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Ocular telemedicine as an enhancement for in-person eye care

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The American healthcare industry—like many others around the world—is realizing a paradigm shift from being provider-controlled to consumer-driven, which demands that care delivery adopt a more patient-focused approach.

Enter telemedicine

Patients and insurance members are taking on more of the rising healthcare costs in the U.S., and as a result, they are more engaged than ever in directing when, where and how they receive care services. This transformation has been heavily driven by increased expectations for technology-enabled services in nearly every other aspect of their lives, from work hours to leisure time, from collaboration to independence.

To add, the 2020 COVID-19 pandemic sped up the evolution of how patients access and receive care, as social distancing became the "new normal"—a change that will inevitably have long-lasting impacts and fundamentally change access to care in America.

Telemedicine—the ability to remotely access healthcare via technology—has become central to care conversations of all types.

Versant Health aims to unpack telemedicine as it pertains to eye care. With interest in and adoption of telemedicine rising, eye care is evolving at a rapid pace to meet patient needs, and with vision health serving as a critical indicator of overall health, eye care delivered via telemedicine has an important role to play in the continuum of care that patients receive.

> "Telemedicine is playing a larger role in care delivery, and there's certainly a place for it in increasing access to eye care and strengthening the relationships between patients and eye care professionals."
>
> —Kirk Rothrock, Chief Executive Officer, Versant Health

What, exactly, is telemedicine, and how does that translate to eye care?

Telemedicine—commonly used interchangeably with the term "telehealth"—typically refers to using two-way communication technology to support care consultations and conversations between patients and doctors.

What does "telemedicine" mean?

The use of **electronic information and telecommunications technologies** to support and promote long distance clinical healthcare, patient and professional health related education, public health and health administration[1]

—The Federal Health Resources Service Administration (HRSA)

The **exchange of medical information from one site to another through electronic communication to improve a patient's health**, with innovative uses of this kind of technology in the provision of healthcare increasing[2]

—Centers for Medicare and Medicaid Services (CMS)

In its earliest iterations, telemedicine was most-commonly used to continue ongoing care at home that would typically require frequent or regularly recurring in-office patient visits, such as behavioral and mental health services. However, with advancements in technology, telemedicine has grown rapidly in both popularity, availability and access across all types of medical disciplines. This cultural shift has been sped up by the 2020 COVID-19 pandemic, with patients unable to easily access in-person care for non-emergencies.

Telemedicine use trends		
Popularity	**Availability**	**Access**
Total use of telemedicine services increased by 624% from 2014 to 2018, according to a study from FAIR Health[3]	Organizations including the Department of Veteran Affairs, TRICARE, Medicaid and commercial health insurance providers have increasingly made telehealth services available to members	Nearly all—9 out of 10—U.S. employers provide coverage for telehealth, and access is continuing to grow at exponential rates[4]

Telemedicine's mounting growth makes sense, when considering the benefits to all involved:

- Provides more convenience for patients and healthcare providers, as well as easily trackable data and information to insurers
- Saves time and money for patients and healthcare providers
- Allows for more immediate personalized care
- Continues to improve with technology advances (e.g., smartphones, data storage and management, artificial intelligence), particularly as the modern generation is more willing to embrace new and evolving technologies

One of the most impactful changes to the modern understanding of telemedicine—outside of video capabilities and artificial intelligence technologies—has been the move from allowing only synchronous (i.e., real time) methods of communication, to including asynchronous (i.e., not in real time) communication and patient home monitoring in approved modalities. The addition of asynchronous and home monitoring has allowed for more patients to get immediate access to—and be insured for—needed care.

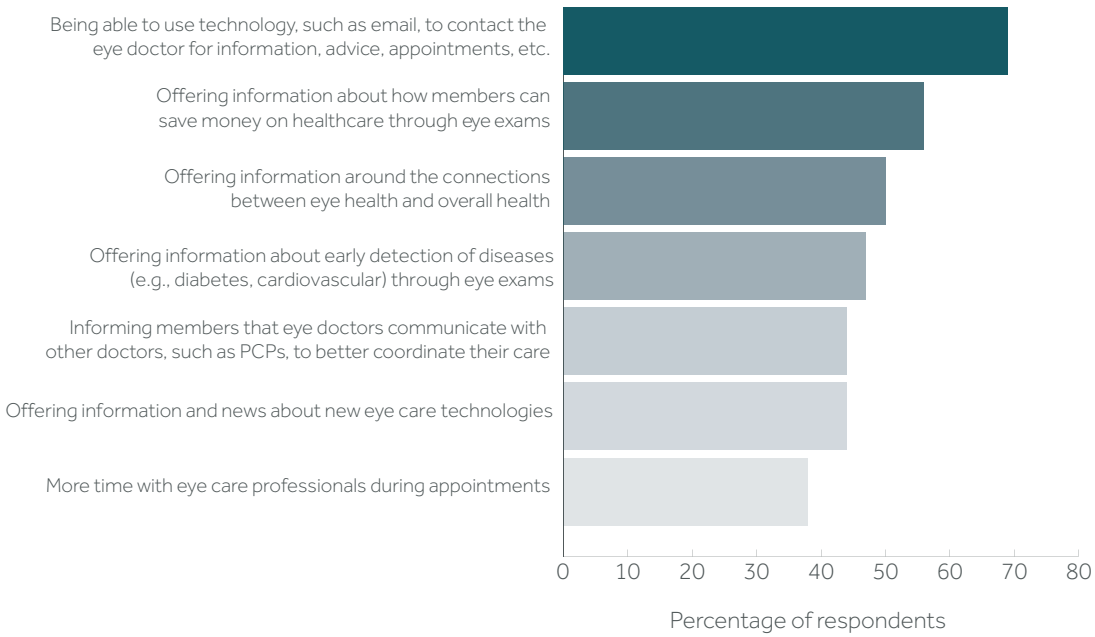
The three types of telemedicine		
Synchronous	**Asynchronous**	**Home monitoring**
Real-time, two-way communication between patients and care providers, typically referring to live reviews, discussions and consultations	Communication between patients and care providers that does not happen in real time, typically referring to virtually transmitting health records and messages for a later assessment	Ongoing, continued assessment and monitoring of patients' health status, typically referring to regularly-scheduled video calls and at-home updates virtually provided by patients

Telemedicine enhances eye care provider-patient relationships, particularly during times of challenge and crisis, but it does not entirely replace in-person eye exams

It comes as no surprise that "ocular telemedicine"—or telemedicine for eye care and vision health—is growing in both interest and use, as all forms of telemedicine become more prevalent in society and the benefits become abundantly clear. In fact, data show that the technology that powers communication with eye doctors is the most important factor in vision insurance purchasing decisions, having a greater impact than information about how members could save money on healthcare through eye exams.

> Health plan executives say that being able to use technology to contact eye doctors would have a highest impact on members' receptivity to purchasing vision insurance, according to Versant Health's inaugural Vision Wellness Study[5]

Factors with a high impact on purchasing vision insurance



The term "ocular telemedicine" comprises a wide range of evolving technologies, including: comprehensive, in-office eye exams that are remotely supervised by eye care professionals; smartphone apps that allow for virtual consultations with eye care professionals; artificial intelligence technology that helps monitor for and diagnose eye issues; and a host of digitally-enabled capabilities in between.

However, ocular telemedicine, in its current stage of development, cannot entirely replace the value of in-office visits with eye care professionals. Rather, it enhances in-office visits by strengthening the ongoing relationship between eye care professionals and their patients.

The truth is people still want some form of face-to-face human connection with their care professionals, including opticians, optometrists and ophthalmologists. There are always going to be instances where being seen in-person provides not only physical health support, but also mental health support through the reassurance and trust that is established through direct human contact.

In some cases, ocular telemedicine may be required. For example, the senior population is particularly vulnerable to diseases and viruses, as found during the 2020 COVID-19 pandemic, and they face the simultaneous challenges of requiring eye care support for their safety and independence, but also needing to avoid contact with other people to reduce their risk of illness. However, in other cases, in-person care is required to sufficiently diagnose the vision health—and potential overall health—issues at hand. In fact, even in the case of seniors, telemedicine may not be the first point of contact; rather, it is used to support ongoing care and monitoring.

According to an analysis by the American Telemedicine Association, studies show that outcomes using telemedicine technologies in coordination with "usual care" were similar or better than outcomes with "usual care" alone.[6]

Three examples of situations for which ocular telemedicine can economically provide support to at-risk patients, improve their long-term outcomes and take costs out of the healthcare system are:

Examples of ocular telemedicine in action			
	Synchronous urgent eye exam	**Asynchronous remote retinal imaging**	**Monitoring for degenerative eye issues**
Situation	A 90-year-old patient residing in a nursing home is experiencing eye pain, redness and discharge.	A patient who is unemployed and living with Diabetes is experiencing blurred vision	An elderly, home-bound patient with intermediate stage macular degeneration is experiencing new onset blurred vision.
How telemedicine works to address it	In environments such as the COVID-19 pandemic, seniors are at great risk of contracting serious, life-threatening diseases from public travel and transmitting illness to others in their living spaces. Rather, than exposing seniors to disease risks, emergency eye exams can be provided in residence via technology-enabled, real-time video and audio communication. **In this case, the patient could set up a video call with their eye care professional and get advice on cause and treatment without leaving their home**.	Imaging for retinal disease in likely sufferers—such as those with Diabetes—can now be performed outside of eye care professionals' offices and at the patient's convenience. Often, this imaging can be performed in primary care settings or point-of-service locations. Eye care professionals can review the imaging as soon as they are digitally available. **In this case, the patient could walk into a Federally Qualified Health Center and receive an immediate fundus photograph, which is then sent to an eye care professional for emergent evaluation.**	Seniors are at risk of developing eye issues that could get worse over time without proper intervention, including age-related macular degeneration and glaucoma. Advances in technology allow patients to monitor their eye health at home and transmit the data to their eye care professionals, so that patients only schedule in-office visits when absolutely necessary. **In this case, the patient could regularly share images of their eyes via a home monitoring device prescribed by their eye care professional to determine when emergency care is required.**

Versant Health embraces and welcomes opportunities for technology to continue to advance telemedicine and the opportunities it presents to improve access, lower costs, ensure quality care and—most of all—contribute to long-lasting, informed, trusting relationships between eye care professionals, patients and insurers.

How does evolving legislation impact ocular telemedicine reimbursement?

Even prior to the 2020 COVID-19 pandemic, national, state and private health policies began expanding the use of remote technologies that would traditionally require in-person provider office visits. In fact, there were 223 state telemedicine bills introduced in 2019 alone—including budget bills and medical assistance budget language—with states comprised of significant rural areas and underserved residents leaning into telemedicine.

Currently, all 50 state Medicaid programs have some type of coverage for telemedicine, but customarily, Medicare only reimbursed for telemedicine services under very strict conditions, while there has been more flexibility in Medicare Advantage plans.

However, pressure has been mounting to improve Medicare reimbursement for telemedicine for quite some time, and the COVID-19 pandemic only increased the need for a rapid response. In February 2018, more than a year prior to the pandemic, a budget bill expanded telemedicine for Medicare Advantage plans and eased

Access to telemedicine is not just about the available technologies, but also the policies in place to ensure that patients can access telemedicine and the care provided is appropriate and reimbursable.

"Meaningful Use" requirements. Fast forward to March 2020, when the CMS broadened access to Medicare telemedicine in response to the COVID-19 pandemic to allow a wider range of services to be covered, as people were unable to leave their homes—and this change could be here to stay.

Still, when it specifically comes to ocular telemedicine, state-by-state limitations on the type of eye care that can be reimbursed by insurers exist.

In response, Versant Health has developed an approach to telemedicine reimbursement for eye care based on 11 core principles, but is also committed to evolving this method, as needs and opportunities for better ocular telemedicine arise. In fact, Versant Health has made ongoing modifications to telemedicine policies based on state and federal emergency mandates.

While the CMS' telemedicine expansion in March 2020 was designated to be temporary in response to an emergency situation, just three months later, Seema Verma, administrator of CMS, said that expanded access to telemedicine should continue beyond the COVID-19 pandemic.[6]

Versant Health's 11 principles of ocular telemedicine reimbursement

1. The technology must support the doctor-patient relationship as that is understood in traditional medical practice.
2. The technology must authenticate the location and identity of the requesting patient.
3. The technology must disclose and validate the identity and appropriate training of the professional rendering care.
4. Appropriate informed consent must be obtained referencing the advantages, limitations and alternatives to these technologies.
5. The patient must have access to the record documenting the care received.
6. The professional providing care must be appropriately licensed and the telemedicine services must be approved by both the jurisdiction extending the professional license and the jurisdiction in which the patient is resident.
7. The licensed professional providing telemedicine services is responsible for the supervision of any non-physicians involved in patient care.
8. The physician must have liability insurance specifically referencing telemedicine services.
9. The standard of care for telemedicine services shall be the same as traditional medical care and must meet the minimum standard for a face-to-face eye exam.
10. The telemedicine service organization and professional must have policies and procedures assessing patient satisfaction, safety, privacy and security of the medical record consistent with federal and state regulations.
11. The telemedicine encounter will have technology supporting real-time interactive audio and visual communications between the patient and the provider—not only audio. The technology must be validated by publication in the peer reviewed literature and must be FDA approved.

Telemedicine for vision care is still evolving.

Although there has been much impressive progress in the technology that enables telemedicine for eye care, patients, providers and insurers are still facing a number of questions about how technologies are—and should be—used for the best possible patient outcomes, including:

- The privacy, security and validity of the technologies
- Concerns about technologies attempting to replace provider-patient relationships
- Concerns about the quality of imaging with remote technologies
- Changing legal licensure across state medical boards

From artificial intelligence to changing provider practice models, telemedicine will undoubtedly impact the future of eye care and how people understand their vision health. Health plans can serve as helpful connectors between eye care professionals and members on when and how to use the ocular telemedicine at their disposal.

It is the responsibility of managed care organizations like Versant Health, professional societies and government agencies to serve the best interests of patients by overseeing matters of safety, privacy and security in ocular telemedicine.

About Versant Health

Versant Health is one of the nation's leading managed vision care companies serving more than 35 million members nationwide. Through our Davis Vision plans and Superior Vision plans, we help members enjoy the wonders of sight through healthy eyes and vision. Providing vision and eye health solutions that range from routine vision benefits to medical management, Versant Health has a unique visibility and scale across the total eye health value chain. As a result, members enjoy a seamless experience with access to one of the broadest provider networks in the industry and an exclusive frame collection. Commercial groups, individuals, third parties, and health plans that serve government-sponsored programs such as Medicaid and Medicare are among our valued customers.

For more information visit **versanthealth.com**.

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