

Using Teledentistry to Maintain Services and Contact with Patients During the time of COVID-19 Physical Distancing: April 5, 2020

Background

This guide to using teledentistry to maintain services and contact with patients during the time of COVID-19 physical distancing has been prepared by Dr. Paul Glassman, Associate Dean for Research and Community Engagement at the College of Dental Medicine at California Northstate University in Elk Grove, CA and Professor Emeritus at the University of the Pacific, Arthur A. Dugoni, School of Dentistry in San Francisco, CA. Dr. Glassman pioneered the use of telehealth systems to deliver oral health care, creating a first of its kind demonstration project more than a decade ago. The six-year demonstration he directed has resulted in national attention to the idea that the oral health industry could reach many people who are not currently receiving oral health services by “bringing care to where people are” using teledentistry systems. The Virtual Dental Home model used in that demonstration is being replicated or used as a model to emulate in many states now.

Dr. Glassman and his staff at the California Northstate University (CNU) College of Dental Medicine (CDM) have extensive experience supporting providers in using teledentistry to reach people who might otherwise not have access to care. However, the way teledentistry has been used in these systems needs to be altered now. During this time when there are shelter in place requirements and strict physical distancing, dental providers, practices, and clinics are facing significant challenges keeping in touch with their patients and providing basic advice, consultation, triage, and emergency services. There is a critical need to provide systems and solutions to support both patients and providers in these difficult times.

One important consequence of physical distancing requirements, if patients are not able to maintain contact with their oral health care providers, they may be going to already overburdened hospital emergency departments for dental problems. It is clearly critical that this be avoided.

Dr. Paul Glassman and his staff at the California Northstate University (CNU) College of Dental Medicine (CDM) prepared this guide for dental providers and practices to use in developing systems that can be effective in the current environment. The document contains a description of systems that can be implemented quickly and can make a major difference in patient’s ability to access their dental providers and dental providers ability to provide effective advice, consultation, and triage leading to efficient in-person urgent or emergency care when it is needed.

Impact of Physical Distancing

As illustrated in Figure 1, below, when people and providers of oral health services are not able to be in each other's physical presence except in urgent or emergency situations, there is a need to establish means of communication, provide advice, consultation, triage, and provide limited and efficient in-person services when necessary. It is also critical that oral health services be provided in the oral health systems so people with these conditions do not need to access the already overburdened general health system, especially hospital emergency departments.

Physical Distancing

- People cut off from sources of dental care
- Practices trying to limit services to emergent/urgent services
- Need to:
 - Establish communications
 - Provide advice, consultation, triage
 - Provide limited and efficient services when necessary
- Must keep people from seeking care for oral health concerns in other components of health care system – Emergency Rooms

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Figure 1: Impact of Physical Distancing on Oral Health Care

System Considerations

These guidelines describe two approaches to creating a working environment in the era of COVID-19. The first consists of piecing together various software products and combining them with workflows to create a system. These products might include email and text messages. However, providers should keep in mind that email and text generally do not meet HIPAA security and privacy standards. They might include a separate way for patients to securely upload photographs and other records, a separate video conference system, a separate scheduling system, a separate system for patients to fill out forms, a separate system for collecting payment or coverage information, and a separate system for scheduling appointments. Having these components as separate systems means that the provider must collect information from multiple places to have a complete record of the interactions with the patient.

Another approach is to use a system where all of the needed components are contained in one integrated system with the ability to have a record of all of the interactions with the patient in one place. This document will describe the use of an “all-in-one” integrated system. Providers can, of course decide to use either approach or a mixture of them.

Components of a Care System for the Era of COVID-19

Whether the provider uses an “all-in-one” system or separate products, there are several strategies and components of a care system to consider. As listed in Figure 2 below, these include the ability to:

Notify people about the availability of oral health consultation and care

- Patients can be notified about the availability of dental consultation at a distance. Individual providers and practices can make their availability known by placing a message with a link on their web site or sending a letter or an email blast to their patients.
- Larger entities with networks of providers and patients can connect patients and providers, make software systems available to the provider, and support systems in other ways. These entities could develop a “call-center” like system to direct patients who do not have a source of care to a provider prepared to work with them.

Plan and deploy a system

Practices and providers will need to adopt the following strategies and activities:

- Understand and implement best practices for synchronous and asynchronous communication with patients at a distance.
- Plan for adoption of a teledentistry-based patient care and communication systems.
- Adopt workflows for using the system within the practice and provider environment.
- Use teledentistry systems to collect and analyze information provided by patients or collected during the synchronous and asynchronous distance interactions. Use the information and communication system to provide advice, consultation, and triage.

Plan for minimum interactions should an in-person visit become necessary

Practices and providers will need to plan for efficient conduct of in person emergency visits should those be necessary. The goal is to have all information, explanations, consent, etc. taken care of prior to the patient arriving at the dental office for emergency treatment to minimize interventions needed, minimize the time in the office, and create very short appointments that can effectively deal with the patient’s major concerns.



Figure 2: Optimized System Components

Workflow

Figure 3, below, is a diagram of a workflow in an optimized system. The blue shapes represent actions from by the patient and the orange shapes represent actions by the provider or office.

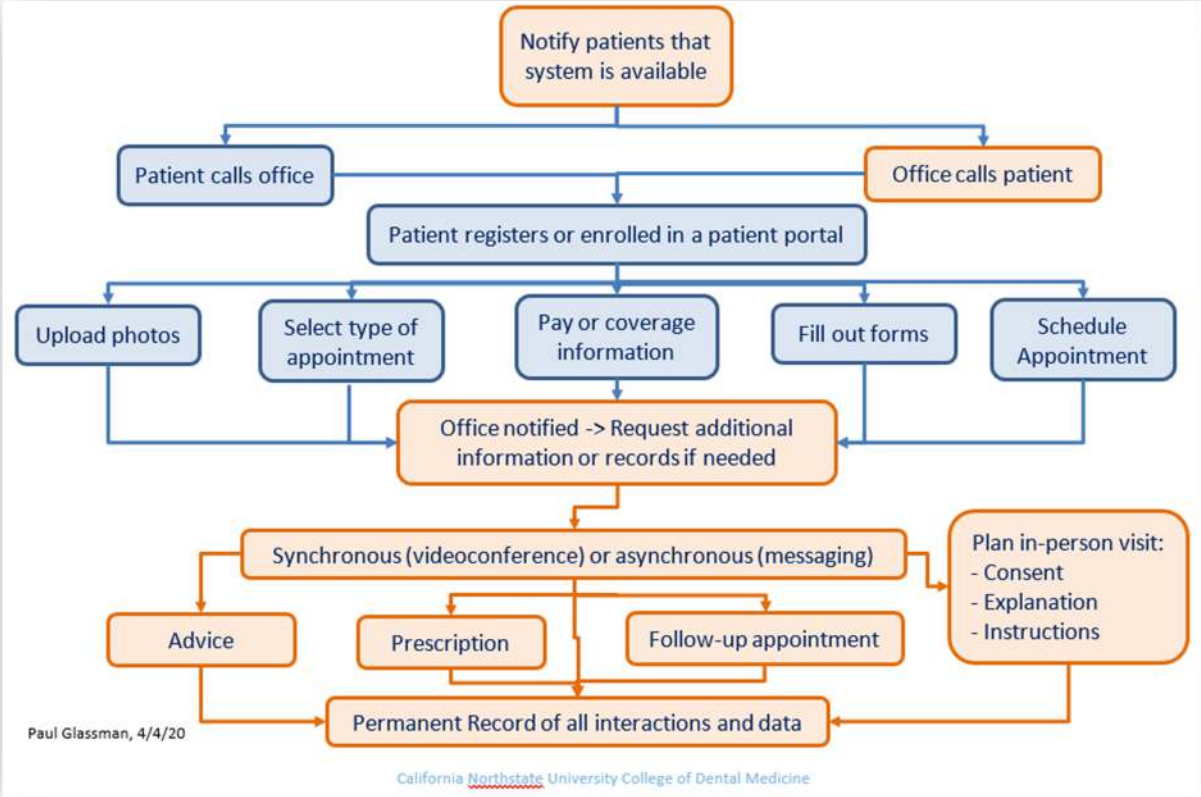


Figure 3: Workflow in an Optimized System

Workflow: Patient perspective

As described earlier, patients can be notified that there is a system in place to contact their provider or they can be directed to a provider who has a system in place. The patient can call the provider office or click a link on the provider website and be directed or helped to sign up for a patient portal where they can share information with the provider office. The provider office can also reach out to patients and direct or help them sign up and access the patient portal.

The patient portal contains areas where patients (themselves or with help from the office) can:

- Upload photographs or other documents or records
- Select the type of interaction or appointment they want (i.e. advice within a few days is ok vs urgent need to be in contact as soon as possible).
- Submit payment based on the type of interaction they select or enter coverage information.
- Fill out forms including demographics, health history, information about the current concern, consent to participate in video appointment, HIPAA consent form, etc. using customizable templates or other provider generated forms.
- Schedule an appointment using a secure provider customized calendar of available appointment times.
- Receive automatic appointment confirmations and reminders which are sent from the system via text/email.

Workflow: Provider perspective

The workflow in an optimized system from the provider perspective can include:

- Providers are notified when a patient registers or adds any new information to the patient portal. This gives the provider office the ability to follow-up with the patient for any additional information that is needed.
- Depending on the information provided by the patient, the provider can interact with the patient through an asynchronous (not real time) messaging system or synchronous (real time) video conferencing system.
- After obtaining the patient's uploaded information and conducting the asynchronous or synchronous interaction with the patient, the provider can, in many cases, provide advice that can reassure the patient or instruction for palliative home care for some conditions. In other circumstances the provider might order a prescription at a pharmacy and schedule another appointment in a few days to see how the patients in doing.
- Referrals to other providers could be made and managed within the application.
- Patient records, including provider notes, treatment recommendations, any uploaded images and documents, a recording of the videoconference, could be available for export to the provider's practice management application.
- Access to the application for patients and providers could be available via PC, Android and iOS mobile devices.

- In some cases, the provider will conclude that an in-person appointment is needed to treat the patient's condition.

Optimizing in-person visits

If the provider determines that an in-person visit is needed, there are several things that the teledentistry system can do to optimize that visit. These can include:

- Providers can explain what will be done during the in-person visit and obtain consent for those procedures within the teledentistry system. This will remove the need for explanations, filling out forms or other paperwork at the time of the in-person visit.
- Providers can instruct the patient to call or text when they arrive outside the office and wait outside until the provider is ready to see them. When the provider is ready they can notify the patient who can come straight into the dental operator, eliminating the need for waiting in a reception area.
- If the procedures above are followed, and the provider uses the minimal interventions needed for the patients' condition, then the in-person visit can be made as short as possible, therefore lowering the risk of transmission for both patients and office personnel.
- Follow-up appointments can take place using the teledentistry system.

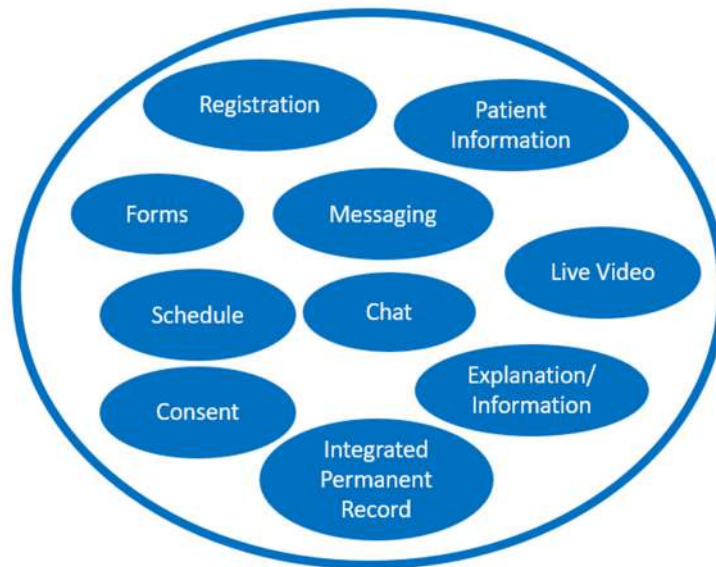
Advantages

There are multiple advantages to implementing a system like the one described here. These include:

- **For patients:** This would provide easy access in the current environment for patients to contact their dental care provider or become connected with a dental care provider. It would also help direct patients with oral health concerns to oral health providers as opposed to the emergency room.
- **For oral health providers:** This would allow providers to remain in contact with their patients as well as other individuals who were not previously connected to dentists. It would help them provide advice, consultation and triage in a secure and private system that creates a record of the interaction which can be exported or connected to their EDR and stored and shared with other referring providers. It would help them plan for any needed in-person emergency treatment and would allow all of the paperwork, signatures, explanations, and consent to be handled prior to the in-person visit. This would greatly streamline and minimize the time required during an in-person visit and minimize risk to the patient and provider personnel.
- **For the Health Care System:** This would help people receive dental advice, consultation, and even needed in-person emergency care for dental conditions and concerns. This is important to keep people with dental problems and concerns from using other components of the health care system to address these concerns. Particularly important in this area is eliminating the use of the hospital emergency department for dental conditions.

Advantages of an “all-in-one” system

As illustrated in Figure 4, below, an “all-in-one” system could contain multiple components that are linked and integrated into one system. The all-in-one system can produce a complete record of the interactions with the patient.



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Figure 4: Components of an “All-in-One” teledentistry system

Contact Information

CNU staff can provide additional training and technical support through live and recorded webinars and materials prepared for on-demand access through CNU’s learning management system.

For questions or additional information, contact:

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