does not count as being exposed

Have you been exposed to a person with COVID?

[Exposure = within 6ft of COVID+ person continuously for >10 min (patient, family, friend, co-worker)]

NO KNOWN EXPOSURE

Undergo Daily Screening:

Any symptoms consistent w/ COVID?

NO (asymptomatic)

Asymptomatic

continue working as normal (wearing mask, hand hygiene)

YES (symptomatic)

Call Occupational Health at 615-936-0955 for directions on where to obtain COVID test (e-pod or in clinic)

1) **Advise AIC/clinical lead (Dunworth/Gelfand) that COVID test has occurred and is pending**
2) **Stay home until test results**

If COVID negative, return to work unless febrile

If COVID positive, self-quarantine for 14 days; follow directions from Occ Health for return to work and any testing

KNOWN EXPOSURE at WORK

Undergo Daily Screening:

Any symptoms consistent w/ COVID?

YES (symptomatic)

Call Occupational Health at 615-936-0955 for directions on where to obtain COVID test (e-pod or in clinic)

1) **Advise AIC/clinical lead (Dunworth/Gelfand) that COVID test has occurred and is pending**
2) **Stay home until test results**

If COVID negative, return to work unless febrile

If COVID positive, self-quarantine for 14 days; follow directions from Occ Health for return to work and any testing

NO (asymptomatic)

Will be contacted daily for 14d by Occ Health to assess for symptoms

Asymptomatic

continue working as normal

If symptoms develop

If symptoms develop, obtain COVID testing

KNOWN EXPOSURE at HOME

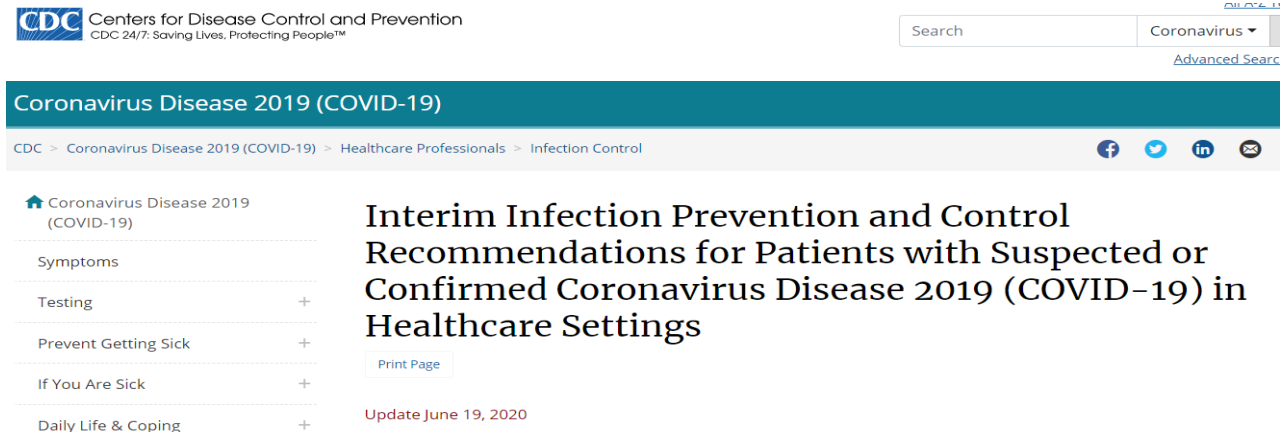
Isolate from live-in COVID+ person

Fill out REDCap Survey from Occupational Health (https://redcap.vanderbilt.edu/surveys/?s=N8P7FHA4JD)

Self-quarantine for 14 days; follow directions from Occ Health for return to work and any testing

If symptoms develop, obtain COVID testing

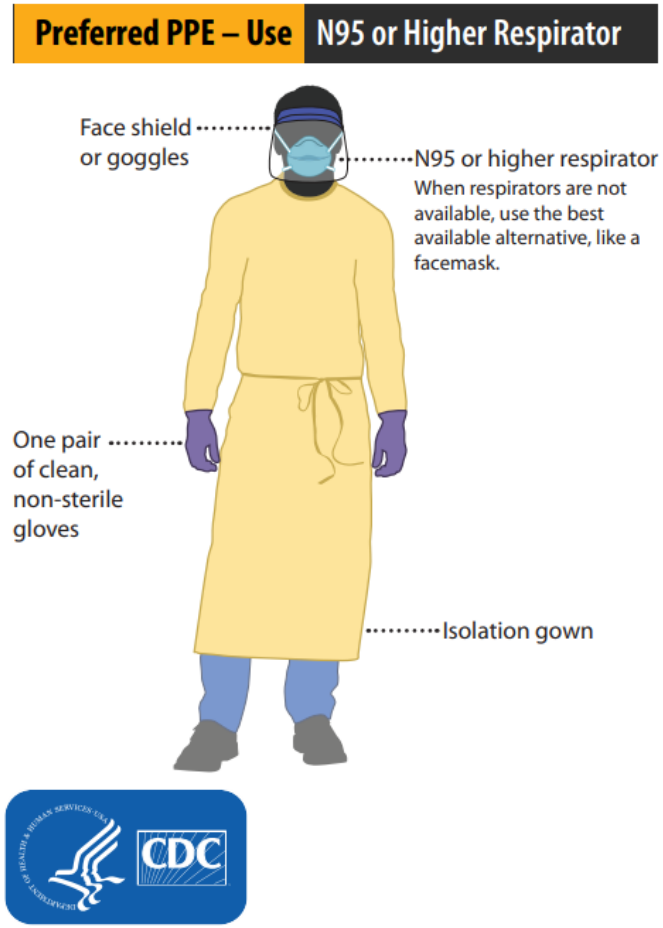
General CDC PPE Recommendations



- Suspected or confirmed
  - Gloves, gown, N95, eye protection
- Areas with moderate to substantial community transmission
  - Eye protection and facemask
  - N95 instead of facemask for AGPs, surgical procedures that may pose higher risk for transmission (AGP, locations with higher viral load- ENT, respiratory tract)
  - No official consensus on list of AGPs
  - Respirators with exhalation valves are not recommended during surgical procedures
- Areas with minimal to no community transmission
  - Standard PPE
  - Eye protection and N95 when recommended
  - Universal face mask use for source control

PPE practices around the country

- Positive Tests:
  - PAPR/N95
  - Face shield/eye protection
  - Gown
  - Glove
  - Negative pressure room
  - Air turnover if positive pressure
  - Nurse present to ensure proper doffing
  - Other personnel out of room for intubation/extubation



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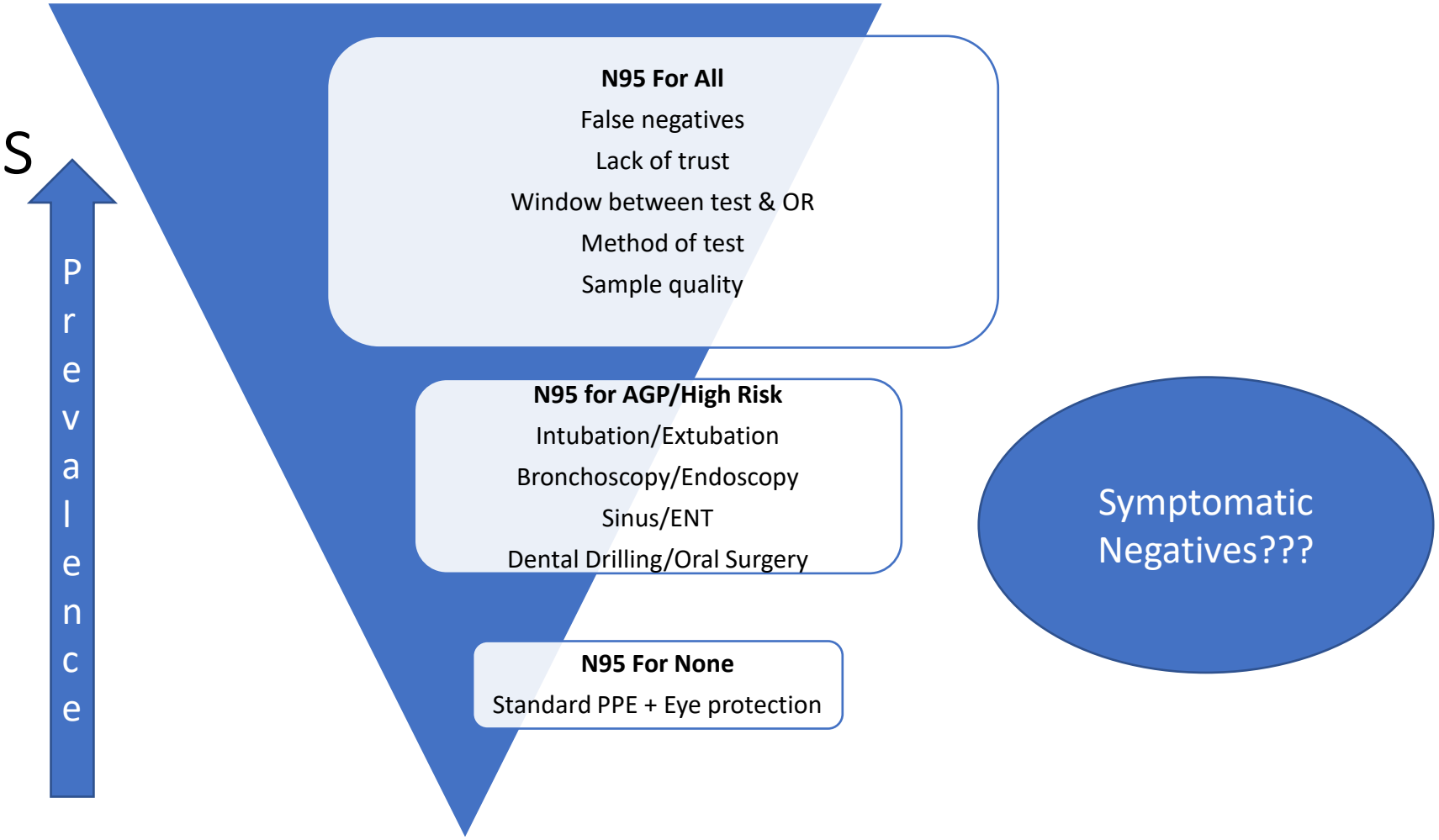
PPE practices around the country: Negative Tests



What influences PPE use?

Personal Influence

- Prevalence
- Trust in testing/results
  - False negatives
  - Sample quality
  - Type of test
- Trust in families to isolate between test and OR date
- Risk stratification to self, family and co-workers
- Availability

Institutional Influence

- Prevalence
- Testing
  - Sensitivity/specificity
  - Availability
- Supply
  - Disposable vs reusable
- Re-sterilization ability
- PPE review committee
  - Per CDC, no AGP expert consensus list
    - Open suctioning of airway, sputum induction, CPR, intubation/extubation, BiPAP/CPAP, bronchoscopy, manual ventilation
    - ?nebulizers and high flow O2 delivery

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The Joint Commission Position Statement

- **N95 or higher** respirator when caring for known or suspected **Covid-19 for AGPs**
- **Because of risk of false negatives, clinicians caring for patients undergoing surgery or AGP should still use N95 or PAPR. Use of N95/PAPR should continue until organization determines that risk of clinician acquiring Covid-19 from false negative PCR test is very low**
- If **incidence is low**, **may stop use of N95/PAPR for AGPs in asymptomatic patients with negative test**
- **Universal masking** of staff, patients over 2 and visitors
- Should not be operating under crisis standards when elective cases resumed
- Conservation strategies for N95/respirators
- Patients undergoing **elective surgery or AGP should be screened & tested shortly before procedure**
  - Support ASA/APSF recommendations
- Follow state and local health department guidelines

The Joint Commission

Position Statement (revised June 22, 2020): Preventing Nosocomial COVID-19 Infections as Organizations Resume Regular Care Delivery

The Joint Commission supports the following positions for healthcare organizations to prevent nosocomial COVID-19 infections as they are resuming routine care.

Healthcare organizations should continue to follow CDC recommendations for universal masking of staff, patients, and visitors. If there are situations where a patient cannot wear a mask (e.g., under 2 years of age, respiratory compromise, or examination of the nose, mouth, lips, and perioral area) personnel providing care within 6 feet of the patient should don a medical mask. In areas where there is moderate to substantial transmission of COVID-19 in the community (or as indicated by standard precautions), personnel should also wear eye protection in addition to wearing a mask. If there are no COVID-19 cases in the community for several weeks, organizations should work with public health authorities to re-evaluate the need for universal masking based on their community's risk of new cases; if the organization stops universal masking, it should be prepared to immediately re-institute universal masking if new cases emerge.

When caring for patients with known or suspected COVID-19 infection, healthcare personnel should wear filtering facepiece respirators (e.g., N95 respirators) or higher-level respirators for all aerosol generating procedures or surgical procedures that might pose higher risk for transmission (e.g., that generate potentially infectious aerosols or involving anatomic regions where viral loads might be higher, such as the nose and throat, oropharynx, respiratory tract).

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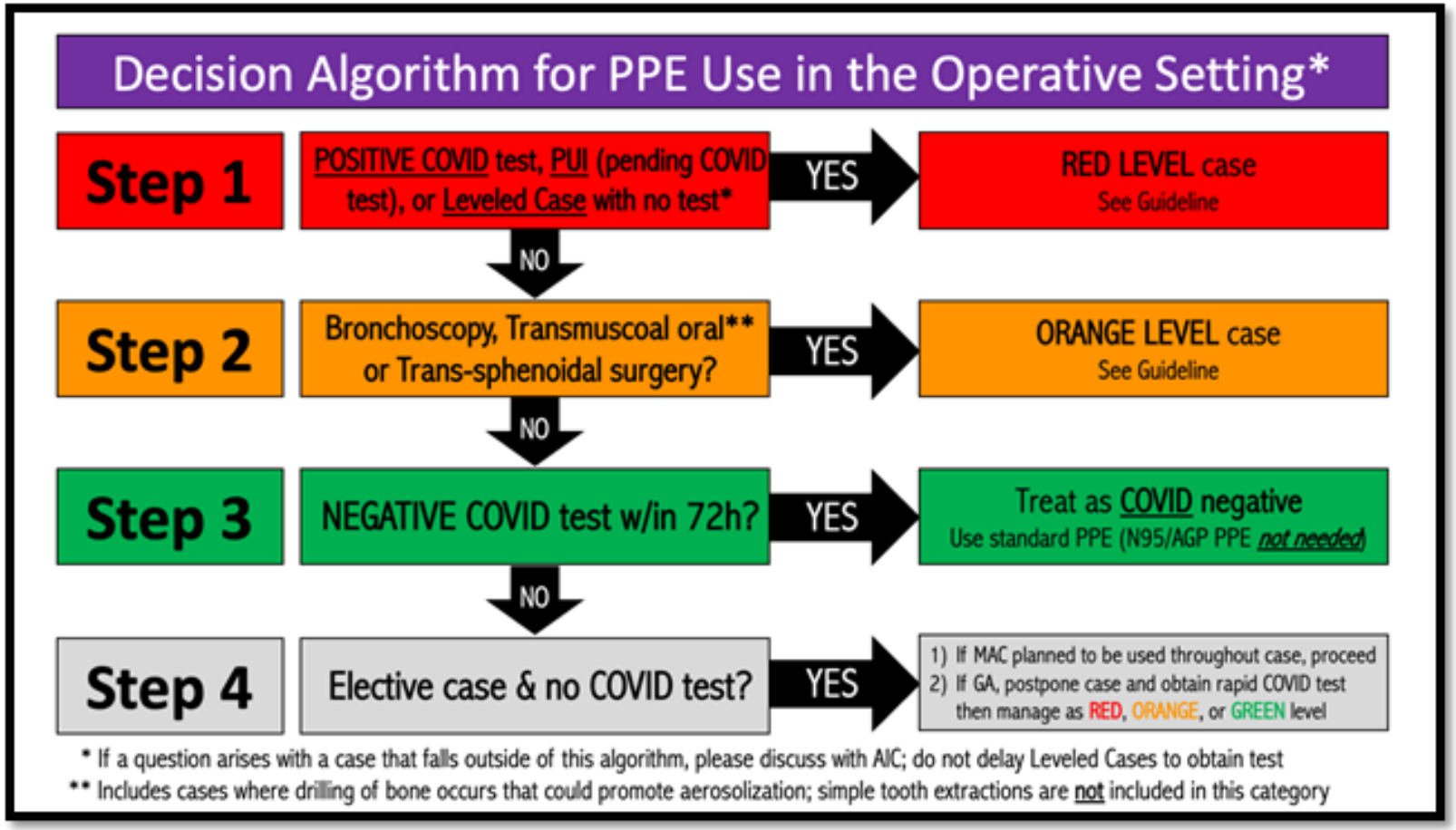

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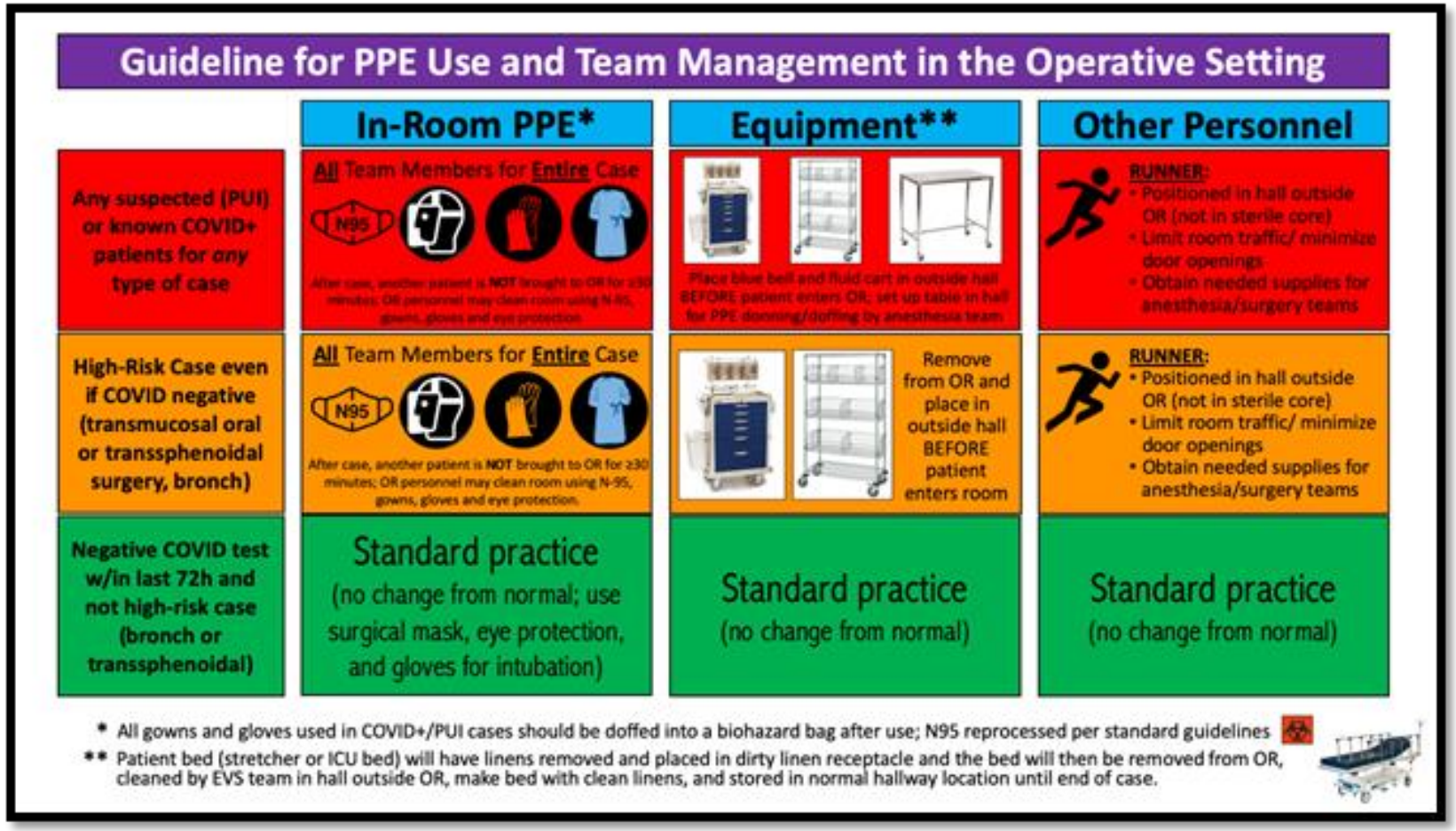

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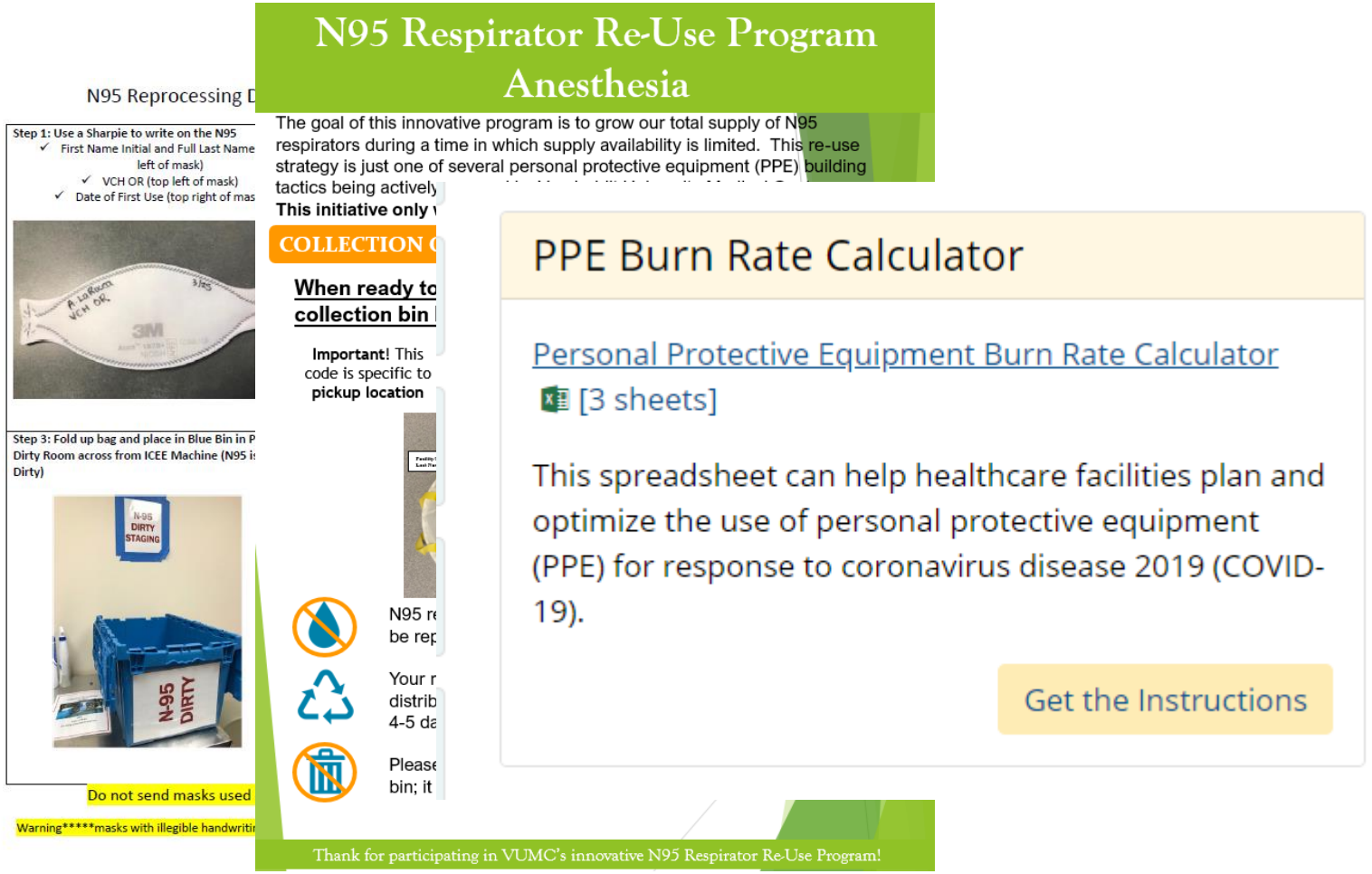
PPE Reuse

- Extended use
  - Repeated encounters without removing
- Reuse
  - Multiple encounters with removal
- Sterilization methods
  - UV irradiation
  - Vaporous hydrogen peroxide
  - Moist heat
  - 5 days between use
- Ability to retain
  - Filtration
  - Fit
  - Safety



CDC Centers for Disease Control and Prevention

CDC 24/7: Saving Lives, Protecting People™

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PEACOC

- Pediatric Anesthesia COvid Collaboration
- Multi-institutional
- International
- Projects, surveys
- Watch for pediatric data and information