

Ibad Khan: Good afternoon. I'm Commander Ibad Kahn, and I'm representing the Clinician Outreach and Communication Activity COCA with the Emergency Risk Communication Branch at the Centers for Disease Control and Prevention. I'd like to welcome you to today's COCA Call Guidance for Dental Settings During the COVID-19 Response. Today's webinar will be closed captioned. The CC button in the Zoom webinar platform to enable closed captioning is located either on the top or bottom of your screen.

All participants joining us today are in listen only mode. The video recording of this call will be posted on COCA's webpage and available to view on demand a few hours after the call ends at emergency.CDC.gov/COCA. Again, that web address is emergency.CDC.gov/COCA. Continuing Education is not offered for this COCA Call. After the presentation, there will be a Q&A session. You may submit questions at any time during the presentation to the Zoom webinar system by clicking the Q&A button at the bottom of your screen and then typing your question.

If we are unable to ask the presenters your question, please visit CDC's COVID-19 website at www.CDC.gov/COVID-19 for more information. You may also email your questions to COCA@CDC.gov.

If you are a patient, please refer your questions to your healthcare provider. For those who have media questions, please contact CDC Media Relations at 404-639-3286 or send an email to media@CDC.gov. For more clinical care information on COVID-19, you may contact CDC's COVID-19 Clinical Call Center at 770-488-7100. The center is available 24 hours a day.

Again, that number is 770-488-7100. We'd like to remind clinicians to please refer patients to state and local health departments for COVID-19 testing and test results. Clinicians should not refer patients to CDC to find out where or how to get tested for COVID-19 or to obtain test results. Also, please continue to visit emergency.CDC.gov/COCA over the next several days, as we intend to host more COCA Calls to keep you informed of the latest guidance and updates on COVID-19. For instance, please join us again Tuesday, June 16, at 2:00 PM Eastern Time for another COCA call where the topic will focus on updated information for long-term care facilities during the COVID-19 pandemic.

In addition to our webpage, COCA Call announcements for upcoming COCA Calls will also be sent via email. Subscribe to receive these notifications by going to emergency.CDC.gov/COCA/subscribe.asp. Again, that's emergency.CDC.gov/COCA/subscribe.asp.

Please share these call announcements with your clinical colleagues. I would now like to welcome our presenters for today's COCA Call. We are pleased to have with us today Mr. Casey Hannan, who's the Director of the Division of Oral Health in the National Center for Chronic Disease Prevention and Health Promotion at CDC, Dr. Michele Neuburger, who's working on the Infection Prevention Control Team as part of CDC's COVID-19 response, Mr. Alberto Garcia, who's working on the Worker Safety Team as part of CDC's COVID-19 response, Commander Marie de Perio, who's also working on the Worker Safety Team as part of CDC's COVID-19 response, and Lieutenant Commander Megan Casey, who's also part of the Worker Safety Team for CDC's COVID-19 response.

I would now like to turn it over to Mr. Hannan. Mr. Hannan, please proceed.

Casey Hannan: Thank you, Commander Khan. Good afternoon, everyone. Thank you for joining today's CDC's COCA Call. CDC recognizes the reality that dental healthcare personnel have very high exposure

risk jobs as classified by OSHA's Occupational Risk Pyramid for COVID-19. We also recognize that dental settings have unique characteristics that warrant specific infection control considerations.

Today, we will share important new information related to CDC's Interim Infection Prevention and Control Guidance for Dental Settings During the COVID-19 Response. Our purpose is to begin to directly reach the nationwide community of dental providers to ensure that all of you are aware of, understand, and are able to adhere to the latest CDC guidance. Accordingly, you're about to hear from CDC experts on recommendations for resuming non-emergency dental care during the COVID-19 pandemic, new information regarding facility and equipment considerations, sterilization, and disinfection, and considerations for the use of test-based strategies to inform patient care, and on expanded recommendations for provision of dental care to both patients with COVID-19 and patients without COVID-19. Because the effects of COVID-19 vary among communities, healthcare systems and providers will also need to consider the local level of COVID-19 transmission when making decisions about the provision of medical and dental services. CDC has released a framework for healthcare systems providing non-COVID-19 clinical care during the COVID-19 pandemic to provide these systems with an analytic tool to deliver non-COVID-19 healthcare during the COVID-19 pandemic.

It is unknown at this time how COVID-19 may permanently change infection control practices in dental healthcare settings, but CDC continues to assess emerging scientific evidence for developing policies, guidelines, and recommendations. This response to the pandemic continues to be a rapidly evolving situation, and CDC will release updates as information becomes available. CDC recognizes dental health care personnel and the settings where dental care is provided are an important part of the overall healthcare community. We also recognize dental health care personnel need PPE to do your jobs. Lastly, we request your assistance in promoting and sharing CDC's Interim Guidance for Dental Settings and to share the recorded video link of this presentation, when available, to help us reach more frontline dental healthcare personnel.

We thank you for your interest and support. Our next presenter is Dr. Michele Neuburger.

Michele Neuburger: Hello, thank you for having me today. My goal is to give a high-level overview of CDC's Interim Infection Prevention and Control or IPC, as we like to say, Guidance for General Settings During the COVID-19 Response. First, I wanted to make a quick note about the Interim Guidance and how this guidance is used with our existing CDC Guidance for Infection Control in Dental Healthcare Settings, our 2003 guidance. Interim guidelines are developed in response to emergencies or rapid increases in cases or conditions, diseases or conditions, and they're labeled as interim to clarify that these guidelines were developed using less thorough processes or were based on tentative or emerging data, and they're often updated when new evidence is available. So, this interim guidance clarifies COVID-19 IPC recommendations that are specific to dental settings.

It supplements, but does not replace the general IPC recommendations for COVID-19 that are on the CDC website. It also supplements our 2003 dental guidance. It doesn't replace the 2003 guidelines, as those are an in-depth set of guidelines for dental health care settings that go beyond recommendations for COVID-19, but it does supplement those guidelines with information relevant to the COVID-19 pandemic. Next slide.

So, our CDC interim guidance was updated on May 19th. The key points included in this guidance are that dental healthcare personnel should prioritize the most critical dental services and provide care in a way that minimizes harm to patients from delaying care and also harm to patients and personnel from potential exposure to COVID-19. You should proactively communicate to both personnel and patients

that need to stay home if sick and know the steps to take if a patient with COVID-19 symptoms enters your facility. Next slide.

So obviously, the biggest change to our guidance was the inclusion of recommendations for resuming non-emergency dental care during the pandemic. There were also additional changes that Mr. Hannan mentioned. So, let's just move on to the next slide, so we can talk about some of those recommendations.

So, all dental healthcare personnel should apply the guidance found in CDC's framework for providing non-COVID-19 clinical care during the COVID pandemic to determine how and when to resume non-emergency dental care. This framework does provide information based on degree of community spread, which we will discuss in the next slides, but you should stay informed and regularly consult with state or local health departments for region-specific information and recommendations. And all dental settings should continue to practice universal source control and actively screen for fever and symptoms of COVID-19 for all people, which includes patients, visitors, and staff who are entering your facility. And you should ensure that you have the appropriate amount and type of personal protective equipment or PPE and supplies to support your patient volume. Next slide.

So, no to minimal community transmission is defined as evidence of isolated cases or limited community transmission, case investigations underway and no evidence of exposure in large communal settings. Here, you should provide dental care to patients without suspected or confirmed COVID-19, using strict adherence to standard precautions, however, given the fact patients may be able to spread the virus while pre-symptomatic or asymptomatic, dental personnel should use additional heightened precautions that are listed in our guidance whenever feasible. Again, you should stay updated about local transmission trends by reviewing information and data from your state and local health departments, as information can change rapidly. Next slide.

So, minimal to moderate community transmission is defined as sustained transmission with a high likelihood or confirmed exposure within communal settings and potential for rapid increase in cases. Substantial community transmission is defined as large scale community transmission, including communal settings like schools or workplaces, and here you should provide dental care to patients without suspected or confirmed COVID-19, using the additional considerations that are listed in the CDC guidance to protect both personnel and patients and prevent the spread of COVID-19 in dental facilities. Next slide.

So, in the context of COVID-19, some infected individuals might not be identified based on clinical signs and symptoms. So, facilities can consider using a tiered approach to using PPE based on the level of transmission in the community, like we're going to discuss, for example, in areas where there is moderate to substantial community transmission. This might include considering having dental personnel wearing N95 or higher-level respirators for higher risk procedures like aerosol generating procedures. In addition, depending on testing availability, and how rapidly results are available, you can consider implementing pre-admission or pre-procedure testing for COVID-19, and that also could inform implementation of PPE used, especially in a situation where there are shortages. However, there are limitations to this approach, and they should be considered, including negative test results from patients who are in their incubation period and might later become infectious and also false negative test results. Next slide.

So, for patient management strategies, you should contact all patients prior to dental treatment, screen them for symptoms consistent with COVID-19, and you can find a list of these symptoms on our website and triage the patient to assess the need for in-office dental care. Systematically assess all

patients and visitors upon arrival and ensure they're wearing a mask or cloth face covering, ask about the presence of fever or other symptoms consistent with COVID-19, actively check the patient's temperature, ask the patient to re-don their face covering at completion of care, and also request that the patient inform the dental clinic if they develop symptoms or are diagnosed with COVID-19 within 14 days after the dental appointment. Next slide.

You should take steps to ensure that all patients, visitors, and staff adhere to respiratory hygiene and cough etiquette, and you can also find more information about that on CDC's website. Place chairs in the waiting room at least six feet apart, remove toys and objects that cannot be regularly cleaned and disinfected, minimize the number of persons waiting in the waiting room, and also review your manufacturer's instructions for use or IFUs for office closure, period of non-use, and reopening for all equipment and devices. Next slide.

Whenever possible, dental personnel should remain with one patient until dental care is complete and minimize the practice of one personnel providing care to multiple patients at once. Set up operatories, so that only the supplies and instruments needed for the procedure are readily accessible. Avoid aerosol-generated procedures, such as the use of dental handpieces, air water syringe, and ultrasonic scalars, whenever possible. If they are necessary for dental care, use four-handed dentistry, high evacuation suction, and dental dams to minimize droplet spatter, and aerosols and limit the number of personnel to only those who are essential. Next slide.

Dental facilities should implement sick leave policies for dental personnel that are flexible, non-punitive, and consistent with public health guidance. Dental personnel should not come to work if they suspect they have COVID-19, and they should regularly monitor themselves for fever and symptoms consistent with COVID-19. All personnel should be screened at the beginning of their shift for fever and symptoms, and if you believe you have experienced a potential work exposure to COVID-19, you should follow CDC's Healthcare Personnel with Potential Exposure Guidance, which is available on our website. Next slide.

You should always practice strict adherence to hand hygiene, including before and after all patient contact and potentially contact with potentially infectious materials, before and after putting on PPE and removing PPE, especially gloves. Use an alcohol-based hand rub with 60 to 95% alcohol or wash your hands with soap and water for at least 20 seconds. When your hands are visibly soiled, you should use soap and water, and you should ensure that hand hygiene supplies are readily accessible and available. Next slide.

For universal source control, dental personnel should wear a face mask or a cloth face covering at all times while they are in the dental setting. You should take steps to prevent self-contamination and perform hand hygiene immediately before and after any contact with your face mask or cloth covering. Dental settings should provide personnel with training about when, how, and where face masks and cloth coverings can be used, and you should also request that patients and visitors wear a cloth face covering or provide a face mask if supplies are adequate. Next slide.

If a patient arrives at your facility and is expected or confirmed to have COVID-19, defer dental treatment and give the patient a mask, if they're not already wearing one. If the patient is not acutely sick, send them home and instruct them to call their primary care provider.

If the patient is acutely sick, for example, has trouble breathing, refer the patient to a medical facility or call 911 as appropriate. If emergency dental care is medically necessary, follow CDC's Interim IPC

Recommendation for Patients with Suspected or Confirmed COVID-19 in Healthcare Settings, including the use of PPE. If aerosol-generating procedures must be performed, take precautions such as wearing an N95 or higher-level respirator and ideally performing the procedure in an airborne infection isolation room. Next slide.

Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly after each patient. You can refer to List N on the EPA's website for disinfectants that have qualified for use against SARS-CoV-2. To clean and disinfect the dental operator after a patient without suspected or confirmed COVID-19, we recommend that you wait 15 minutes after completion of clinical care and exit of the patient to begin to clean and disinfect the room surfaces. Now, this was developed as an interim recommendation specific for dental settings. We understand that this is a longer period of waiting than other healthcare settings, and we're continually reviewing this information and will continue to update it accordingly, as information becomes available. So, please continue to check CDC's website for any updates.

Also, what I do want to mention here is there are a lot of unknowns about the risk of aerosols, but what we do know is one of your greatest risk occurs during clinical procedures when you have the potential of getting splashed directly and the surfaces directly around you get contaminated. So, the most important thing to focus on is your standard precautions and any other additional transmission-based precautions that are recommended. To make sure that you're adequately protected when providing clinical care, make sure that you are following the recommended administrative and engineering controls and you're wearing your PPE correctly and that you're performing proper environmental cleaning and disinfection. So, and lastly, to clean and disinfect the dental operator after a patient with COVID-19, you should delay entry into the operator until sufficient time has elapsed for enough air exchanges to remove potentially infectious particles, and you can find more information on how to calculate that on CDC's website. Next slide.

So, sterilization protocols do not vary for respiratory pathogens. You should perform routine cleaning, disinfection, and sterilization, and follow the recommendations found in our 2003 guidelines. You should also follow the manufacturer's instructions for the times and temperatures recommended for the sterilization of specific dental devices. Next slide.

So, this, like we said, is really a time to revisit the fundamentals again and make sure that you and your staff are well-trained and will continue to receive proper training in order to perform your job safely.

It's important to provide dental personnel with job or task-specific education and training on prevention of transmission of infectious agents, including refresher training. So, CDC does provide a training series on the basic expectations for safe care and dental settings, which is available on our website. It's also important that dental personnel are educated, trained, and actually have practiced appropriate use of PPE prior to caring for a patient. We have many resources on our website for PPE, including information, printouts, and videos on using PPE, and we also have healthcare respiratory protection resources training as well. Next slide.

And now I would like to turn it over to Mr. Garcia. Thank you.

Alberto Garcia: Hi, good afternoon. My name is Alberto Garcia, and I'm a mechanical engineer for the Centers for Disease Control and Prevention. I'll be talking about engineering considerations for dental settings. Next slide, please.

First, it's important to point out that today we aren't aware of any documented recirculation of viable SARS-CoV-2, the virus that causes COVID-19 within HVAC systems. A well-functioning HVAC system can help to reduce the potential for infectious aerosol dissemination. For example, a clean to less clean airflow is a ventilation concept where you strategically establish airflow directions that protect space occupants from potentially high hazard exposures.

It is generally determined by the placement of the supply and return vents, for example, airflow from the reception desk to the waiting area or from the workstation to the patient chairs. You should try to increase to the highest filtration that doesn't hurt your airflow through your HVAC. The American Society of Heating, Refrigerating and Air Conditioning Engineers, ASHRAE, recommends a minimum of MERV13, whenever it's feasible, as this is the lowest MERV rating with documented performing efficiency against the full range of respiratory aerosols. Of course, the more outdoor air, the better for the dilution of indoor aerosols, assuming that your outdoor is clean with consideration of humidity, temperature extremes, and other environmental factors. Also, you should consider putting the HVAC fan on on at all times, so the ventilation supply will operate the full time and not throw it on and off based on the temperature.

Running during your occupancy and for at least two hours afterwards, even though ASHRAE recommends operation of 24 hours, and this is especially true for bathroom exhausts. Run the bathroom exhausts at all time during occupied hours and do not allow to turn it on and off with lights or occupancy sensors. Source control with portable fan filter units can help to reduce aerosol concentrations quickly, and you should consider also UVGI, offer UVGI in addition to all the systems that we have mentioned. One note that I wanted to mention and that it's important is that this is not an all or none package of recommendations. Each of these recommendations is capable of increasing the level of protection. You should consider consulting with a knowledgeable HVAC professional prior to implementing any of the changes. Next slide, please.

Regarding the patient placement strategies, you should consider individual patient rooms, if all possible. Well-ventilated individual patient rooms are always preferred. You should at least consider six feet of space between the patient chairs, and this distance might be greater when considered in the position of the dental healthcare provider.

Physical barriers are preferred all the way from floor to ceiling. The only caveat is to check with local fire code compliance, so you don't block the spray pattern or ceiling mounted fire sprinklers. And operatories should take advantage of the clean to less clean airflow as shown on the diagram, you should have airflow flowing from the hallway, which is considered cleaner than the airflow into the room, and you should try to rotate patients with their head, it's away from pedestrian corridors and towards the rear wall, where you might have the ducted air return, and you may place a portable HEPA filter unit. Next slide, please.

For patient volume strategies, you should identify the maximum number of patients that you may have at any given time. It's important to remember that SARS-CoV-2, the virus that causes COVID-19, is thought to be spread primarily through respiratory droplets. And clinically defined droplet size begin at five microns, but you can see on this chart that the larger droplets, say around 10 microns or larger, can still float for several minutes. Those the guide recommended that the dental healthcare provider should wait at least 15 minutes to allow for larger droplets to settle out before beginning disinfection. So, with this, I'm going to pass it to Dr. Marie de Perio, and she's going to talk about PPE strategies.

Marie de Perio: Thank you. So, thanks for this opportunity to present today. I'm going to talk about CDC's recommendations for use of personal protective equipment, or PPE, in dental settings and also discuss CDC's strategies for optimizing the supply of PPE during the pandemic with a focus on N95 respirators. Next slide.

CDC's current recommendations for PPE use for dental settings are targeted to different scenarios. For procedures likely to generate splashes, CDC recommends gloves, eye protection, gown or protective clothing, and a surgical mask. This is for all patients who are not suspected or confirmed to have COVID-19. For aerosol-generating procedures on these patients, CDC recommends gloves, eye protection, gown or other protective clothing, and an N95 or a higher-level respirator. This is also the same recommended PPE for patients with suspected or confirmed COVID-19. Next slide.

It's important to note that respirator should be used in the context of an OSHA compliant respiratory protection program, and this includes medical evaluations, training, and fit testing. In addition, it's important that dental health care personnel receive training in how to put on, use and take off PPE, as Dr. Neuburger mentioned. Also, dental facilities should ensure that any reusable PPE is properly cleaned, decontaminated, and maintained after and between uses. Next slide.

CDC has published a series of webpages that provide strategies for healthcare settings to optimize supplies of PPE when there is limited supply, while maximizing the level of protection offered to healthcare personnel. So, the webpages are intended for leaders who are responsible for developing and implementing policies and procedures for preventing infectious disease transmission in healthcare settings. Many of these strategies are also relevant to dental settings. CDC provides strategies for optimizing the supply of gloves, gowns, eye protection, face masks, N95 respirators, and also higher-level respirators. Next slide.

CDC has framed these strategies within the hierarchy of controls, using the surge capacity approach. So, surge capacity refers to the ability to manage sudden, unexpected increase in patient volume that would otherwise severely challenge or exceed present capacity of the facility. So, three general strata have been used to describe surge capacity and can be used to prioritize measures to conserve PPE supplies along the continuum of care. Conventional capacity includes measures that do not cause any change in daily standard practices. Contingency capacity includes measures that may change daily standard practices, but may not have significant impact on the care delivered to the patient or the safety of the healthcare personnel.

Crisis capacity are measures that are not commensurate with US standards of care. In the next few slides, I'm going to walk through many of the strategies, which are focused on optimizing the supply of N95 respirators, however, some of these strategies are also relevant to face masks, gowns, and other PPE. Next slide.

Engineering controls within conventional capacity includes ideally performing aerosol-generating procedures on COVID-19 patients in airborne infection isolation rooms and also using physical barriers like glass or plastic windows in reception areas or between dental chairs. Administrative controls within conventional capacity include things like telemedicine or teledentistry, which is increasingly being implemented around the country, excluding all staff not directly involved in patient care, like your billing personnel. Implementing source control by having a patient wear a face mask or a cloth face covering when the patient is not receiving care. Next slide.

Conventional capacity PPE strategies include considering the use of alternative NIOSH-approved respirators that provide equivalent or higher protection than N95. So, there are many disposable filtering facepiece respirators that are at least as protective as the N95, including the N, P, and R series. There are also powered air purifying respirators or PAPRs and elastomeric respirators. Both are reusable options. So, they're nice options when N95 supplies are low. Next slide.

So, before I talk about contingency and crisis capacity strategies, I want to make sure everyone understands the planning around making these decisions. We recommend that dental settings make plans in the event of increased demand and decreased supply of PPE based on understanding their current inventory and supply chain, understanding their utilization rate, and we have a burn rate calculator that can help facilities do that on our website.

Implementation of conventional capacity strategies. So, this is important, as we don't think dental settings should jump to these contingency and crisis capacity strategies, without doing all they can under conventional strategies first. In addition, communication with healthcare coalitions and state and local health partners are also important. Next slide.

CDC provides some contingency capacity strategies for times of expected shortages. One example is that OSHA published some temporary guidance that temporarily suspends annual fit testing, as long as the employee has undergone an initial fit test. Contingency capacity PPE strategies include considering the use of N95 respirators beyond their manufacturer-designated shelf life for training and fit testing and also considering the extended use of N95 respirators, which means that dental personnel would wear the same N95 for repeated close contact encounters with several different patients. When practicing extended use of N95 respirators, the maximum recommended extended use period is about eight to 12 hours or the length of one shift. Next slide.

Finally, I wanted to highlight some crisis capacity strategies for when N95 supplies are really low. These strategies should only be considered after conventional and contingency strategies have been implemented. Dental settings can consider the use of respirators beyond their manufacturer-designated shelf life for dental care. They can consider the use of respirators evaluated and complying with standards used in other countries, and Lieutenant Commander Megan Casey is going to cover this topic after my presentation. In addition, dental settings can consider implementing limited reuse of N95 respirators, not to exceed in general five donnings and doffings. Finally, dental settings can prioritize the use of N95 respirators and face masks by activity, such as aerosol-generating procedures. Next slide.

Before I turn it over to Lieutenant Commander Casey, I wanted to give some useful resources that are on CDC's website. Thank you.

Megan Casey: Good afternoon, everyone. My name is Megan Casey, and I'm a nurse epidemiologist with NIOSH, and I'm going to go over some factors to consider when purchasing respirators from another country. Next slide.

So, first, I'd like to emphasize that NIOSH-approved respirators will provide the expected level of protection regardless of their country of origin. You can tell that your respirator is NIOSH-approved by looking for the approval number on the respirator or the strap.

You can be confident that these respirators will provide the expected level of protection when purchasing directly from the manufacturer or from a reputable distributor. But NIOSH has become aware of a number of counterfeit or substandard respirators on the market. Please take a look at our

NIOSH blog that describes some of these issues and provides links to resources on counterfeit and substandard respirators. Next slide.

Now, if you are unable to obtain a NIOSH-approved respirator and have no other option than to purchase a respirator that conforms to an international standard, the CDC guidelines specify international standards that are nearly equivalent to NIOSH N95.

It's important to remember that respirator manufacturers that are NIOSH approval holders also often manufacture respirators according to these international standards. So, if the respirator that you are purchasing has been improved to an international standard, you can have confidence in that respirator when you are purchasing from a manufacturer who is a NIOSH approval holder. And you can look at our certified equipment list to see a list of our NIOSH approval holders. If the manufacturer you are purchasing from is not a NIOSH approval holder, we recommend the following steps outlined in the next several slides. Next slide, please.

So, if you're purchasing from a manufacturer who is not a NIOSH approval holder, we recommend utilizing every available option to try to learn more about this manufacturer. This could be anything from talking to colleagues to trying to obtain financial reports on the company. Next slide. As part of your evaluation, you can see if the manufacturer can provide you proof of laboratory accreditation. While documentation is important, some of this documentation is easy to falsify.

So, you really have to do some evidence gathering from various sources to have confidence in the manufacturer that you are purchasing from. Next slide. So, once you've evaluated the manufacturer, you then need to take a close look at the product that they're offering you, and here we recommend looking at the Food and Drug Administration's Emergency Use Authorization, which provides a list of international respirators that have been vetted for use in healthcare. Now, we strongly recommend trying to obtain samples of the respirator before you commit to purchasing, because you want to conduct fit testing without respirator to see if it can form a good seal to the face. For this reason, we do not recommend purchasing respirators with ear loops, because our preliminary NIOSH research has found that it's very difficult to achieve good fit with an ear loop design.

So, look for respirators that have head straps on them. We also recommend that you check our NIOSH webpage to see if we have assessed the filtration efficiency of the international respirator that you plan to purchase, and I'll tell you more about that in the next slide. Since the beginning of April, we have tested over 194 different international respirator models. Based on these assessments, we found that the majority or 50% provide less than expected protection, that is they provide less than 95% filtration. And again, these results are available on our NIOSH webpage. So again, we strongly recommend that you choose a respirator that is listed on the FDA Emergency Use Authorization, because those products have been carefully vetted. Next slide.

Now, I mentioned before about obtaining samples and conducting fit testing, just like NIOSH-approved N95 respirators, if you are purchasing international respirators and using them to provide respiratory protection in your dental practice, they need to be administered in accordance with your respiratory protection program. So, this includes medical evaluation, fit testing, and having a written respiratory protection plan. Next slide.

Now, if you've evaluated the manufacturer and the device and you plan to purchase an international respirator from a manufacturer that is not a NIOSH approval holder, then you need to carefully evaluate the terms of the contract. Do not prepay for your purchase, and if you're paying more than \$3 per

respirator or less than \$2 for a respirator, you may need to go back and evaluate that manufacturer or product more closely. Be very cautious about purchasing through third parties and establish provisions in your contract to protect your purchase. Next slide. Now, NIOSH will continue to provide support to US workplaces by assessing the filtration efficiency of international respirators.

Our priority is to focus on those respirators seeking approval to be included on the FDA's Emergency Use Authorization, but we're providing support to state and federal agencies as well as US workplaces. Next slide. Now, if you are in charge of obtaining respirators for your dental practice, I highly recommend taking a look at some of the links provided here. I especially recommend the last link to our webinar on purchasing international respirators, as it provides some testimonials, advice, and common pitfalls from individuals' experience with purchasing respirators internationally. And now, I think we're ready to take questions, so I'll hand it back. Thank you.

Ibad Khan: Presenters, thank you for providing our audience with such useful information on this rapidly evolving pandemic. We will now go into our Q&A session. Please remember, you may submit questions through the webinar system by clicking the Q&A button at the bottom of your screen and then typing your question.

Our first question asks, "**Can you please speak about how the industry is preparing for this possible second wave of COVID-19?**".

Michele Neuburger: Here, this is Michele Neuburger. So, COVID-19 is a new disease, and we're still learning about how it spreads and the severity of the illness it causes, and we don't know yet if it has a seasonal pattern and whether we'll see increased spread later in the year, but we must be prepared for ongoing transmission of COVID-19. So, given report shortages of PPE and that the anticipated timeline of return to normal isn't known yet for the PPE shortages, dental settings should understand their current PPE inventory, their supply chain, and their utilization rate. If PPE and your supplies are limited, we really encourage you to review the CDC strategies to optimize the supply of PPE that were discussed earlier and also begin to prioritize dental care for the highest need and beginning with the most vulnerable patients first. Thank you.

Ibad Khan: Thank you for that. Our next question asked, "**Has there been a documented case of transmission through dentistry? And if not, do you think the concern about it is overblown?**".

Michele Neuburger: Sure, this is Michele Neuburger. So, no confirmed cases of transmission of COVID-19 in dental settings have been reported to CDC at this time, either from personnel to personnel, patient to personnel, or personnel to patients. We are aware that there are news reports regarding transmissions of COVID-19 in dental settings, but we haven't been able to confirm any of these, and we are in regular contact with state health departments. What has been reported to CDC has been cases of dental personnel testing positive for COVID-19, but none of those cases have been shown to be associated with work exposures. And, you know, it's really important to remember that dental settings, you know, for the past couple of months have been seeing emergency care.

Many of the facilities have been closed down, and they are just starting to reopen, and dental professionals are considered to be at high risk of exposure to COVID-19 due to the types of procedures they perform. So, they should continue to follow the Infection Prevention and Control Guidance to protect both themselves and their patients from transmission of COVID-19.

Ibad Khan: Thank you very much. Our next question asks, **"How is CDC investigating dental settings to gauge the risk of personnel and patients?"**.

Michele Neuburger: So again, this is Michele Neuburger. Like I spoke of earlier, we are currently working very closely with state and local health departments and industry partners to continually monitor the data on risk of transmission of COVID-19 in dental settings, and we will continue to provide information as we receive it. Thank you.

Ibad Khan: Thank you very much. Next question. **"What are considered to be aerosol-generating procedures in dentistry? Could you please list them or describe them?"**.

Michele Neuburger: Sure. This is Michele again. So, there isn't currently, like, a complete list of what we call AGPs or aerosol-generating procedures in dental settings, but really, the devices in the procedures that are most known to produce aerosols and airborne contamination include ultrasonic scalars, use of dental handpieces, use of the air water syringe, and then air polishing and air abrasion devices. Thank you.

Ibad Khan: Thank you. Next question asks, **"What kind of face masks should I be using, if not using an N95 with a face shield?"**.

Michele Neuburger: So, this is Michele again. You should be using the highest level of surgical mask that you have available to you. The higher the level, the more fluid resistant the mask is, and higher level masks may be chosen for procedures that generate a larger amount of spray and spatter. If lower level masks are worn during procedures that generate a lot of spray and spatter, they may need to be changed more often during the procedure, because they become saturated more quickly than a thicker or a higher level mask. If you are concerned about your supply of surgical masks, you can prioritize higher level masks for procedures that will generate more spray and spatter. Thank you.

Ibad Khan: Thank you. We -- our next question is about fit testing. **"So, if our clinic is having trouble getting our staff fit tested for N95 respirators, do you have any recommendations?"**.

Marie de Perio: Yeah, this is Marie de Perio. I'll take this one. So, as I mentioned in my presentation, you know, that OSHA respiratory protection standard requires employers to have a respiratory protection program when the use of any respirators are required in the workplace. So, the program should include medical evaluations, training, and fit testing. So, OSHA has issued temporary enforcement guidance regarding discretion -- enforcement discretion for required annual fit testing, however, it's still required to perform an initial fit test to determine if the respirator properly fits the worker and is capable of providing the expected level of protection.

So, we have heard from many healthcare facilities that they are having trouble with fit testing. So, under serious, you know, pandemic conditions in which respirator supplies are severely limited, we understand it may not be possible to fit test employees before they need to use them. So, it's important to work with employees to choose the respirator that fits them best, as even without fit testing, a respirator is still expected to provide better protection than face masks or using no respirator at all. So, the respirators should ideally fit over the nose and under the chin, and if the employee cannot get a good seal, they should try a different model. And so, while fit testing is ideal to confirm if a respirator does or does not fit, dental personnel should be able to obtain a good fit if they've had training and if they perform a user seal check prior to each use of the respirator.

So, even if employees begin using respirators without proper fit testing, employers should make every effort to perform fit testing as respirator supplies allow. And so, employers should always perform fit testing for employees who cannot successfully seal check their own respirators. As an offshoot of that question, I did want to clarify that if dental facilities do not have access to N95 respirators, CDC does state that a surgical mask plus a full face shield might be an acceptable alternative. So, I will stop there.

Ibad Khan: Thank you very much. Our next question asks, **"Is it possible to reuse an N95 respirator that has already been worn to extend its use?"**.

Marie de Perio: This is Marie de Perio again. I'll take this one, and this is a very common question that we fielded from healthcare settings. So, CDC's PPE optimization, PPE supply optimization strategies were written to follow a continuum, as I described, in the order of conventional contingency and crisis capacity. So, N95 respirators are really meant to be disposed after each use, but we wrote the strategies to help facilities deal with limited supplies. So, extended use is presented as a strategy under contingency capacity, and ideally, the respirator would be discarded after the dental personnel wears it for the duration of their shift.

During times of crisis, we understand it may be needed to practice limited reuse on top of extended use. I want to warn everyone again that these crisis capacity strategies are not commensurate with US standards of care, but they may need to be considered during known shortages. So, as with either strategy, we have concerns about the continued filtration and fit capacities of the respirator. So, it's really important for dental personnel to always perform a user seal check when redonning a previously worn respirator. If dental personnel find themselves in a situation where these practices may need to be implemented, you know, considerations should be made to selectively canceling routine procedures and visits until supply allows.

Ibad Khan: Thank you very much. The next question asks, **"Can you talk about the different methods to decontaminate N95 respirators?"**.

Marie de Perio: Yeah, so CDC does have guidance on decontamination and reuse of filtering facepiece respirators, and these summarize what we know about the various decontamination methods. So, at present, there are no generally approved methods for N95 and other disposable respirator decontamination prior to reuse. Based on the limited research available though, ultraviolet germicidal irradiation or UVGI, vaporized hydrogen peroxide and moist heat have all shown to have the most promise as potential methods to decontaminate disposable respirators.

Ibad Khan: Thank you very much. The next question is about KN95 respirators. The question asks, **"Can KN95 respirators with ear loops from China be used to protect dental practitioners that are performing procedures? And if they can, do they need to be fit tested?"**.

Megan Casey: This is Megan Casey, and I'll take this question. So, when NIOSH-approved respirators are unavailable, KN95s that are listed on the Food and Drug Administration's Appendix A of the Emergency Use Authorization List may be used to protect workers during the pandemic. NIOSH strongly recommends against purchasing a respirator with ear loops, because again, as I mentioned before, it can be very difficult to achieve good fit with a respirator that has ear loops. So, we recommend that dental practices conduct fit testing with multiple people in your organization, per the requirements of your respiratory protection program. And as Marie mentioned, you know, a respiratory protection program includes medical evaluation, fit testing, training, and a written program plan.

And, as she mentioned, while OSHA has suspended the requirement for annual fit testing, the initial fit test for that respirator model is still required. So, if you are providing KN95s for the purposes of providing respiratory protection in your dental practice, that needs to be done in accordance with your respiratory protection plan, and those KN95s do require an initial fit test, especially if they have ear loops.

Ibad Khan: Thank you very much. **"Does the recommendation for waiting 15 minutes after patient care for cleaning and disinfecting a dental facility apply to all patients?"**.

Michele Neuburger: Sure, this is Michele. I'll take this one. Again, CDC does recommend that dental personnel wait at least 15 minutes after the completion of any clinical dental care that has the potential to generate spray or spatter, and this applies for -- on patients without suspected or confirmed COVID-19. So, it's really for any procedure generating spray and spatter to begin that environmental cleaning and disinfection process. We've also had a lot of questions about whether the time can be altered based on different scenarios, such as using a HEPA filtration unit.

So, you know, HEPA filtration units will improve the efficiency of your particle clearance, but you still should continue to wait that 15 minutes, you know, after completion of care and the patient exit to begin the environmental cleaning and disinfecting process, even if you're using a portable HEPA filtration unit. Thank you.

Ibad Khan: Thank you very much. Our next question asks, **"How do you calculate the amount of time needed between patients for enough air changes to remove potentially infectious particles?"**.

Alberto Garcia: This is Alberto Garcia, and I'll take this one. I would agree with what Michele mentioned earlier that the 15 minutes was a guideline recommended to wait for droplets to just drop from the air. And you would do that for patients that are not confirmed COVID positive, for treatment of known or suspected COVID positive patients, extra precautions are warranted to include allowing more time for potentially infectious aerosol to be removed from the air. To calculate the sufficient time, we refer people to the table B1 on the CDC Guidance for Environmental Infection Control in Healthcare Facilities that was published in 2003. On that table, there are two columns that talk about the 99 to 99.

9% removal of calculating efficiencies of variable contaminants when the space is purged by clean air at different exchange rates. So, you will need to know the air changes per hour of your specific setting, and then you need to provide that the clean air providing -- provided to fresh is coming from outdoors or is contaminant free. So, for healthcare infection control, the contaminant of concern is human source, including people that might have COVID-19, and to use this table properly, you need to be sure the source is not there in the room anymore. And then you need to calculate for mixing on the room. So, the table assumes perfect mixing on the room, which almost never occurs, and you might need to consider a key factor that ranges from one to 10 and multiply that in minutes, multiply the minutes on the table to get the final answer that you need.

So, for example, if you're using -- even if you're using a portable HEPA unit and to boost your air changes per hour to 20, the wait time for 99% removal of airborne particles, according to table B1, is approximately 14 minutes. However, if you want to wait a more realistic time, you need to multiply that by three, and your time to actually wait would be about 42 minutes.

Ibad Khan: Thank you, Mr. Garcia. Next question. **"How are agencies responding to employee concerns regarding possible COVID-19 spread via a building's HVAC system?"**.

Alberto Garcia: And this is Alberto Garcia, and I'll take that one too. CDC has not posted guidance on the decontamination of building HVAC systems to include air filtration systems potentially exposed to SARS-CoV-2. To date, we don't have identified confirmatory evidence to demonstrate that the virus is viable -- that viable virus is contaminating these systems. Should these systems actually become contaminated with the virus, the most likely scenario is to be -- is to believe that the virus would lose viability naturally within hours to days, and there is no guidance advocating for proactive systems shut down for decontamination and filter exchange.

Ibad Khan: Thank you very much, and we have time for one last question. Question states, **"Do air handling systems for COVID-19 positive and COVID-19 negative areas of the facility need to remain separate?"**.

Albert Garcia: This is Alberto Garcia, and I'll take that one too. While infectious, SARS-CoV-2 is not thought to be transmitted long distances in the HVAC system. This theory is not yet proven. Ideally, the same HVAC system that serves COVID-19 positive patients should not serve other areas of the HVAC, unless it uses a single H -- unless it uses an HVAC system that uses a single pass air supply. If a shared HVAC system is unavoidable, then it's important to remember that CDC has not identified evidence that demonstrate that viable virus is being recirculated through the HVAC.

Under the share HVAC scenario, facility operation personnel should consult with an HVAC professional and seek to minimize air returning coming from a COVID positive zone and maintain negative static pressure relative to the rest of the facility. If return air from a COVID positive zone is unavoidable, adjunct HEPA filtration on the return -- in the in the adjunct HEPA filtration of the return air is not feasible, HVAC professionals should work with the facility operation personnel to increase the HVAC unit filtration efficiency to the highest filtration efficiency that is compatible with the HVAC system.

Ibad Khan: Thank you very much. On behalf of COCA, I would like to thank everyone for joining us today with a special thank you to our presenters. For our audience, if we were unable to get to your question, please send your question to COCA@CDC.gov. A closed caption video for this COCA Call will be posted on COCA's webpage shortly after the live call at emergency.CDC.gov/COCA. Please continue to visit emergency.CDC.gov/COCA for their next several days, as we intend to host COCA Calls to keep you informed of the latest guidance and recommendations on COVID-19.

In addition to our webpage, COCA Call announcements for upcoming COCA Calls will also be sent via email. So, please remember to subscribe to receive these notifications by going to emergency.CDC.gov/COCA/subscribe.asp.

Please join us again next Tuesday, June 16, at 2:00 PM Eastern Time for another COCA Call where the topic will focus on updated information for long-term care facilities during the COVID-19 pandemic.

To receive information on upcoming COCA Calls or other COCA products and services, join the COCA mailing list by visiting the COCA webpage at emergency.CDC.gov/COCA and click on the join the COCA mailing list link. To stay connected to the latest knows from COCA, be sure to like and follow us on Facebook at [Facebook.com /CDCclinicianoutreachandcommunicationactivity](https://Facebook.com/CDCclinicianoutreachandcommunicationactivity). Again, thank you for joining us for today's call and have a great day.