COVID-19 Hazard Assessment

The American Dental Association (ADA) recognizes that dental care is a critical component of health care for Americans and is considered an essential service. This guidance, developed under the direction of the ADA Advisory Task Force on Dental Practice Recovery, provides considerations to implementing COVID-19 hazard assessments in dental settings (a task supplemented by a checklist). This is a complementary piece to the ADA Return to Work Interim Guidance Toolkit and will enable dentists to provide dental care in a safe and healthy work environment for employees while reducing the risk of COVID-19 spread for all.

What is the purpose here? *A hazard assessment such as this is put in place to mitigate risk to employees and reflects what is recommended by the Occupational Safety and Health Administration's (OSHA's) Recommended Practices for Safety and Health Programs.*

It is impossible to assess the hazards being presented in a dental office without reflecting upon the extent of the hazard in the community, as this has bearing on the potential infectivity of the patients coming into the practice. Though this assessment is done with respect to protecting staff, decisions when evaluating or conducting a hazard assessment should take into consideration the regional or local levels of COVID-19 community transmission. Dentists are encouraged to repeat an assessment regularly, and track the data trends as conditions change during the pandemic period.

More details about each of OSHA's recommended action items are available through the linked "Action item" subtitles that follow.

Action Item 1: Collect existing information about COVID-19 hazards

Collect, organize, and review information on COVID-19 hazards which may be available from any number of credible sources, such as your local health department, Centers for Disease Control and Prevention (CDC), Occupational Safety and Health Administration (OSHA) and ADA.

- Investigate the rates of COVID-19 infection by state, locality, or ZIP code.
    - COVID-19 cases by county: Cases and Deaths by County from Centers for Disease Control and Prevention (CDC)

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- o [COVID-19 cases by ZIP code](#) Johns Hopkins University & Medicine's Coronavirus Resource Center
- o [Directory of Local Health Departments](#) National Association of County and City Health Officials (NACCHO)

- Follow trend data available and note increasing or decreasing rates of disease incidence (*TIP 1*).

> *TIP 1: Instead of just noting the current cases in your area, or the number of people being tested, you'll get the most useful information if you track the trend over time. A positive trend measure would be to see a reduction in time in the ratio of:*
>
> The number of positive test results
> The total number of people tested

Action Item 2: Inspect the workplace for potential safety hazards

Conduct initial and periodic inspections of the workplace to identify new or recurring hazards.

- Measure the type and availability of Personal Protective Equipment (PPE) to ensure there is an adequate supply of the necessary PPE on hand (*TIP 2*).

- Consider that the spread of virus is possible through:
  - o Direct contact between any infected person and a staff member
  - o Airborne transmission of COVID-19 may be affected by the following:
    - Proximity to the patient, especially if the patient is speaking, sneezing or coughing (*TIP 3*)
    - Length of procedure (*TIP 4*)
    - Amount of aerosol generation during procedures
    - Room air flow patterns should be examined (*TIP 5*) *(This may be effective, though further research is needed.)*
    - Capability, or lack thereof, of air filtration (*TIP 6*) *(This may be effective, though further research is needed.)*
  - o Surface contact (treatment areas as well as throughout office space)
    - Unnecessary items resulting in cluttered counter tops
    - Magazines, toys, coffeemakers in reception area

> *TIP 2: CDC has a **PPE Burn Rate Calculator** to help estimate PPE usage.*

> *TIP 3: Patients should wear a mask at all times unless actual treatment is being performed. Talking generates aerosols as well, so all parties to general conversation should wear masks. Keep casual chat to a minimum when the patient is mid-treatment and unmasked.*

> *TIP 4: The lengthier a procedure is, the more time a staff person is exposed, should the virus be present. Make sure you plan your procedures to maximize efficiency and minimize risk by decreasing the amount of time needed for them.*

> *TIP 5: Look at possible changes to airflow patterns. Are there ventilation fans in your restrooms that could be kept on all the time to help draw air out? Are there windows in your building that could be opened as seasonally appropriate? Remember that you want to direct air flow away from patient treatment areas and out of your office. Be aware, however, that as you do so you do not want to draw potentially contaminated air through any populated common areas like the reception room, lab area and the like.*

> *TIP 6: Use of free standing HEPA filtration units in operatories may be a feasible way to provide filtration. Assess the space the filter is to service, and select a unit of appropriate capacity. Remember that PPE must be worn by the person charged with changing the filters, as they may be contaminated. Used filters must be bagged in impermeable bags and disposed of following manufacturer's recommendations.*

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- Appointment scheduling such that patients (and any companions) overlap in the reception area, resulting in closer contact than social distancing prescribes.
- Examine the office layout and traffic flow to identify where inadequate social distancing might occur as people move throughout the facility.
- Remove unnecessary items on surfaces that may act as potential sources of contamination.
- Review general housekeeping protocols for the practice, including touching base with any outside contractor maintenance crews to make sure they are using approved disinfecting agents.

Action Item 3: Identify health hazards

Identifying workers' exposure to health hazards is typically more complex than identifying physical safety hazards. The focus of this particular document is the biological hazard presented by COVID-19.

- The health hazard for this assessment is the biologic threat of infection from COVID-19.
- Potential transmission of COVID-19 is also identified as a potential hazard.
- Identify any individual employee factors present that have potential to increase risk of infection for that employee (*TIP 7*, *TIP 8*).

> *TIP 7*: Other factors that might increase risk for infection include, but are not limited to, being 65 years or older, or having existing health conditions such as heart disease, lung disease, kidney disease, diabetes, any auto-immune disorders or pregnancy.

> *TIP 8*: The Equal Employment Opportunity Commission (EEOC) has issued Pandemic Preparedness in the Workplace and the Americans with Disabilities Act, which includes helpful information on how employers may ask employees questions about any contributory hazard factors. Remember that only limited people should have access to an employee's health screening information.

Action Item 4: Conduct incident investigations

Workplace exposures provide a clear indication of where hazards exist and learning from them will identify hazards that may cause future harm if left unmitigated.

> *TIP 9*: CDC has an assessment tool for health care workers who have been exposed to COVID-19. Consider adapting this to use as a part of the office incident investigation.

- Develop a plan to investigate incidents of disease transmission. It should include, at a minimum:
  - Referral of patients with COVID-19 signs or symptoms
  - Evaluation and subsequent action for any employee with COVID-19 signs or symptoms (*TIP 9*)

COVID-19 Hazard Assessment

- Utilize data from ADA's Employee COVID-19 Daily Screening Log (English) / (Spanish) to aid in early identification of other potential staff hazard exposures.

- Maintain a log of any exposure incidents.

- Communicate with the physician or testing agency that the employee or patient was referred to for the purposes of contact tracing.

- Conduct any reporting for exposure incidents in the office as required by state or local department of public health: NACCHO Directory of Local Health Departments

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Action Item 5: Identify hazards associated with emergency and nonroutine situations

Plans and procedures need to be developed for responding appropriately and safely to hazards associated with foreseeable emergency scenarios and nonroutine situations.

- Identify admissions of any unscreened persons into clinic and plan to mitigate if possible (*TIP 10*).
- Review the office plans for dealing with any medical emergencies.
- Plan ahead as best as possible for any physical plant concerns, such as power outages, vacuum pump failures, heating or cooling system failures.

> *TIP 10: Plan ahead to mitigate as many of these as possible. For instance, if the mailperson used to drop mail off inside the clinic, can there be a mail drop point outside the entrance? Can laboratory pick-ups and drop offs be handled outside the office? Other services for which to consider alternative methods, such as scheduling for non-patient care hours, might be laundry or linen service pick up and delivery, drinking water deliveries or tradespeople providing repair services.*

COVID-19 Hazard Assessment

Action Item 6: Characterize the nature of identified hazards, identify interim control measures, and prioritize the hazards for control

a) **Nature of Hazard**
   Evaluate COVID-19 by considering:

   o What the severity of potential outcomes may be (which with this hazard may range from no exposure all the way through to extreme outcome of death)?

   o What is the likelihood that an event or exposure will occur?

   o What is the number of workers who might be exposed in the various scenarios?

b) **Interim Control Measures**
   Use interim control measures to protect workers until more permanent solutions can be implemented.
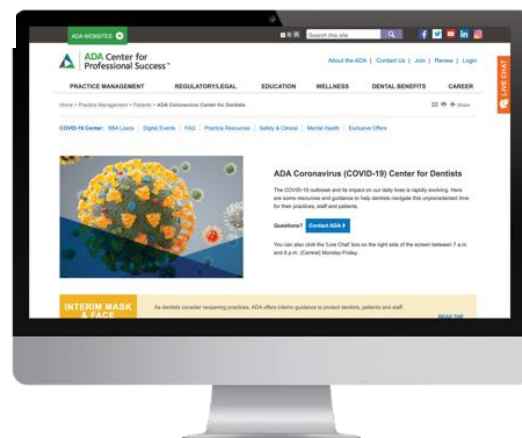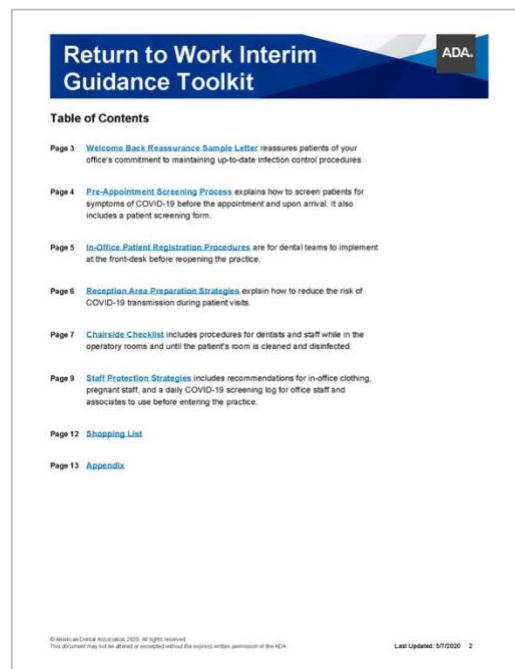
   o ADA Return to Work Interim Guidance Toolkit

   o Consideration of emerging science for engineering controls

c) **Prioritize the Hazards for Control**
   As possible hazards have been identified, think through those presenting the greatest risk and plan any mitigation efforts first. Follow through with taking time to do the same planning and procedure identification with remaining hazards, working through them in order of decreasing severity.

Note: "Risk" is the product of hazard and exposure. Thus, risk can be reduced by controlling or eliminating the hazard or by reducing workers' exposure to hazards. An assessment of risk helps employers understand hazards in the context of their own workplace and prioritize hazards for permanent control.

The ADA will continue to update its guidance as more information becomes available about COVID-19. For all COVID-19 resources from the ADA, visit the ADA Coronavirus (COVID-19) Center for Dentists.

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