The COVID-19 pandemic has taken a toll on the dental industry worldwide, causing most practices to close initially due to the high-risk nature of dentistry. Awaiting leading health organizations to develop new guidelines, dental practices struggled to reopen in the early months of lockdown, and while most practices have made progress to reopen, maintaining access is an ongoing struggle. Some national guidelines have been developed, but local health departments often adapt these guidelines to their own context, which complicates health centers’ ability to navigate multiple, sometimes-conflicting documents. Like many other health centers, Health Care for the Homeless (HCH) programs shut down oral health services at the onset of the virus’ spread, and their plans to reopen faced unique challenges. Given the urgency of the dental needs in this population and the fact that COVID-19 will persist in our communities for many months to come despite the distribution of vaccines, health centers must find strategies to sustain access to safe dental services.

This issue brief synthesizes the prevailing recommendations from national dental organizations, adds considerations for serving people without homes, examines innovative strategies, and outlines remaining challenges. It also makes the case for why health centers must retain access to dental services, especially for clients experiencing homelessness.

**Why Dental Services Are Essential for Those Experiencing Homelessness**

In the earliest weeks of the pandemic, the World Health Organization characterized oral health as non-essential. For people experiencing homelessness, this is a dangerous description. HCH dental clinics serve as an important safety net and are often the only resource people experiencing homelessness have to address complex, urgent, and routine/comprehensive dental care. Without access to community-based care, clients often rely on more costly hospital systems and emergency departments. Both the experience of homelessness itself and the inaccessibility of the health care system preclude many unhoused people from accessing dental care often resulting in poor oral health outcomes.

Oral disease and tooth loss are associated with an increased risk of death, poor overall health, difficulty obtaining and retaining employment and a decreased quality of life. Not only can

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dental infections spread and lead to death, oral health problems can have a negative impact on overall health, particularly for clients who have been diagnosed with cardiovascular disease and diabetes. Studies also demonstrate that dental care during pregnancy is safe and improves maternal oral health and that of their newborn. Moreover, partial or complete edentulism (lacking teeth) makes it difficult to maintain a healthy diet, further compounding the consequences of poor oral health on overall health.²

Chronic pain and infection, in addition to lack of access to much needed dental care, drastically affect the lives and general health of clients.³ Clients rely on routine dental care to maintain functionality, appearances, and self-esteem. Painful or missing teeth can prevent clients from biting into or chewing food properly, obtaining or keeping jobs, going out in public, communicating clearly (verbally or non-verbally), and/or seeking additional behavioral health or medical care. Dental services are especially crucial in times of crisis and can be provided to clients during COVID-19 in a way that is safe for both clients and staff.

Unique Challenges for Clients without Homes During the Pandemic

General recommendations for Dental Health Care Personnel (DHCP) in the time of COVID-19 often present unique challenges for clients experiencing homelessness and their dental providers:

1. **Complex health care needs:** Clients experiencing homelessness often have higher acuity of medical needs, including behavioral health, psychiatry, and dental. They are often more medically complex, which further complicates their oral health. This is especially true of those who have never had regular dental care. Patients without homes especially require trauma-informed care and environments. Barriers put in place due to COVID-19 restrictions can exacerbate trauma-induced responses.

2. **Barriers to care:** People experiencing homelessness face daily quandaries for basic survival, such as finding safe places to sleep and adequate food. Maintaining personal hygiene including oral hygiene can sometimes be impossible. Lack of insurance coverage and limited access to care only compounds this problem, making it difficult for clients to follow treatment regimens or prioritize their oral health.

3. **Technology limits:** Strategies such as teledentistry are hindered when clients lack their own phone, cell phone or other mobile device, have limited access to the internet, or

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lack another means to communicate with DHCP. Technology is often less available to clients without homes.

**Prevailing Recommendations on Sustaining Access to Dental Services**

By their very nature, dental clinics are accustomed to infection prevention and control (IPC) practices though the shift to incorporate principles of air flow and ventilation and mitigation of airborne transmission at the high level is new. [CDC recommends](https://www.cdc.gov) adding to traditional IPC practices during the time of COVID. Highlights include:

1. **Triage and screen:** Before patients receive any dental treatment, implement screening protocols that include temperature checks, questions on social and travel history, and additional symptom checks. Ensure source-control measures for staff and patients are in place and work on supplying resources to provide face coverings to patients who lack their own.

2. **Use PPE:** Additional personal protective equipment (PPE) is strongly recommended during long procedures or procedures using an aerosolizing hand piece or ultrasonic unit. An N95 or equivalent respirator should be used, as well as adequate full-coverage eye protection. There are now more methods to optimize PPE usage, such as N95 decontamination and reuse, and cleansable and reusable gowns. Refer to [CDC guidance on PPE donning and doffing](https://www.cdc.gov).  

3. **Assess workflow:** Incorporate a COVID-related workflow that accounts for infection control techniques, air engineering, and aerosol settling rates. Appointments with clients may need to be lengthened, structural changes and new equipment might be needed, and the staggering of certain appointments may be required.

4. **Add teledentistry:** Teledentistry can keep staff safe and optimize PPE usage, while also relieving patients of pain and triaging their immediate needs. Technology barriers often prevent HCH patients from using all forms of telehealth, but it can be used when patients present to the clinic with auxiliary staff triaging and taking x-rays on a rotating basis, in addition to using electronic dental records that can be accessed remotely. This saves on PPE use and the cumulative exposure time staff have with patients.

5. **Update staff education and training:** Ensure protocols include new measures taken for IPC, PPE use, teledentistry, and understanding COVID-19. Monitor and manage DHCP and create a process to respond to staff questions or illness. Ensure proper protocols are in place for DHCP around the workplace and while treating patients. Screening protocols are recommended for DHCP as well and can follow similar guidelines as screening patients.

6. **Control aerosols:** Aerosols are a principal transmission method for COVID-19. Consider treating patients using atraumatic restorative treatment (ART) or implementing control measures for aerosols. Adding considerations for aerosols into routine IPC practices will also help to minimize potential spread. If dental treatment must be performed on
someone with suspected or active COVID-19, attempt to treat them at the end of the day in an enclosed room. See detailed CDC guidance on treating these patients.

7. **Vaccinate patients and staff:** As they become available, vaccinating all patients and staff will reduce the risk of transmission in dental clinics and eventually reduce the need for N95s and other PPE. In some states, oral health providers are permitted to administer vaccines themselves, which may be helpful for many health centers.

The American Dental Association urges dental practices to remain open and use existing IPC and PPE practices to build on additional COVID-19 precautions. Because DHCP (particularly in health centers) are so well-practiced at infection control, the addition of screening procedures and additional precautions have kept the infection spread rate within dental offices very low, despite the higher risk of transmission with the prolific use of aerosols.

**Unique Strategies for HCH Health Centers**

Given the unique challenges and the urgency of the needs of the homeless population, some HCH health centers have used innovative strategies to reopen and sustain dental services. A focus group with dental directors of HCH health centers emphasized the following strategies:

1. **Adapting the guidelines for re-opening mobile units:** Guidelines on operating dental mobile units during COVID-19 are vague. Given the importance of this service delivery model to bring dental care to the field, some HCH Health Centers have evaluated the safety risks and adopted guidelines into operating mobile units (see Appendix B for an example from Alameda County HCH). Some of these strategies include:
   - Evaluating the air engineering of the unit, as well as administrative practices and taking measures to redesign the unit. Given the small size of mobile units, this becomes even more important. Some of these measures could include building plexiglass barriers between units, installing HEPA air filtrations at different chairs, and allocating a separate space for sterilization and PPE donning and doffing.
   - Planning ahead for the flow of activities, as well as timing of patients’ appointments to minimize proximity. This includes separating exam chairs within the mobile unit from the aerosol-generating chairs.
   - Utilizing open-air tents outside of the unit for COVID assessment, consent, and tracking symptoms.

2. **Utilizing Teledentistry:** Teledentistry has been helpful in the initial phase of dental screening, COVID screening, and examination. While it is not always possible to have video associated with teledentistry in the field, some dental directors deem video essential. Social workers, case managers, or other staff who work in the field (including

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4 On December 4, 2020, CDC released Considerations for School Sealant Programs During the Coronavirus Disease 2019 (COVID-19) Pandemic. Because many school sealant programs operate from mobile units, some guidance is transferrable to HCH mobile dental programs, though this is not the focus of the guidelines.
at homeless shelters) can help facilitate access. (See also: Case Studies on COVID-19, Telehealth, & HCH Health Centers)

3. Dental Case Management: Using dental case management is an effective way of facilitating access to needed care. With the additional risk and barriers to care for this population, dental case management can change the course of dental health for those with unstable housing. The main components of dental case management include:

- Screening for the urgency of care
- Evaluating other contributing physical and mental health factors that can affect dental care, as well as unique access barriers, and providing problem-solving through connection with other providers, translation services, transportation, etc.
- Warm handoff to the dental clinic or referral
- Accompanying the patient to the appointment, if feasible, and providing additional support
- Following up to ensure treatment completion
- Working toward establishing continuity when possible
- Incorporating oral health education and prevention

4. Outreach Strategies: Meeting clients where they are on their own terms, outreach is a foundational component of the HCH model of care. Some HCH dental clinics have established new outreach strategies during these times to reduce the time inside the clinic by bringing essential and non-aerosol generating services to homeless shelters and encampments. These services include exam, portable x-ray, silver diamine fluoride application, prevention, glass ionomer fillings and periodontal therapy when feasible.

5. Non-aerosol Generating Procedures: Some HCH Dental Clinics have adapted guidelines in reducing aerosol-generating procedures to meet patients' needs. While in some cases it is impractical to eliminate such procedures, there seems to be a shift in practice. HCH dental clinics are aiming toward eliminating infection and disease process, stabilizing active dental caries and periodontal disease, and providing functionality through dentures. Strategies to reduce aerosols during dental care also can include using glass ionomer sealants and silver diamine fluoride when appropriate, and hand scaling rather than using ultrasonic units.

Conclusion

While the struggles to sustain access to dental services during the pandemic are not unique to HCH health centers, the dental needs and urgency of care for people without homes is increasing exponentially. This could have an irreversible effect on the overall health and wellbeing of this especially vulnerable population. Dental services for people experiencing
homelessness must be prioritized during these times, necessitating increased funding, priority for vaccination, and sufficient supply of PPE.

A few leading organizations have published guidelines on reopening dental services in the midst of the pandemic. While we hope this publication (including the Appendix for mobile units) provides some insight, there remains a need for practical guidance to translate these guidelines into user-friendly tools with as much specificity as possible. Examples of this could include training videos for dental staff on infection control protocols and proper use of PPE, such as these ADA materials. In addition, while the guidelines are comprehensive in general terms, they are not adopted to different settings; as mentioned previously, guidelines omit the distinct setting of mobile clinics, which has prevented many HCH dental clinics from maintaining regular access to care. Similarly, CDC recommends teledentistry as a strategy to minimize in-person appointments and to be used for triage and COVID screening. However, guidance on teledentistry leaves much to interpretation.

The dental profession is well accustomed to mitigating the risk of aerosol and blood borne pathogens. The pandemic has now necessitated providers focus on further minimizing of aerosols while optimizing ventilation and air flow, which represents a profound shift. With peer support among HCH dentists across the country, as this paper partially represents, HCH health centers are embracing this change and are poised to sustain crucial oral health services in the midst of a rapidly changing environment.

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- Carol Niforatos, DDS: Denver, CO
- Parita Patel, DMD, MPH: Baltimore, MD

Appendix A: HCH Profiles

Colorado Coalition for the Homeless: Denver, CO

Colorado Coalition for the Homeless (CCH) provides two dental clinics to serve people experiencing homelessness in Denver. Until March 13, 2020, full general dental services have been provided to CCH clients including fixed and removable prosthodontics.

On March 16, 2020, the CDC, Colorado Department of Public Health and Environment, and the American Dental Association extended formal recommendations for all dental services to cease, except for emergency services. Especially of concern were aerosol-generating procedures (AGP) such as restorations and surgical extractions. Due to pandemic restrictions, the Coalition was forced to close all clinical and outreach sites other than the central Stout Street Health Center, a Federally Qualified Health Center, which provides integrated health
care including behavioral care, dental, primary care, vision, substance use treatment, and pharmacy services.

With the change in dental services, Coalition dentists, dental hygienists, and dental assistant staff were either furloughed or assigned to work with other Coalition health center teams addressing the non-dental needs of people experiencing homelessness at shelters and temporary sites administered by the City of Denver and the Coalition.

Dentists scheduled at the Stout Street Health Center provided teledental visits and limited oral exams with prescriptions or referrals. Due to the pandemic, patients who would normally seek care in person for urgent oral health needs had the opportunity to receive a scheduled telephone visit with a CCH dentist. CO Medicaid approved reimbursement for these visits if there was a secure visual component of the visit in addition to certain documentation requirements. PEH rarely had the technology needed to FaceTime with a DDS, therefore the dental visits were audio-only by telephone. Even with this option, encounter totals dropped drastically due to the “Shelter at Home” requirement; the Coalition’s encounter activity to that point had been 1,300 per month, but in April 2020 it dropped to just 28 encounters.

On May 8, 2020 the city of Denver and the Colorado Dental Association/CDC advised that it was safe to reopen with restrictions, requirements, and guidelines in place, all of which were adhered to strictly at CCH. Outreach services resumed, prioritizing Denver respite sites and temporary housing sites.

CCH faced a number of challenges, including Room Air Exchange and cleansing, in addition to national and regional shortages of PPE (gowns, masks, gloves, and N95 masks). Other concerns included workflow before and after aerosol-generating procedures and managing storage, disposal, reuse, and inventory of PPE. All staff had to be trained on new workflows. Medicaid reimbursements have been greatly diminished due to near shut down of dental services. Other concerns include pent up need for services to the point of desperation, managing the second wave or surge of COVID cases and timing the re-opening of CCH’s second dental clinic. Clients experienced need for infection control and serious oral health concerns that were put off for months, exacerbating already serious physical and behavioral concerns.

Due to the need for testing and quarantine, staff attendance is less reliable; CCH must manage scheduling on a day-to-day basis, often rescheduling patients that have waited a month to see the dentist. A future challenge could be the shutdown or reduction of dental services for a second round due to the surge at the time of this writing. HCHs must gain priority in receiving PPE and N95’s to serve the most vulnerable populations in our nation.

The desperate dental needs of people experiencing homelessness have been magnified during this crisis. Every effort must be made on federal, state, and local levels to support HCH, including dentistry. HCH must be prioritized in PPE supply and administrative support due to the critical nature of services rendered.
Alameda County Health Care for the Homeless Program: Oakland, CA

Alameda County Health Care for the Homeless (ACHCH) is a health-department-based health center. ACHCH ensures access to dental care for Alameda County residents who are experiencing homelessness by providing part of its homeless dental services through contracts for dental services. ACHCH contracts with two trusted community dental providers: La Clínica De La Raza health center and Onsite Dental Foundation, which operates mobile dental care, bringing dental services directly to emergency shelters and organizations serving people without homes.

ACHCH has been focusing on formalizing its dental efforts in the last few years by carrying out a comprehensive Oral Health Needs Assessment and Planning with the goal of creating an infrastructure for oral health within the homeless health center, improving and expanding dental services for the homeless population, and integrating oral health throughout the overall program and in collaboration with its partners. When the pandemic hit, ACHCH continued to use the lens of oral health integration and collaboration to combat the challenge of assuring the oral health of the population. Dental services were temporarily suspended on March 18, 2020, following the order of California Department of Public Health and County of Alameda.

At the beginning of June while local shelter-in-place policies were still in effect, ACHCH and Onsite Dental Foundation were engaged in communication on preparation for reopening and modifications needed. Onsite Dental followed CDC guidelines and adopted the guidelines into the mobile unit and reopened by June 15th. ACHCH also developed a checklist tool based on the CDC guidelines to track innovations and adaptations (see Appendix B). Some of the adaptations included: changing the configuration of the unit and the flow of services to allow for physical distancing and ventilation; investing on equipment such as extra oral suctions and air filters; changing staff responsibilities to allow for additional time with infection control and donning and doffing; creating a flow to allow for outdoor COVID-19 symptoms triage; and utilizing the dental case manager to communicate, schedule, and assist patients with the changes. Some of the challenges ACHCH faced included reduced patient load, implementing the COVID-19 symptoms protocols for staff, and continued shortage of PPE.

La Clínica reopened dental services for urgent care on Aug 15th. A Federally Qualified Health Center, they have clinic-wide protocols for staff safety and training, PPE protocols, and guidelines. ACHCH conversations focused on the additional modalities in the dental clinic and how to meet the increasing needs of patients without homes. Some of the measures in place that allowed the partial reopening of dental services for the unhoused patient population included: utilizing Teledentistry for initial triage including a phone call and a video chat when feasible; utilizing the dental case manager to reconnect with existing patients; starting new exams/treatment plans for patients and focusing the treatments on disease management; non-aerosol generating procedures; and delivering prosthodontics. Some challenges are space limitations due to the space reconfiguration, PPE shortage, and the additional time it takes for additional infection control measures and as a result reduced clinic capacity for the population and accepting new patients through this contract.
As a program ACHCH feels lucky to have had the support and enthusiasm of their partners to resume the much-needed services for and will continue efforts to improve and adopt to the changing situations to better serve the community.

Albuquerque Health Care for the Homeless: Albuquerque, NM

Albuquerque Health Care for the Homeless (AHCH) Dental Clinic offers a comprehensive range of dental treatment to its clients experiencing homelessness. Services include hygiene, restorative, endodontics, oral surgery, and removable prosthetics. At the onset of the stay-at-home orders in mid-March, the dental clinic halted all procedures but remained open for emergency services to lessen the burden on emergency rooms and urgent care facilities.

In mid-June it became increasingly important to resume normal dental services. AHCH was able to purchase extra-oral suction machines and set up an account with Battelle for recycling N95 masks. They increased the length of appointments and reduced walk-in treatment so that each patient was appropriately planned for. Hygiene appointments also lengthened to allow sufficient turnover of each operatory.

Teledentistry proved challenging as persons experiencing homelessness often do not have access to their own technology. An on-campus teledentistry approach was explored with a dental assistant remaining on campus triaging and taking x-rays on patients while a dentist worked remotely to diagnose and treatment plan. AHCH continues to use this approach in certain circumstances but otherwise have mainly conducted care in person.

The senior management team worked with the medical and dental directors to establish an appropriate workflow for all staff with the goal of continuing to provide quality and comprehensive care to their clients. AHCH was universally supported in their decisions and have thus far maintained a safe working environment for staff while providing all services to clients.

Appendix B: Mobile Dental Unit Reopening Checklist from Alameda County HCH

<table>
<thead>
<tr>
<th>#</th>
<th>Area of Guidelines</th>
<th>Examples of Programmatic Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Well-thought out modifications in the patient management and the flow of the following:</td>
<td>• Re-evaluation/exam for current patients to ensure proper treatment plan is in place or needs to be updated given the time that has lapsed due to Shelter in Place.</td>
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<tr>
<td></td>
<td>a) Evaluation of the necessity of care</td>
<td>• Incorporating phone consultations before appointments. Put a sign outside of the unit with the call-in information to re-route walk-ins.</td>
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<tr>
<td></td>
<td>b) Scheduling practices</td>
<td>• Modifications in the flow of exam and treatment and evaluation of the necessity of care.</td>
</tr>
<tr>
<td></td>
<td>c) General patient flow/waiting for services</td>
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<tr>
<td></td>
<td>d) Patient masking</td>
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<td></td>
<td>e) Patient flow for case management</td>
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<tr>
<td></td>
<td>f) Exam and treatment</td>
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<tr>
<td></td>
<td>g) Other: ______________</td>
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</tbody>
</table>
h) Other: __________________

- Case Management flow and how it integrates into the new flow of dental services. Assuring case managers and care coordinators follow the new COVID protocols, communicate them with patients, and are involved in COVID triage and assessments of dental needs.
- Informing new patients on the workflow changes. Staff to ensure that each patient is well informed of changes in the dental practice/flows to avoid misunderstandings and unexpected stress and psychological trauma for our vulnerable population.
- Updated consent form to capture changes in procedures and patient expectations due to COVID-19.

### 2 Administrative Controls and Work practices

- Maximum 2 patients in the van and separating the airflow between the cubicles as much as possible.
- Changing the design of the unit, if needed, to assign separate areas for sterilization, donning and doffing, exam, and dental chairs.
- Trying to avoid the movement between two dental chairs by thinking through the procedures and having the supplies be available.
- Using extra-oral suction, Isolite and dental dams to reduce the spread of the aerosols in the air. Use of Laser instruments instead of the rotary hand piece, when applicable, and use of ultrasonic scaler with discretion.
- Ensure PPE availability, storage, and re-sterilization practices.

### 3 Written protocols are in place for screening for COVID-19 and to use for patients with the following:

- Using a Patient Screening Form for COVID-19.
- Developing protocols for patients with known or suspected COVID-19.
- Developing protocols for patients who are not symptomatic for COVID-19 and without known exposure to COVID-19.
- Improving the work plan to summarize approaches above.
- Documenting the process through short checklists.

### 4 Dental Practice Infection Control Protocols are Updated to Address Care/Service Issues associated with COVID-19

- Increase ventilation in operatory areas by looking at air engineering and a. opening windows b. utilizing air purifier in each operatory c. consulting an air engineer if needed.

- PPE list and supplies for 2 weeks
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<thead>
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<tbody>
<tr>
<td>b)</td>
<td>Procedures modification for reduction of aerosol producing</td>
</tr>
<tr>
<td>c)</td>
<td>A respiratory protection program</td>
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<tr>
<td>d)</td>
<td>Hand Hygiene</td>
</tr>
<tr>
<td>e)</td>
<td>Universal Source Control (Mask and hand washing and gloves)</td>
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<tr>
<td>f)</td>
<td>Environmental Infection Control</td>
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<tr>
<td></td>
<td>• Decrease aerosols generation by using Laser devices when applicable or procedure modification</td>
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<tr>
<td></td>
<td>• Implementing respiratory protection program in a mobile setting. Use of protective gear, workplace procedures, training, and evaluation of new procedures in place to ensure consistency.</td>
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<tr>
<td></td>
<td>• Conducting training for staff and following the 5 guidelines on how to handle mask, hand washing and infection control in the recommended sequential manner.</td>
</tr>
<tr>
<td>5</td>
<td>Engineering Control</td>
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<tr>
<td></td>
<td>• Ventilation system, airflow, Efficiency, HEPA filters, ultraviolet germicide irradiation UVGI</td>
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<tr>
<td></td>
<td>• Combining different strategies to ensure efficiency. See #4 too.</td>
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<tr>
<td>6</td>
<td>Patient Placement Strategies</td>
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<td>Patient Volume Strategies</td>
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<tr>
<td></td>
<td>• Dental case management used to facilitate this.</td>
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<tr>
<td></td>
<td>• Anticipating a decrease in patient volume to 12-16 patients per day (instead of previous 25-30 pts. /day).</td>
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<tr>
<td>7</td>
<td>Staff Training</td>
</tr>
<tr>
<td></td>
<td>• An initial training followed by ongoing trainings based on the need</td>
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<tr>
<td>8</td>
<td>Monitor and Manage Dental Healthcare Personnel</td>
</tr>
<tr>
<td>a)</td>
<td>Sick leave policies</td>
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<tr>
<td>b)</td>
<td>Ask staff to monitor themselves</td>
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<tr>
<td>c)</td>
<td>Screen at the beginning of shift</td>
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<tr>
<td></td>
<td>• Review current recommendations on staff sick leave policies to develop own policies.</td>
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</tbody>
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