Petaluma Health Center is a Federally Qualified Health Center in Northern California. The dental program serves about 11,000 patients annually at two main sites and through our mobile school based program. On March 16th, 2020 we closed one of our sites and limited in clinic dental services to emergent and urgent care only. We had to quickly adapt our clinic protocols and eliminated aerosol producing procedures. We went from seeing 120 dental patients a day to 8 patients per day. The only good thing about that was with only one dentist seeing patients, our PPE needs were greatly reduced. With more than 100 patients becoming overdue for routine and deferred care daily, we started to worry about future backlog and maintaining patient quality outcomes. We started to worry about cavities progressing and children needing to go to the operating room to receive care under general anesthesia. A new service line, teledentistry would allow us to engage and care for patients that otherwise would have been turned away.

We decided to provide video, live transmission visits between the dentist, assistant, patient and parent. We had staff set up with laptops, call and text capabilities, and access to patient records. Quickly we identified a teledentistry platform and started testing different types of visits. We started with emergency screenings when our front office staff needed help triaging. Later, we decided to also engage families of children 0-6 years old that were at high or moderate risk for caries. We already had a successful, value based clinic care model for these patients, and it seemed that we could provide the same care via video. We created a process map that mirrored the in clinic visits. We tested small and refined the test after almost every visit in the beginning. We learned a lot from those first visits and used that information to improve the program and expand it.

We schedule these risk based recall visits for 0-6 year olds for one hour. The dental assistant sends the patient the visit link via text and calls them to offer support with logging in. Once all are online, the visit begins with introductions. We identify the patient and parent. We obtain verbal consent. We explain the circumstances preventing an in-office visit, and services offered at this time in clinic. We ask Covid-19 screening questions and offer referral if needed. We perform other medical history review and ask about the chief complaint. When it comes to the dental history we use motivational interviewing for enhanced patient engagement and self-management. We spend a lot of time on this section asking open ended questions, using active listening, affirmations, reflections and summarizations. This is how we learn about the patient’s home care, diet, fluoride exposure, trauma prevention, daily routines and their hopes for their oral health. When we look at the levels of evidence for cavities prevention, all interventions except sealants can be self-administered. Patient engagement and self-management are more important than receiving a cleaning in the office twice a year.

At this point the assistant communicates through the electronic dental record that the patient is ready for the dentist. The dentist joins the live video and receives from the assistant the summary of what has been discussed so far. Then the dentist performs a visual exam via live video and reviews the electronic dental record including the intraoral photos submitted by the parent ahead of time. Based on the information gathered the dentist determines the patient’s risk level, makes a diagnosis and creates a treatment plan. The treatment plan includes prescribing fluoride if needed along with a behavior plan consisting of self-management goals. We review the patient's previous goals, and keep the same goal with different strategies or choose a new goal. Goals are specific and tips and barriers are identified. We also assess the patient confidence level with achieving their goal. After asking patient’s permission we provide anticipatory guidance and nutritional counseling based on their dental history.

Next we have the parent and patient demonstrate toothbrushing and flossing. This allows us to see and give feedback on the type of brush, toothpaste, how much toothpaste is used, and the brushing technique. Next we ask the parent to open the self care package they received from us in the mail. We go over all the contents: toothbrush, toothpaste, floss, disposable mouth mirror, gloves, gauze, fluoride varnish with brush, the snack guide and a sticker. We ask the parent if they are comfortable with applying fluoride varnish on their child’s teeth. If they are, the dentist coaches them on how to apply it. Home care instructions are given, the assistant schedules the next appointment for the patient after which the patient leaves the visit. The next visit can be for follow up care and/or risk-based recall in 3, 4 or 6 months.

There is a bit of follow up work to be done in terms of documentation. For efficiency and based on analyzing cycle times, we divided the tasks between the assistants and the dentist. The assistants send via text patient education materials prescribed by the dentist during the call, call in the prescription given by the dentist, record the visit time stamp, import photos taken during live video and send patient satisfaction survey via text. The dentist imports photos taken during live video, completes the risk assessment form, clinical notes and posts codes, and signs and locks the chart.

We learned some lessons along the way and used them to improve the patient experience and quality of care. The majority of patients have smart phones and attend the visit from their phone. Patients prefer text versus call and very few patients use e-mail. For the teledentistry platform, patients preferred to click on a link versus having to download apps or plug ins.

Visit preparation is key. We communicate with the patients several times before the visit to prepare them for success. (at least two texts and two calls) We created a video visit preparation list to let patients know how the visit will go, how to prepare for it, how to log in, what to review and submit in advance.

We learned that we needed good intraoral photos taken by parents with their phone. So we created videos with examples and instructions for parents on how to do this. The assistant uploads the patient’s photos to the electronic dental record ahead of the video visit. If parents need help with taking photos, the assistant reaches out to coach them on the process.

We also learned that we needed to communicate with patients about these new types of visits we were offering, so we included information in the patient newsletter and on our website. We had a demonstration to the front office staff and after experiencing it first-hand they could easily explain the visit and its benefits to the patients when scheduling. We created scripts for scheduling staff to deliver a consistent message.

We started sending patients self-care packages. We had to figure out how far in advance they would have to be mailed and what to contain. We started sending a brief video with instructions for the parents on how to apply the fluoride varnish.

During the visit is very convenient for the dentist to share their screen and review patient records and educational materials together with the parent. We developed new patient education materials with lots of photos that could easily be texted to the parents.

We started assessing patient experience by asking “*On a scale of 1-10, 10 being the highest, how likely are you to recommend this type of visit to family and friends?”* So far we are at 96% satisfaction out of 330 patient surveys collected. We have also surveyed staff satisfaction and have used the information to improve provider experience mainly around technology and photo quality.

In terms of data, the no show rate for video visits has been 6% a lot less than for in clinic visits preCovid 15% and Covid 38%. We have provided 850 video visits so far. We started with one and now have three dentists trained and providing teledental visits. We developed a robust staff training and calibration program to ensure program consistency and quality. Even after re-opening, we continue to offer teledental visits to keep patients safer at home and to prioritize clinic space for surgical procedures, routine and deferred care for patients 7 and older as well as medical care. Dental staff working remotely allows for social distancing in the clinic.

Some patients that we saw via video had cavities and needed treatment with silver diamine fluoride (SDF), a topical medication that when applied to caries it stops their progression. Due to the quick and easy nature of the SDF application protocol we started wondering if we could apply it in the patient’s car in a drive through type of set up. We consulted with our medical side on how they were conducting the immunization drive through and came up with a similar process. We scheduled the patients, set up a tent in front of the building, directed the patients there and a dentist and an assistant provided the SDF treatment to the patient in the back seat of their car. Everything went very smooth and we were able to adopt the change right away. For some patients the dentist even placed sealants or interim restorations. There was no need to refine and test again. We saw 56 patients this way so far and have about two drives per month scheduled based on need. This practice has inspired other clinics in the area to have dental drive through clinics where they do screenings and apply fluoride varnish.

Dental caries are a chronic disease, managed by risk assessment, medicine - fluoride and lifestyle changes. Acute episodes are treated surgically. After providing teledental visits for the past three months, we feel that we can manage the chronic disease via teledentistry while increasing access to hands on and acute care in clinic.

Only 65% of patients 0-6 years old seen in our clinic in 2019 have returned for a risk based recall visit in a timely manner and only 35% of patients seen for a well child check in medical had a dental visit before age one. (as recommended by AAPD, AAP and ADA) We are very hopeful that offering teledental visits will increase the number of health center patients that establish a dental home before turning one because these visits are convenient and allow meaningful communication with parents and caregivers in a comfortable setting. Meeting patients where they are is the first step of engagement. Teledental visits have allowed us to focus on healthy behaviors, prevention, self-care and early minimally invasive care. At the same time we hope that our risk based recall rates will improve leading to further reduction of caries in our patient population.

Teledentistry is playing a positive role in re-opening and is our hope that it will become a permanent service line for the provision of dental care. Patients are learning about these visits and are asking for them. They are becoming comfortable with the technology which will simplify the process in the future. I hope that our teledental program demonstrates meaningful ways of engaging patients in their care while increasing the value of care, patient and provider satisfaction and improving patient outcomes. Teledentistry also has the potential to reduce the cost of care.