

## WHITE PAPER

# How Teledentistry is Delivering ROI and Driving Post-Pandemic Practice Success

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# Executive Summary

Teledentistry adoption was essential during the pandemic, is essential now, and will deliver tangible benefits in the future.

**Over the last year and a half, COVID-19 impacted dental practices, forcing massive changes in “business as usual.” One such change was accelerating the adoption of teledentistry. In less than two years, teledentistry services are now expected by established patients and new patients alike.**

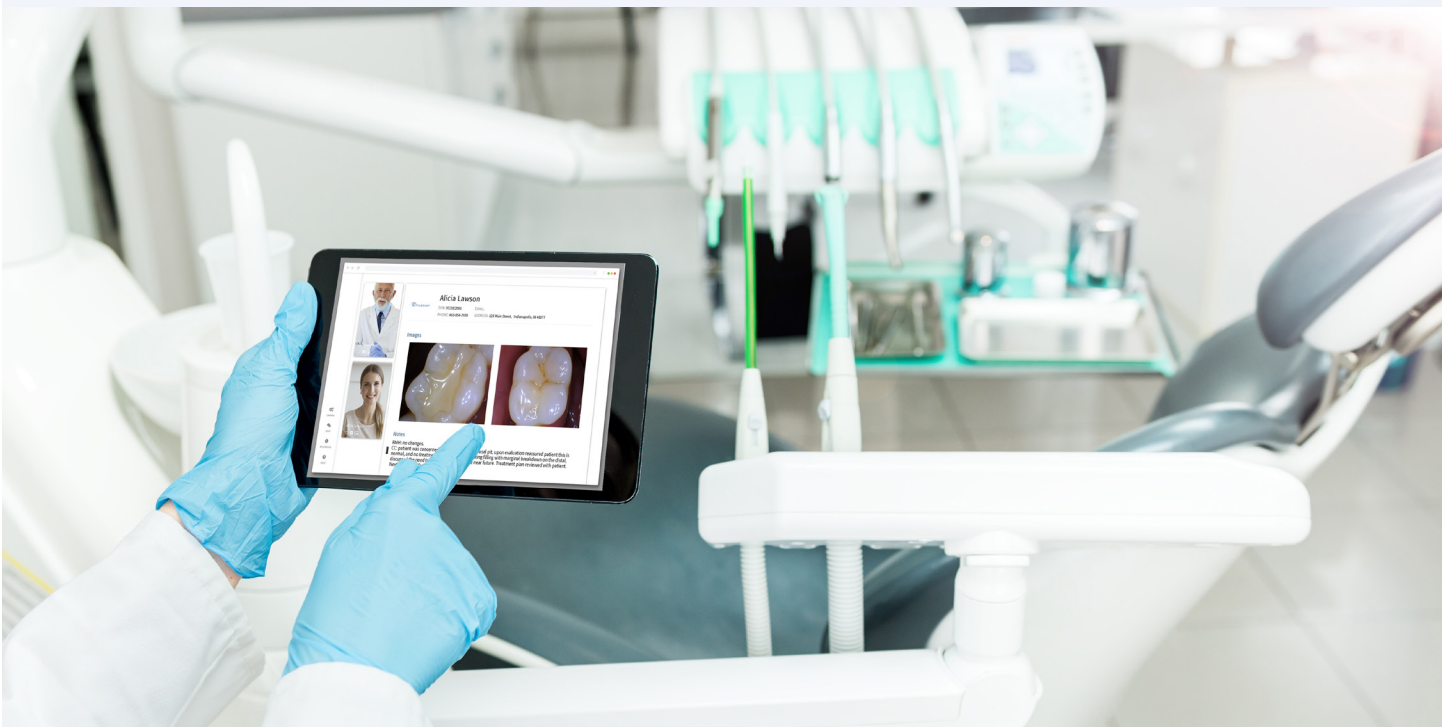
Just like telehealth for medical care, teledentistry has been added to the armamentarium for dentists to provide the best, most comprehensive and on-going care for their patients. Traditional barriers to care based on time constraints or geography are lowered for patients and dentists alike.

Even though the American Dental Association, (ADA) Health Policy Institute (HPI) estimates that private practice revenue will be decreased by 20% this year, savvy dental practices are defying these downward annual revenue estimates by creating a larger digital footprint to provide more patient care within their practice, with teledentistry. <sup>1</sup>

In addition to reviewing the lessons learned about teledentistry during the last year and a half, this paper will explain how to increase access, profitability, and success for your practice by using teledentistry, including how to calculate your return on investment (ROI) for this technology.

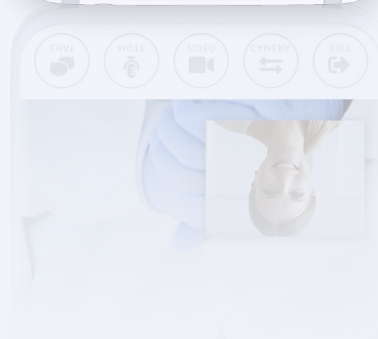
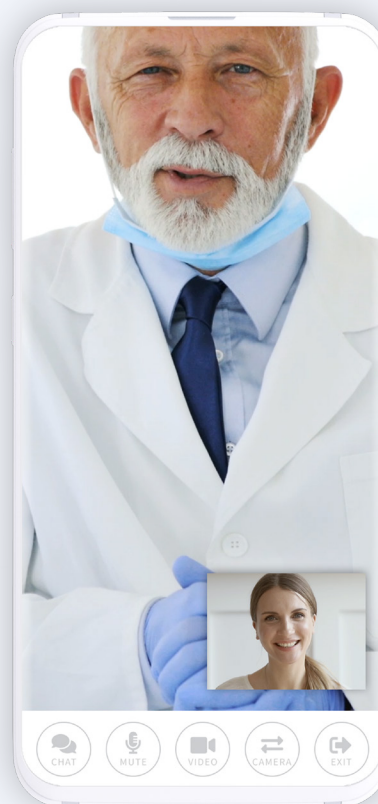
**Teledentistry is allowing practices to increase patient volume to pre-COVID levels, or better.**

**In today’s post-pandemic world, combining in-patient care with teledentistry just makes good business sense.**



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# Why Teledentistry is Critical for Rapid Practice Recovery

## Problem

During the last year and a half, patient revenues and patient volume declined. In fact, the Health Policy Institute of the American Dental Association notes that there is a projected 14% gap in annualized patient volume from pre-COVID-19 levels, from surveys of over 1700 dentists the week of May 17, 2021. <sup>1</sup> While rural practices may fare a bit better, with slightly more volume, there is no doubt that overall patient volume and revenues are down from pre-COVID-19 levels in 2019.

Part of the reason for this downturn is the practice's reduced capacity to physically see more patients. Extra time for screening is needed, for infection control procedures and operatory clean-up, necessitated by new requirements for a written COVID-19 protocol for every practice. These processes take longer to prepare operatories for the next patient, usually about 15 minutes, compared to pre-COVID-19 levels. <sup>2</sup> There is a new awareness of potential pathogens from aerosol-generating procedures because of COVID-19, even though this risk has been present for decades. <sup>3</sup>

Teledentistry allows the dental professional to see patients, eye-to-eye without PPE, in order to have a dialogue about their care. Now, teledentistry ensures that operatory time is efficiently reserved for productive patient care.

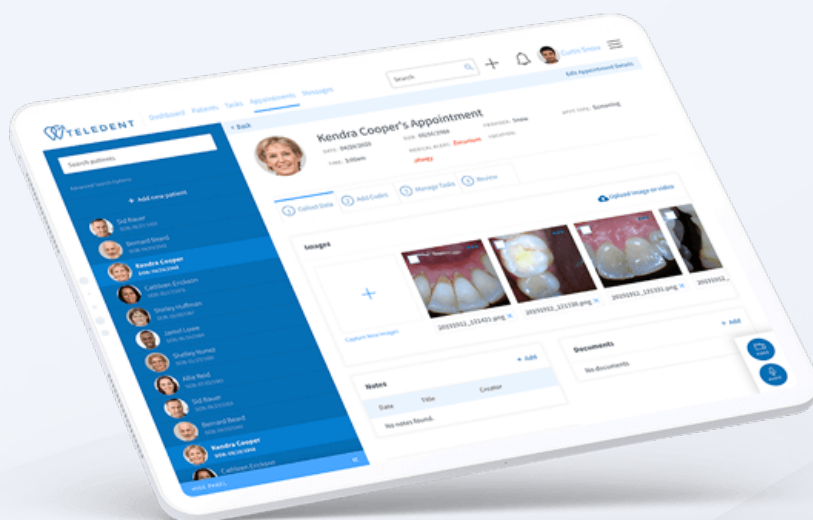
## Solution

Let's face it, thanks to COVID-19, you now have to simultaneously manage a digital and an in-office workflow. Teledentistry enables you to seamlessly integrate these two workstreams to maximize your productivity, and revenue for operatory-based care and beyond.

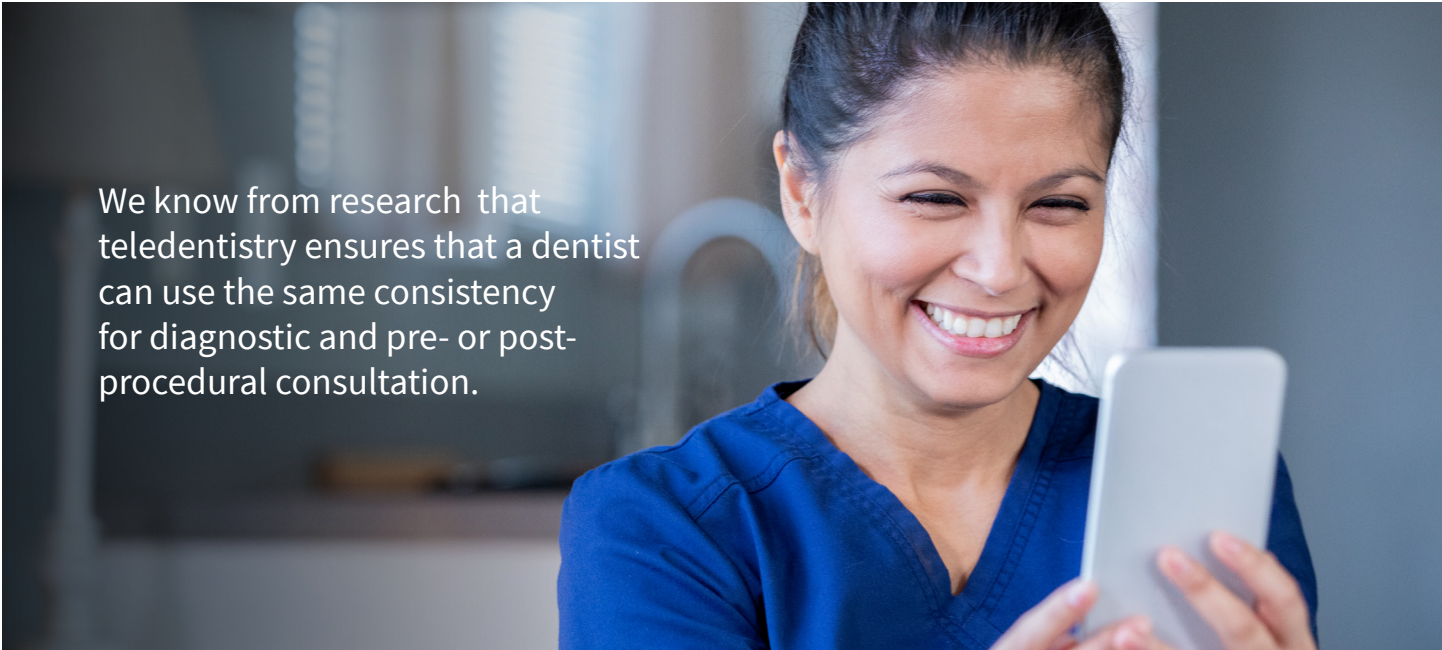
You now have a convenient way for the practice and the patient to easily fill gaps in the schedule by offering a virtual means to add additional patients, increase patient satisfaction and maintain a connection to care.

Instead of wrecking a practice's daily in-patient schedule with emergency care or routine follow-up or case consultation, teledentistry can be used to virtually assess both. Emergency and routine patient needs, and preferences can be determined, and proper scheduling of in-office care can occur.

**Use of teledentistry surged during 2020, accelerating the speed of adoption. In fact, more than a third of dentists reported that they were either using or planning to use teledentistry, according to a CareQuest survey.<sup>4</sup>**







We know from research that teledentistry ensures that a dentist can use the same consistency for diagnostic and pre- or post-procedural consultation.

We know from research that teledentistry ensures that a dentist can use the same consistency for diagnostic and pre- or post-procedural consultation, as that used in operatory-based care.<sup>5</sup>

Since a HIPAA compliant video record of the patient's chief complaints can be easily attached to a digital record keeping system, which can also include a record of patient intake, medical history, and case presentation, your agreed upon treatment goals are easily recorded and the patient inputs are easily retained electronically.

During the pandemic, hygiene production was decimated. You can now boost hygiene department revenue to better than pre-covid levels by providing customized education and personalized virtual instruction for each patient based on their needs and your assessment of their oral conditions. What's more, videos or educational materials can be selected and archived in a cloud-based portal for patients, who can view them from anywhere at their convenience.

## Lessons Learned from a Pandemic

Recently published data from an emergency room for patients seeking oral care showed that COVID-19 positivity rates among patients generally conformed to the overall population-based transmission rates of COVID-19 within that community.<sup>3</sup>

We now know that many patients with COVID-19 who are not vaccinated may be asymptomatic and that checking with the local health department about whether a practice's community is high, moderate, or low transmission is particularly important.<sup>6</sup>

But COVID is not the only communicable disease concern for dental practices. For example, community transmission of influenza is also tracked by the CDC.

Teledentistry can reduce risks of the flu as well as other seasonal respiratory infections, such as colds, to both patients and staff. Anecdotal reports over the pandemic indicate that individual practices and DSOs alike who use teledentistry also reduce employee absenteeism and days missed due to illness.

**Teledentistry can secure and store a privacy-protected video to a patient file, without having to enter copious notes to an electronic record. When using a robust platform such as TeleDent™ by MouthWatch, it typically only takes a few clicks to attach it. Teledentistry saves time and time is money.**

# Better Practice Business Management

There are many more business advantages to using teledentistry. For example, it can help connect patients to a practice, making appointment times available on their schedules, without the commute to a dental office. Most teledentistry appointments, especially limited examinations for emergencies or post-operative care or evaluation of emergencies, can be accomplished in 10 to 15 minutes.

On the other hand, longer teledentistry visits of 30 minutes can be reserved for referrals, case consultations for patients with presentation of treatment plans and enhanced oral hygiene instructions. Ongoing monitoring of patients, especially those with complex or disability needs, can be easily accomplished as well.

Using terms borrowed from studies of physicians adopting new techniques, we will classify dental practitioners based on the categories of innovators, early adopters, early majority, late majority, and laggards according to how quickly they adopted new techniques.<sup>8</sup>

Innovators have been using teledentistry over the last 20 years. According to a convenience sample (or selection of participants from a population on which it is easy to obtain data) of early adopters and majority users in teledentistry (n=23), grouping tele-visits was easier for front desk personnel to manage for these users.<sup>9</sup>

Whether a dentist describes themselves as an early adopter or a late majority user, the time for adding teledentistry is optimal now that the COVID-19 crisis has abated somewhat.

## A Better Way to Track Referrals and Patient Status

While face-to-face consultations can be scheduled with teledentistry, it is also effective in scheduling time for comprehensive case consultation to increase patient acceptance in this new clinical world.<sup>10</sup>

Teledentistry also integrates co-management of care with other specialist(s) and allows the dentist to track connection to referrals. In fact, consultations can easily occur, with patients reporting the same acceptability comparing in-person visits to a teledentistry visit for consultations.<sup>5</sup>

While a larger randomized controlled trial (RCT) is the standard evidence needed to compare the two methods, teledentistry remains a promising avenue to provide consultation “in restorative dentistry with high levels of patient acceptability.”<sup>11</sup>

Teledentistry for monitoring and early detection of oral pathology may be important too. Because more than 2/3rds of oral cancer are not detected in the early stages, teledentistry in combination with Artificial Neural Network (ANN) based risk-stratification model has been shown to increase early detection of oral potentially malignant (OPML)/malignant lesions. Digitization of cytology slides showed no difference between tele-cytology and conventional cytology in detection of oral lesions (kappa, 0.67–0.72).<sup>13</sup>

**There is a danger of settling into post-pandemic complacency. That's why adopting teledentistry is more important to avoid the crisis-complacency cycle, and merely waiting for the next pandemic or influenza strain.**

**Patient acceptance has been shown to be high for virtual consultations, as well as virtual referrals. In a study of orthodontic patients, patients preferred teledentistry video consultations to an in-person consultation.<sup>12</sup>**

# Making In-Patient Care More Efficient

Practically speaking, there are no national standards on teledentistry, and even some states are not yet allowing it. Some states, like Texas, only recently allowed teledentistry by dental professionals. While many insurance companies are providing reimbursement for teledentistry, wide variability in allowable frequency of teledentistry visits is reported.

While teledentistry is included in many dental insurance packages for employees, self-insuring practices are including teledentistry as a kind of “concierge” dental service too. However, standardization of teledentistry visits, like other methods of providing dental procedures and care is evolving. Look for more on this issue in the coming months.

Teledentistry allows the practice to assess needs and provide proper scheduling for in-patient care and monitoring of chronic conditions. Of course, teledentistry visits require the same standard of care as in-patient services. However, teledentistry visits can be scheduled in either real-time (synchronous) or store-and-forward (asynchronous) visits.

With the latter, the practice can assess non-emergency needs of patients in an ongoing way even with limited practice hours. Note that a provider of teledentistry should be a dental provider, licensed in the state where the teledentistry visits occurs.

Teledentistry also allows expansion of the capacity of the dental office beyond traditional business hours, without additional equipment or staffing costs, and independent of geography or time constraints.

**Teledentistry can ensure that a practice is taking the best care of patients, whether the patient is at home, work or school, or vacation. Providing optimal care is now available, wherever the patient is.**

## How to Measure Teledentistry's Return on Investment

Return on Investment (ROI) is a measure for your practice to measure the efficiency or profitability of a purchase of teledentistry for your practice. Relative to the cost, ROI helps you to determine the amount of money either gained or lost for use of teledentistry in your practice. Usually expressed as a percentage, ROI is calculated by a formula, dividing your net profit by its cost.<sup>14</sup>

Here is one formula for ROI.

$$\frac{\text{Profit} - \text{Cost}}{\text{Cost}} \times 100 = \text{ \% ROI}$$

This is simply profit minus costs (net profit), divided by your total costs:

**1) Cost:** (The monthly cost for teledentistry). For example, one TeleDent license for one dentist at \$109/month is \$1308 a year.

**2) Profit.** This is your hourly reimbursement for a teledentistry visit times the monthly hours scheduled with teledentistry per provider. For this example, we used an average teledentistry visit for 10% of available appointments or 18 hours of teledentistry scheduled. Half of all the teledentistry visits is reimbursed and half are free.

In this example, reimbursement is about \$40 for a limited examination, with \$25 dollars for teledentistry. No charge is made for case consultations or referrals or follow-up from surgery, whether in-person or teledentistry. But we save \$50 in PPE costs and 15 minutes of time not cleaning up the room.

Model scheduling is 2 case consultations or patient education per hour or 30 minutes, with follow-up evaluation scheduled about 10 minutes each. The average number of patients seen on teledentistry is 3 patients an hour.

(Note: There is a saving of about \$25 dollars for each no-charge follow-up hygiene and surgery, now evaluated after in-patient care on the next day with teledentistry which is not factored into this example, for simplicity.)

## Example of ROI

**Annual Profit** calculated (\$40 for limited exam, plus \$25 for teledentistry) times 216 visits per year, or 18 visits a month. Half of these are reimbursed, and half are not charged.

**Annual Cost** = \$1308 for monthly teledentistry license

$$\frac{((\$40 + \$25) \times \frac{216}{2}) - \$1308}{\$1308} \times 100 = 437\% \text{ ROI}$$

This does not count the extra time that the practice now has because an operator can be used for in-patient care, increasing productivity. Instead of half an hour of chair time, with fifteen minutes of that being for cleanup, there is no lost operator time.

Another patient can receive local anesthesia, and a teledentistry visit can be done without operator chair time or \$50 for PPE costs. Instead, for at least half the visits, a charge of \$65 dollars can occur. While this example also does not include the hourly cost of labor over the year, this could be included.

This simple example allows you to calculate for a dentist and an assistant, with one front desk manager/scheduler. There would be extra costs for alerting patients and enrolling patients in this technology, which also is an opportunity cost that will vary with each office.<sup>15</sup>

Please note that over time, ROI would be expected to shift based on technology changes or increase in demand from patients for teledentistry. Teledentistry allows the provider to increase patient volume, without taking time between patients for proper cleaning and disinfection of each room.

Teledentistry increases the provider and staff capacity of your internal systems, ensuring that in-patient care productivity is maximized. Methods to calculate this would vary by hourly or monthly productivity, but you can determine this by adjusting your digital workflow / in-patient care ratio.

In fact, a systematic review on its validity shows comparability of teledentistry to in-patient care.<sup>165</sup>

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# Summary & Conclusion

This whitepaper summarizes the latest emerging research on teledentistry, based on the experience with COVID-19 and beyond. There is an example calculation for ROI and break-even Analysis for teledentistry.

Using teledentistry increases dentist capacity and saves time and costs from PPE. Teledentistry allows a practice to adjust workflows without incurring costs for additional PPE or time for cleaning operatories between patients and getting the operatory ready for the next patient.

By putting the patient at the center of your care center, teledentistry ensures a variety of functions like assessment of emergencies, follow-up for surgery, deep cleaning, and referral, all without incurring PPE costs.

Best of all, a dentist can talk with patients about case consultations and referrals with other specialists on patient care can be coordinated and scheduled much more easily.



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## About the Author

Margaret Scarlett, DMD, is an internationally recognized dentist, author, and pandemic disease expert. Retired from the U.S. Public Health Service after 20 years, Dr. Scarlett has provided expert guidance on infectious and chronic diseases for the Secretary and Surgeon General of the Department of Health and Human Services, the Centers for Disease Control and Prevention (CDC), the World Health Organization, the U.S. Department of State, global ministries of health, international dental schools, and consumer health companies. First author of CDC's original infection control guidance for dentistry and a practicing dentist, Dr. Scarlett provides consultation and support to expand evidence-based dental practice and innovation.

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