

RESEARCH REPORT

Teledentistry Helps Provide the Right Care at the Right Time

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Introduction

During the early days of the COVID-19 pandemic, when in-person dental visits were limited, dental providers turned to teledentistry to [communicate with and triage patients](#). Nearly all (93%) dental providers surveyed during that time (May 2020) indicated that they [anticipated long-term changes in the practice of dentistry](#) after the initial crisis had passed, and many providers felt that teledentistry would become part of the “new normal”.

In addition to increasing access to care during a public health emergency, teledentistry [increases access to care](#) for individuals in underserved populations, such as those with disabilities, those who lack transportation, or those who live in rural areas or other places without adequate access to dentists. Of particular interest to program sponsors and payors, patients with a teledentistry visit [cost 10% less to treat](#) than patients who do not use teledentistry. A 2018 study found that the average annual dental cost per patient was \$681 for those who had at least one teledentistry visit, compared to \$756 for those without any teledentistry visits. Teledentistry is an excellent example of [value-based care \(VBC\)](#), as it has the potential to increase access to care at a lower cost.

Research on teledentistry prior to the pandemic found that while some patients (16%) who had been seen for a teledentistry visit did not follow up with an in-person visit,

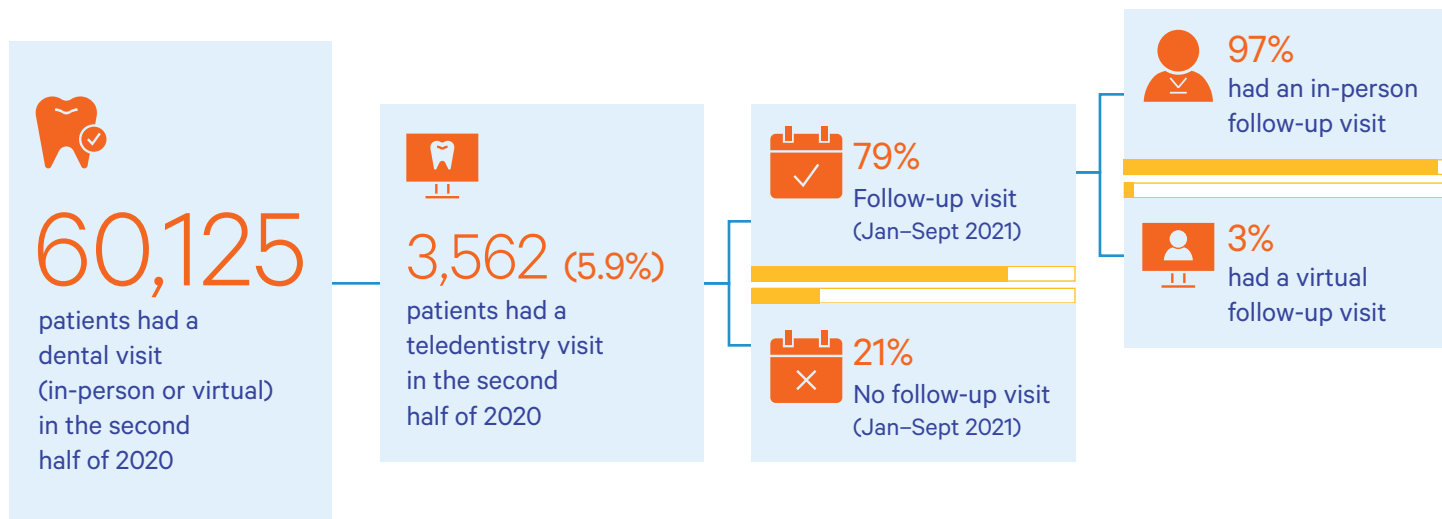
[most patients \(84%\) were successfully triaged and came to the dental office](#) following the virtual visit. Furthermore, having had a teledentistry visit was associated with less need for a subsequent emergency dental visit. However, little is known about the specific types of follow-up treatments that are provided at the initial in-person visit after a teledentistry visit, particularly during a public health crisis.

To address this gap, CareQuest Institute for Oral Health used data from Advantage Dental+ Oral Health Centers in Oregon and Washington to examine oral health outcomes for patients after a teledentistry visit. Data were obtained for all patients who had a teledentistry visit from June through December 2020, using the Current Dental Terminology (CDT) codes D9995 (“[synchronous teledentistry](#)”) and D9996 (“[asynchronous teledentistry](#)”, also called “store-and-forward” teledentistry). Within this cohort, we examined dental service utilization patterns and rate of return following teledentistry visits for the year 2021. In addition, we examined the most common procedures done during the first in-person dental encounter after a teledentistry visit (and procedures done at in-person visits during the same period for those without a virtual visit) and calculated the average number of days between the teledentistry visit and the first subsequent in-person visit. Finally, we stratified utilization of teledentistry by procedure and location type.

Teledentistry Care Is Well-Suited to Triage and Address Patient Needs

Analysis of the data showed that teledentistry was a well-utilized tool for patient care during the pandemic and led to timely in-person and virtual follow-up:

- Of the 60,125 individuals who had any kind of dental visit (in-person or teledentistry) in the second half of 2020, 5.9% (3,562) had a teledentistry visit.
- Nearly one in four (23.8%) teledentistry visits involved interpreting a diagnostic image.
- The most common CDT codes billed in association with a teledentistry visit related to assessment and evaluation (D0191 and D0140), diagnosis and treatment planning (D0150), oral hygiene instruction (D1330), and nutritional counseling for control and prevention of oral disease (D1310).
- Less than 2% of CDT codes billed on the same day as a teledentistry visit were associated with in-person procedures, such as radiographs or extractions. These procedures likely occurred during an in-person visit later on the same day as the teledentistry visit.
- Nearly four out of five (79%) of those who had a teledentistry visit had a follow-up dental visit in January–September of 2021.
- Of those who had a follow-up visit in 2021, nearly all (97%) had an in-person follow-up visit. Three percent had a follow-up visit using teledentistry.
- For those who had a teledentistry visit, most (89%) had a synchronous visit, while 11% had an asynchronous visit.
- Individuals who had an in-person follow-up visit after their teledentistry visit saw a dentist in person an average of 49.3 days after the initial visit.
- Six out of 10 patients had an in-person visit within three weeks of their teledentistry visit.



Follow-up Care and Types of Treatment after a Virtual Visit

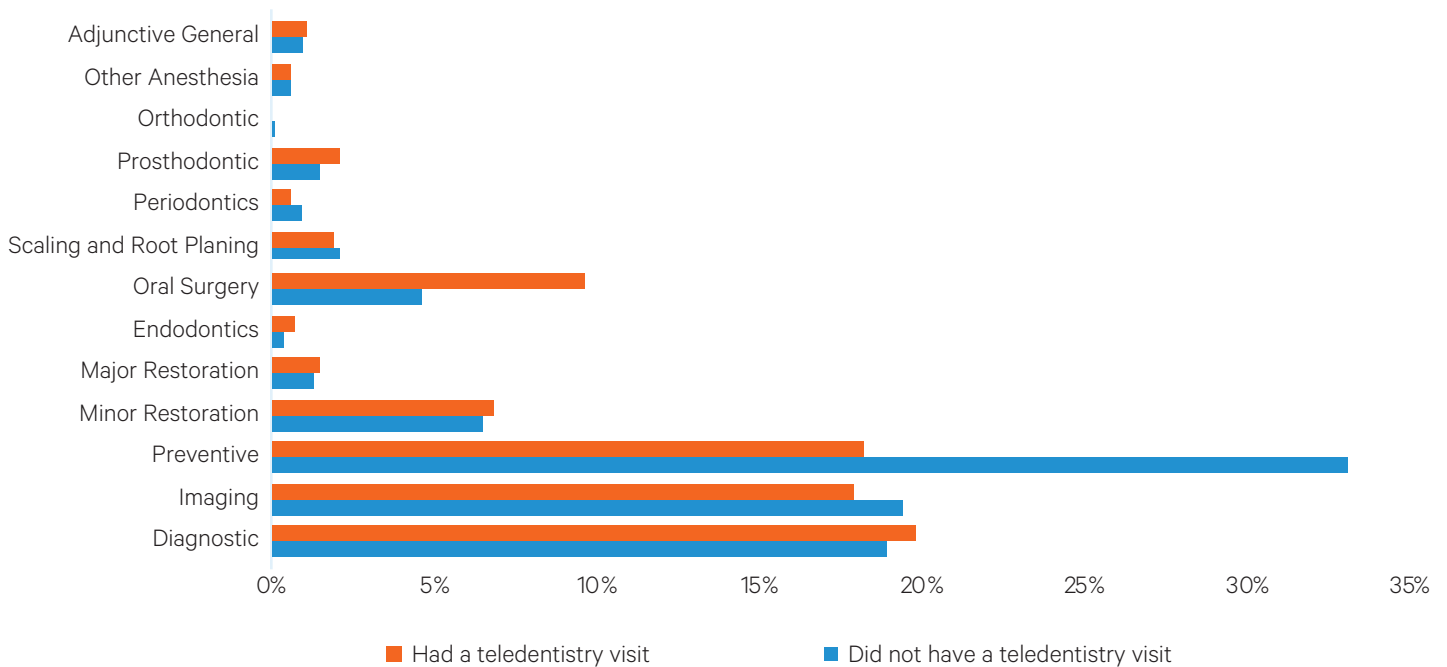
Follow-up patient care after a teledentistry visit primarily consisted of diagnostic and restorative services and less often consisted of preventive care.

- Six out of 10 individuals who had a teledentistry visit subsequently had a problem-focused evaluation (CDT codes D0140, D0160, D0170) at their next in-person visit.
- A much smaller number of individuals (7%) with a teledentistry visit had a subsequent in-person assessment visit to determine the need for referral or a caries risk assessment, and 4% had oral hygiene instruction.
- Individuals who did not have a teledentistry visit in 2020 were more likely to have preventive care, scaling and root planing, other periodontal treatment, or some type of imaging at an in-person visit in 2021 than those who had a teledentistry visit in the second half of 2020.



Those who had a teledentistry visit were **more likely** to have **restorative care (minor and major), diagnostic services, prosthodontic care, or an oral surgery or endodontic procedure at their first in-person visit** than those who did not have a teledentistry visit.

Utilization by procedure type and teledentistry visit

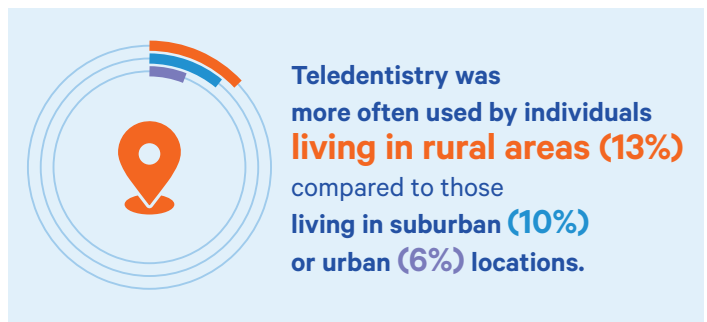




Teledentistry Benefits Patients with Less Access to Care

Findings revealed that teledentistry was utilized more often by individuals in rural locations and was less expensive than in-person visits, helping to alleviate common barriers to receiving dental care.

- Teledentistry was more often used by individuals living in rural areas (13%) compared to those living in suburban (10%) or urban (6%) locations.
- Teledentistry visits were less expensive on average (\$99 per visit) compared to in-person visits (\$114 per visit).





Implications

The findings of this study demonstrate that teledentistry can be used to successfully communicate with patients, triage patient needs, and plan in-person visits more efficiently. Triage care through teledentistry allows strategic use of chair time to provide more definitive and involved procedures such as oral surgery, endodontic procedures, and restorative care. Teledentistry also allows individuals in rural areas to access dentists' expertise more easily, so that rather than traveling long distances for preventive or simple diagnostic services, they are able to receive restorative or other definitive treatments when they do travel to the dental office for in-person care. During the first year of the pandemic, individuals with a teledentistry visit were able to see a dentist for an in-person visit within three weeks on average.

Teledentistry also allows for [cost savings](#), a key piece of providing value-based care. The current study suggests cost savings of approximately 10-15% for teledentistry in comparison to in-person visits. The long-term financial impact of teledentistry is promising and merits continued study over a longer period of time.

In-person visits for those who did not have a teledentistry visit were mostly focused on prevention, but individuals often received preventive services, namely oral hygiene instructions and nutritional counseling, during their teledentistry visit. This contrasts with the problem-focused and restorative focus of in-person follow-up after a teledentistry visit. The results encourage the use of teledentistry to provide preventive care in addition to triaging emergent needs, and there is much potential to expand this avenue. Providing services such as [caries risk assessment, patient education, or setting self-management goals](#) routinely will allow for greater utilization of preventive care and empower patients to better manage their oral health. Barriers to widespread adoption of teledentistry, especially for preventive care, must also be addressed. Public and private payors must enable coverage for these services, train network providers, and educate patients about this care modality. Communities should be provided with resources to understand and access their teledentistry care options. There is much potential to move beyond emergency-focused teledentistry care, toward using the modality to enable comprehensive, risk-based, and integrated care that improves quality at a lower cost for communities, care teams, and payors.

CareQuest Institute for Oral Health

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