

Using Connected Care (Telehealth) Successfully in Veterinary Practice

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DEFINITIONS

Connected Care is the integration of digital technologies to enhance and support the veterinarian-client-patient relationship (VCPR) and facilitate proactive and ongoing care through improved communication, diagnosis, and monitoring. It is an approach to veterinary practice that is patient- and client-centered, and actively engages the entire veterinary healthcare team.

Telehealth is the overarching term that encompasses all uses of technology to remotely gather and deliver health information, advice, education, and care. Telehealth can be divided into categories based on who is involved in the communication. For communication between veterinarians and animal owners there are two important categories that are distinguished by whether a VCPR has been established:

- Without a VCPR, telehealth includes the delivery of general advice, educational information, and teletriage (to support the care of animals in emergency situations).
- Telemedicine includes the delivery of information specific to a particular patient and is allowable only within the context of an established VCPR.

Teleadvice includes the provision of any health information, opinion, guidance or recommendation concerning prudent actions that are not specific to a particular patient's health, illness or injury. This general advice is not intended to diagnose, prognose, treat, correct, change, alleviate, or prevent animal disease, illness, pain, deformity, defect, injury, or other physical or mental conditions. Examples include recommendations made by veterinarians or non-veterinarians via phone, text or online that all animals should receive physical exams or premise visits as part of a comprehensive healthcare plan, or reference to the importance of attending to regular vaccination or parasite prevention as a key part of preventive care.

Telemedicine involves the use of a tool to exchange information about a patient's clinical health status electronically from one site to another. Examples include using technology to communicate with a client and visually observe the patient during a postoperative follow-up examination and discussion.

Teleconsulting refers to a primary care veterinarian using telehealth tools to communicate with a veterinary specialist or other qualified expert to gain insights and advice on the care of a patient.

Telemonitoring, mHealth or mobile health employs mobile devices. Some mHealth applications and wearables are designed to augment animal health care within VCPRs, while others are designed and marketed directly to consumers for their education and for animal monitoring without clinical input (outside of a VCPR).

Teletriage is the safe, appropriate, and timely assessment and management (immediate referral to a veterinarian or not) of animal patients via electronic consultation with their owners. In assessing a patient's condition electronically, the assessor determines urgency and the need for immediate referral to a veterinarian, based on the owner's (or responsible party's) report of history and clinical signs, sometimes supplemented by visual (e.g., photographs, video) information. A diagnosis is not rendered. The essence of teletriage is to make good and safe decisions regarding a patient's disposition (immediate referral to a veterinarian or not), under conditions of uncertainty and urgency.

Telesupervision is the supervision of individuals using mediums such as audio or audio/video conference, text messaging and email. Clinical supervision is integral to continuing professional development of health professionals. While telesupervision may be useful in any context, its value is amplified for health professionals working in rural and remote areas where in-person access to supervisors within the local work environment is often diminished. While telesupervision offers innovative means to undertake clinical supervision, there remain gaps in the regulatory parameters of use in clinical practice. State regulators will need to address whether telesupervision is considered direct or indirect supervision, or some new, to-be-defined category of supervision. Telesupervision involving the practice of veterinary medicine should not be undertaken without a clear regulatory framework in place.

GOALS FOR CONNECTED CARE (TELEHEALTH)

Implementation of telehealth within a practice should stay focused on three goals:

- Improve the level of care for the patient. Done right, telehealth, and specifically telemedicine, will result in an improved level of care for the patient. For example, postsurgical incision photos or video can provide the veterinarian with more concrete information than just a description over the phone.
- Increase access of underserved populations to veterinary medical care. In ADDITION to improving the level of care, telehealth used appropriately may also increase access to veterinary care. While telehealth may not be a panacea for resolving all access to care issues, it certainly can be part of the answer.
- Improve utilization of all members of the veterinary healthcare team. There are certainly instances where other (non-veterinarian) members of the healthcare team can be better utilized in the practice and qualified staff members should certainly be employed in providing appropriate and legal guidance to clients.

If telehealth technology does not consistently meet all three of these goals, then it is not being used correctly.

POTENTIAL APPLICATIONS OF TELEHEALTH IN YOUR PRACTICE

There are multiple potential applications of telehealth that you may want to consider for your practice.

Sharing general animal health information

Veterinarians and their teams already offer general, non-patient-specific information (teleadvice) over the phone, and via text, email, and their practice website or social media pages. Often this information is provided free of charge. Offering more structured teleadvice services can provide an opportunity for veterinarians and their team members (e.g., veterinary technicians, veterinary assistants) to use and be compensated properly for their training and skills and can also create unique opportunities to attract new clients, particularly if your veterinary hospital has one or more areas of special interest or particular expertise and that is evident in your offerings.

Expanding access to veterinary care

Despite all the advances in veterinary medicine, there are still clients who struggle to access routine veterinary care for their animals for a variety of reasons. Excessive distances, available transportation (including availability and ease of transportation for the patient), disability, language

barriers, and financial issues are some examples of roadblocks. Today's high-quality telecommunication tools and software applications can provide almost seamless communication between clients and veterinary healthcare teams at a distance, making it easier for clients to access veterinary expertise.

If you have clients for whom recurring trips to the veterinary hospital serve as a deterrent to accessing veterinary care, consider customizing a telemedicine offering that makes your services more convenient for them to utilize. Many services are possible with telemedicine, as long as a VCPR that satisfies state and federal requirements is in place, and the attending veterinarian is comfortable assessing the patient remotely and feels able to exercise good clinical judgment in caring for the patient.

Potential clients may benefit from educational offerings addressing the importance of preventive care or safety for and around animals.

After-hours care

Clients want and expect 24/7 services, including veterinary care. Traditionally, access to after-hours care has meant that the client leaves a message with an answering service and waits for the veterinarian to call them back. Today's client generally expects more. Implementing teletriage services can help meet client expectations and patient needs, assist in scheduling with prioritization given to urgent cases, while also allowing veterinarians to better manage their work-life balance.

Assessing client compliance and patient progress

Evaluating progress after treatment - including checking client compliance with your recommendations and adjusting those recommendations as needed - is critical for successful outcomes. Using tools of telemedicine can enhance continuity of care. For example, you can use photos and video to help evaluate healing of incision sites; video to monitor the patient's gait and overall mobility; video to see the patient's general demeanor and evidence of return to normalcy after treatment; and electronic transfer of herd records to keep an eye on health and production. Such consultations can be conducted in real time or asynchronously depending on needs and preference.

Cases that may lend themselves to electronic appointments include, but may not be limited to, medical rechecks (e.g., chronic dermatological cases; gastrointestinal issues pending additional workup; osteoarthritis; herd or other animal group record evaluations; including assessments of regularly collected laboratory, health, and production data), post-surgical evaluations; follow-up behavioral consults; and digital necropsy (a standard set of images is obtained during the procedure and shared with the veterinarian). Using tools of telemedicine can support coordination with onsite paraprofessionals, such as the exchange of diagnostic images and case status between veterinarians and farriers involved in the management of certain conditions of the equine foot. Telehealth tools can also be used to provide clients with up-to-date information about hospitalized patients, including - for longer term patients - an opportunity to view their animal and see what progress has been made during the course of treatment.

Palliative care

When the stress of a trip to the hospital might exacerbate an animal's already deteriorating health, telemedicine provides a convenient way to check in on these patients. This is especially helpful for

patients when clients might otherwise forego a veterinary hospital visit because of the frequency of visits required and time limitations, challenges the animals themselves may present for transportation (e.g., cats who dislike both the carrier and the vehicle ride), and/or how the animal reacts to hospital visits overall. A telemedicine evaluation allows you to get a general sense of the animal's overall wellbeing and can help determine whether treatment plans should be adjusted or an in-person examination is needed.

Artificial intelligence-assisted diagnostics

Virtually every area of life has been touched by AI, enhancing our understanding of complex issues and increasing the likelihood of better outcomes because large amounts of data can be more rigorously analyzed. With its robust ability to integrate and learn from large sets of clinical data, AI can serve roles in diagnosis, clinical decision making, and personalized patient care.

Veterinary medicine is experiencing rapid advancements in AI, including deep learning, machine learning, natural language processing, and robotics, with current applications in the areas of triage, image interpretation (radiologic and pathologic), disease/condition diagnosis, patient monitoring, drug development, and even robotic surgery. Applying AI to health care supports veterinarians, including those in both primary care and specialty practices, by better integrating information and increasing the accuracy of a diagnosis, reducing the likelihood of errors in diagnosis, and earlier identification of subtle changes in patient health that can lead to more proactive intervention.

Remote patient monitoring

Remote patient monitoring (RPM) uses digital technologies to collect medical and other types of health data from patients in one location and electronically transmit that information securely to healthcare providers in a different location for assessment and recommendations. It can be used by veterinarians and their clients to increase the amount of information available about a patient's health and, thereby, improve diagnostic and treatment decisions and assess client compliance with recommendations.

- Synchronous or real-time monitoring/communication is where video or other data are shared and evaluated in real time. Live video streaming is the most common approach to synchronous RPM, but a variety of technologies are available that can deliver information about an animal's environment, feed consumption, activity, and physiological parameters (e.g., heart rhythm, temperature) in real time.
- Asynchronous monitoring/communication is where video or other data are recorded and then sent to the veterinarian at a later time.

Examples of RPM being used in veterinary medicine include microchips that also measure body temperature, with the potential for earlier detection of certain diseases and stressors; continuous monitoring of glucose concentrations in diabetic patients; time lapse videography to evaluate lying time in dairy cattle as a measure of cow comfort; the use of smart-sensing technologies to provide critical environmental information in poultry production facilities; electronic feeding stations that record individual animal feeding patterns and daily intake; evaluation of lameness in a variety of veterinary patients via accelerometer-based monitors or cameras; and assessment of growth rate and external parasite loads of finfish via video sampling. Some veterinarians even use video monitors in their hospital so that they can keep an eye on their hospitalized patients or those continuing to recover from anesthesia even when they are not in the immediate vicinity.

Sometimes veterinary paraprofessionals or clients may directly participate in such monitoring, such

as when technology is employed that allows a stethoscope or similar monitor to be positioned on the patient with the sounds and, sometimes, an ECG tracing then transmitted electronically to the veterinarian.

Specialty consultations

Creative and appropriate use of telehealth can improve access to specialists for primary care veterinarians and their patients/clients. Live video teleconference and e-consultation can be used by primary care veterinarians to connect with providers of specialized services for real-time support. Such consultations are enhanced by electronic technology that allows rapid sharing of medical records, high-quality radiologic images and other test results. And, just as for primary care veterinarians, telemedicine allows specialists who have established a VCPR to better connect with their patients and clients and manage chronic cases.

Three-way consultations including the client, primary veterinarian, and specialist may be considered in situations where the specialist needs to interact remotely with the client and/or patient, but where the specialist has not been able to establish a VCPR. Such an approach can help with access to specialists in areas where a particular specialty is currently unavailable or existing specialists are overutilized impacting their ability to schedule in-person appointments in a timely fashion. State and federal regulations should be clearly understood in these situations before taking this approach.

Education

Connected Care provides multiple opportunities to support your client education efforts. Informed clients better understand their animals' health status and may be more likely to comply with your recommendations with a net improvement in patient outcomes. A thoughtful approach to client education can also improve utilization of the training, skills, and time of the entire veterinary healthcare team.

- **Digital diagnostics** — Digital microscopes and otoscopes can provide clients with a real-time view of exactly what the veterinarian is seeing, and digital stethoscopes allow clients to hear exactly what the veterinarian is hearing. These tools can provide great support for client understanding of their animals' health concerns and make them more amenable to following your advice. While still somewhat expensive for routine veterinary use, digitally enabled drug containers with accompanying smartphone applications provide reminders when it's time to administer medication and can also provide a gentle compliance assist.
- **Client webinars** — For years it has been common for veterinarians to offer educational classes in the clinic or in community venues, such as the local library. Now these same types of classes can be offered via live and/or recorded webinars or livestreams and videos delivered via social media. Live presentations allow clients to interact with the presenter, while recorded ones offer the convenience of viewing whenever the client has time. Webinars can be used to provide general health or animal care information (e.g., importance of regular examinations and preventive care, basic house/behavioral training, grooming and hoof care, holiday hazard proofing) or may be customized to target clients, individually or in groups, whose animals may have a commonly encountered medical condition the management of which benefits from more complete understanding (e.g., endocrine conditions, such as diabetes; renal disease; laminitis). Multiple members of your veterinary healthcare team can and should participate in providing this education, consistent with their training and within their scope of practice.
- **Individual client instruction** — Veterinary technicians and veterinary assistants can use tools of telehealth to review with clients how to administer subcutaneous fluids, ophthalmic

ointment, and other medications; provide routine dental care; care for wounds and manage bandages, splints/ casts, or external fixators; understand and manage their animal's undesired behavior; and implement nutritional recommendations. As always, the role of the team member in providing these services needs to be consistent with their scope of practice.

Don't forget that tools of telehealth can also be used to deliver and receive education for members of the veterinary healthcare team. Examples include arrangements with specialists that permit referring veterinarians to participate in daily or weekly rounds and learn more about complex cases, remote video instruction provided by vendors that supports better use of diagnostic equipment and more accurate interpretation of test results, and real-time viewing and discussion of unusual cases with surgeons, pathologists, behaviorists, or rehabilitation specialists.

KNOW THE RULES

You might already have some solid ideas about how you'd like to incorporate Connected Care into your practice. Even if that's the case, it's critical that you first familiarize yourself with the rules that govern the use of telehealth, including the regulatory and legal landscape around the delivery of telemedicine. In addition to helping to protect you, your patients, and your clients, doing the following will ensure you don't spend valuable time pursuing services that cannot be legally offered in your area.

There are rules that your state VMA should be able to help you locate and better understand.

State veterinary practice act/regulations/rules are an example. These statutes, regulations, and rules direct certain aspects of how veterinary medicine can be delivered in the state and likely will impact how telehealth can be legally delivered.

Some **State pharmacy laws** include aspects of veterinary pharmacy regulations. You should become familiar whether your state is impacted by the human state pharmacy laws and how that might impact telemedicine.

You should also be familiar with **State licensure requirements** in the state in which you reside as well as any states in which your clients reside. In many cases, you will need to be licensed in both states if you are providing regular ongoing telemedicine services into another state.

Many states have implemented **telehealth laws** on the human side and the way in which they were written have either intentionally or unintentionally included veterinary medicine. A few states have begun passing specific veterinary telehealth laws/rules of which you should be familiar as well.

Most states have **Veterinarian-Client-Patient Relationship (VCPR)** laws/rules, generally inserted as part of their practice act. VCPR regulations are one of the regular concerns when practicing telemedicine.

Many veterinarians are not fully aware that **Federal VCPR requirements** exist and may play into how you practice telemedicine. If your state VCPR requirements are less stringent than the federal VCPR requirements, then there are situations, including extra-label drug use (which is the vast majority of what veterinarians do with medications), veterinary feed directives (or VFDs), and certain live biological use all need to meet federal VCPR requirements. AVMA's telehealth resources can help you find out where your state falls regarding federal VCPR issues.

Medical records need to be kept to the same standards for telemedicine interactions as they are for in-clinic visits. You should be aware any **Federal/state/local record retention requirements** related to your practice of telemedicine.

There may be **state confidentiality laws** that you need to be aware of that could impact how you deliver telehealth services.

Finally, there are likely **State and federal controlled substances laws** that dictate whether controlled substances can be prescribed via a telemedicine visit and if so, how much of a supply can be prescribed without an in-clinic visit.

THE VETERINARIAN-CLIENT-PATIENT RELATIONSHIP (VCPR) AND LICENSING

Many veterinarians want to know what can and cannot be done with telemedicine based on if there is a legally established VCPR.

While specific answers will depend on your state laws/regulations, in general **Within an established VCPR** there are a variety of telehealth and telemedicine service models that are available to veterinarians and veterinary practices. Client-facing telemedicine services may include use of tools that allow the veterinarian to remotely and securely gather essential patient health information from the animal owner or another caretaker; access the patient's medical records; and conduct a virtual evaluation of the patient through real-time video or transmitted photographs or other data.

The veterinarian is ultimately responsible to determine if they have adequate information to make a tentative diagnosis, provide a prognosis, prescribe most medications, alter a current treatment protocol, or make other treatment recommendations.

Without a legally established VCPR the veterinarian may provide non-patient-specific advice, but must stay clear of diagnosing, prognosing, or treating patients. Two exceptions may apply: (1) your state law allows a VCPR to be established electronically, you have met the requirements for doing so, and activities that would invoke a requirement for adherence to the federal VCPR (such as extra-label medicine use or VFDs) are not conducted or (2) advice given in an emergency until a patient can be seen by a veterinarian. Non-client electronic communications that include the provision of non-patient-specific advice and general educational content are usually acceptable.

We have previously made mention that if you are treating a patient via telemedicine across state lines, you will likely need to be licensed in both your state of residence and the state where the patient resides.

The AVMA takes the position that when a legally established VCPR exists with the primary care veterinarian, that consulting specialists, those who are only advising on the case, and are working through the primary care veterinarian (i.e., not directly with the client), the consultant does not need to be licensed in the state. Obviously, you need to be aware of your state requirements as they may not necessarily match AVMA positions.

DETERMINING YOUR OFFERINGS AND INTEGRATING THEM INTO NORMAL PRACTICE OPERATIONS

For success, connected care needs to be mainstreamed into your approach; it should not be pigeon-holed as a “different” way of taking care of patients and clients. In-person visits and telehealth then become seamless partners in delivering cohesive, high-quality patient care.

Evaluate technology and service providers

If you are considering partnering with a provider of a telehealth-specific client communication platform, it is important to understand each provider’s capabilities, limitations, and costs. Are you wanting communication with your clients to be asynchronous, synchronous or both? Do you want a built-in payment system, or do you want to bill from your practice? Make sure the platform works with the technology available to you and your client, including hardware, operating system, your practice management software (if you are wanting integration), and internet service. Some client communication platform providers employ veterinarians or veterinary technicians to assist with triage and/or providing general advice for clients. This may be offered during normal business hours or after hours, with patients for which an in-person visit seems appropriate redirected to your clinic for an appointment or to an emergency facility when calls are received outside of normal business hours. Telehealth-specific client communication platforms may require an ongoing monthly or per-use investment in addition to new hardware. Another consideration is the amount of support available from the provider during implementation and use. As is typical of new technologies, telehealth-specific client communication platforms are continually evolving, so check with the provider to be sure you understand how they upgrade and how those upgrades are passed on to you.

Some veterinarians will remember cardiology services from the days when we used modems that had phone cradles in them that were used to transmit the EKG information to the specialists on the other end. Today, AI-assisted diagnostic products typically employ predictive analysis algorithms to filter, organize and search for patterns in big data sets from multiple sources. As such, they provide a probability analysis that can help veterinarians make better informed decisions more rapidly.

When determining whether to add an AI-assisted diagnostic product to the technologies in your practice, there is some basic information you should gather. For example, who is the intended user of the product (e.g., veterinarian, technician, client); what disease/need does it target and for what population of patients; whether additional data processing is required to fully take advantage of the product; and how it supports your decision making. In addition, you should ask about the data set it is using to provide its assist (e.g., how well does the data set fit the patient population for which you want to use the tool in your practice); what happens to any data you enter into the system, including security around that data; the anticipated accuracy of the product and what steps the vendor takes to continually improve and update it; and what kind of vendor support is provided for its use.

It’s important to remember that AI-assisted diagnostic products are not a replacement for your expertise or the expertise of consultants (veterinary specialists and others). Care must be taken when interpreting AI-assisted diagnostic results.

Remote monitors, including wearable devices, collect and support the analysis of data (both synchronous and asynchronous) that healthcare providers, including veterinarians, can use to make informed decisions that may lead to better patient care and outcomes. Most RPM technologies include the following components: sensors on a device that are enabled by wireless communication to measure desired physical parameters; local data storage at the remote site that interfaces

between the sensors and a centralized data repository; a centralized data repository where larger amounts of data are collected and analyzed; and diagnostic application software connected with the central depository that creates intervention alerts based on the data analysis. Data and alerts from RPM may be accessed by multiple types of devices, including smartphones, personal computers, laptops and tablets.

When implementing RPM, a few considerations are key. First, the technology must be easy for both clients and veterinarians to adopt and continue using. The equipment and user interface must be intuitive, the set up must be easy, and the patient data delivered by the remote monitor should be well-organized and simple to evaluate. Second, like other aspects of telehealth, to deliver on its promise, RPM must be integrated into your practice's workflow and operations. RPM only works if you pay attention and are prepared to act on the information being provided. Third, much RPM is dependent on a wireless telecommunications infrastructure, which may not be available in some areas. And, finally, since RPM involves transmission of patient and client data across networks, information security needs to be addressed as well.

Consider starting with a pilot for patients or facilities where you anticipate a good return on investment (e.g., weight management, diabetics, milk production monitoring) and then expand after you have had an opportunity to reflect on its success (or not). Think about whether you will supply the equipment, or it will be purchased by your client upon your recommendation. You'll also want to consider whether your fees for reviewing and analyzing patient data can be captured within existing service fees or whether a separate fee for such services makes sense for your practice.

Train staff, market your services, and engage clients

Implementing new telehealth services is an excellent way to more fully utilize the expertise of the veterinary healthcare team. Make sure the entire team is on board with delivering the new services and knows their role in providing and marketing them. Training your hospital staff will be key so that every one of your team members understands the why, what, and how of you offering these services for your patients and clients.

As with any new product or service, you need to let both existing and potential new clients know about the new telehealth services you are offering. Put together a communication plan to get the word out and generate interest. Create marketing materials, such as in-clinic displays, email to all existing clients, digital displays for your practice website, and promotion via your social media channels. Consider developing a script for your veterinary healthcare team to use when communicating with clients via phone or text about your new service(s). For example: "Our doctors are now available for telemedicine consultations" or "We have integrated new digital tools into our practice to support better patient care. Our new services include AI-assisted diagnostics and remote patient monitoring..." In-person conversations with clients, colleagues and friends can also help you spread the word.

Your first telehealth engagement with a client might be their first time ever using such services. As with any new experience, there will be questions and teachable moments for everyone involved. Before any client makes use of your telehealth services, make sure they are educated about the advantages and disadvantages of using such services in veterinary health care and what to expect from each. Using simple language that your client can easily understand, explain:

- How your telehealth offerings work, including scheduling, needed technology for

telemedicine consults, availability of doctors, turnaround time on AI-supported diagnostic services, what the potential is for RPM, and billing/payment for those services.

- The scope of the services, and what will be involved in evaluating patient progress.
- What your expectations are for communication between visits.
- The role of any third-party services or products you will be using (e.g., client communication platform, AI-supported diagnostic product, RPM product/service).
- Record keeping, privacy, and security, including any potential risks. Discuss how patient and client information will be collected and stored and describe the security precautions you take to help ensure confidentiality.
- The potential for technical failure, and outline an explicit emergency plan, particularly for clients in settings where in-person access to the veterinarian/practice may be more difficult.
- Procedures for coordinating care with other professionals.
- Prescribing policies, including adherence to state/territorial and federal regulations and limitations.
- The conditions under which telemedicine services may be terminated and a recommendation made for in-person care.

Clinic setting

When communicating with clients through communication platforms, choose a location that provides privacy, avoids distractions and background noise, has adequate lighting, and otherwise supports quality communication and consultation. Consider whether and how an existing examination room or workspace might be adapted to accommodate telehealth, especially if you will be using such a platform to examine the patient with the client viewing remotely. If space is limited, you might consider a mobile solution (e.g., a telehealth cart) that can be moved from one location to another to support flexibility.

- **Privacy:** The room you use for virtual consults should assure privacy for your client. Prevent unauthorized access and interruptions, and make sure your team members know not to open the door when it is closed for a consultation.
- **Noise:** Soundproofing should be sufficient that you can focus fully on your patients' and clients' needs and provide privacy for your clients when they are speaking with you.
- **Furnishings/appearance:** The setting should be designed for both comfort and professional interaction. Especially if you conduct video consults, the room should convey a professional atmosphere.
- **Lighting:** Ensure lighting is sufficient to allow your client to see you easily, and for you to clearly and effectively view the video screen or other hardware you will use for the consultation.
- **Video setup:** Place your camera on a secure, stable platform to avoid any wobbling during videoconferencing. Position the camera so that your face will be clearly visible to your client, with the camera at eye level. If you are performing an in-person examination of a patient and are streaming the examination to the client, you may wish to use a camera that pans, tilts, and zooms for maximum flexibility in viewing.

As for any veterinarian-client-patient interaction, a summary should be entered in the medical record.

Equipment

You don't have to break the bank when choosing equipment. However, your equipment must allow you to efficiently and effectively receive needed electronic data (e.g., medical records, images, activity data), deliver a high-quality medical consultation, and project a professional demeanor to clients. Use modern telecommunication equipment, such as smartphones, tablets, or laptops with high-quality audio and video capabilities and secure data storage (including offsite).

If you are conducting video consultations, make sure your viewing screen is large enough to see patients clearly. A small smartphone screen might suffice for remote face-to-face communication with your client, but you will probably want a larger monitor if you need to view your patients' activity or evaluate wounds, incisions, behavior, or environment.

Many AI-supported diagnostic products can be used with most current equipment, but make sure you verify how this works. RPM devices may transmit data directly to you, or your client may need to send you the data or authorize your access to it. It is important to understand how data transfer occurs, what equipment is needed, whether/how the data will be stored in the patient's record, and how the data is secured. If you are using a third-party application/service, ask your vendor what additional equipment is needed to properly support the service. Also consider if you will need to execute appropriate service contracts for hardware and software.

Connectivity and security

Connectivity is critical. This means reliable internet service and adequate bandwidth, resolution, and speed for clinical consultations. You can test your connection and bandwidth with free online testing sites. Searching keywords like "speed test" will help you locate these sites. The AVMA Guidelines for the Use of Telehealth in Veterinary Practice contains some specific items to consider when it comes to connectivity and security.

Test your setup and your client's technology needs

Once you have your workspace for virtual consultations set up and needed equipment in place, test it by conducting a few trial sessions with people who are offsite. Check sound and picture quality, network speed, and background noise levels. Make sure your camera can be positioned so that the veterinarian, another veterinary healthcare team member, and/or the patient are clearly visible. Use test cases to ensure you are able to transmit photos, videos, documents, and other data successfully.

You can have the best technology on your end, but if your client has suboptimal technology, it may negatively impact the experience. It may be worth considering having a staff member setup a trial connection with clients who are using the telehealth technology for the first time to evaluate the quality of the client's connection and to work out any problems ahead of the actual virtual visit.

Despite your best efforts, problems will happen; so, you will want to have a backup plan for the virtual visit. The plan should be communicated to the client before the session begins.

Your backup plan for a video consultation should include making sure you have the client's phone number so that you may call them directly in the case of a disrupted consultation. A telephone connection provides an opportunity to troubleshoot the issue together. It may also include referring the client to another provider or completing the encounter by voice only, with the option to request an in-person visit.

MONETIZING VETERINARY TELEHEALTH

How do you decide what your veterinary practice should charge for telemedicine services? The good news is that you can customize your approach to what's best for your patients, clients, veterinary healthcare team, and practice workflow. Pricing models to consider include:

- Pay per use (e.g., \$X per consultation, graduated fee depending on length of consultation)
- Bundled pricing (e.g., included in overall cost of veterinary healthcare plan [per visit, monthly, annual])
- Subscription pricing (e.g., \$Y per month/per animal for unlimited access to the service[s])

Each practice should independently determine its fees for various telemedicine services based on the time spent by the veterinarian and other veterinary healthcare team members, the costs of these services to the practice, the value of the services to the client and patient, and competitive considerations in the market.

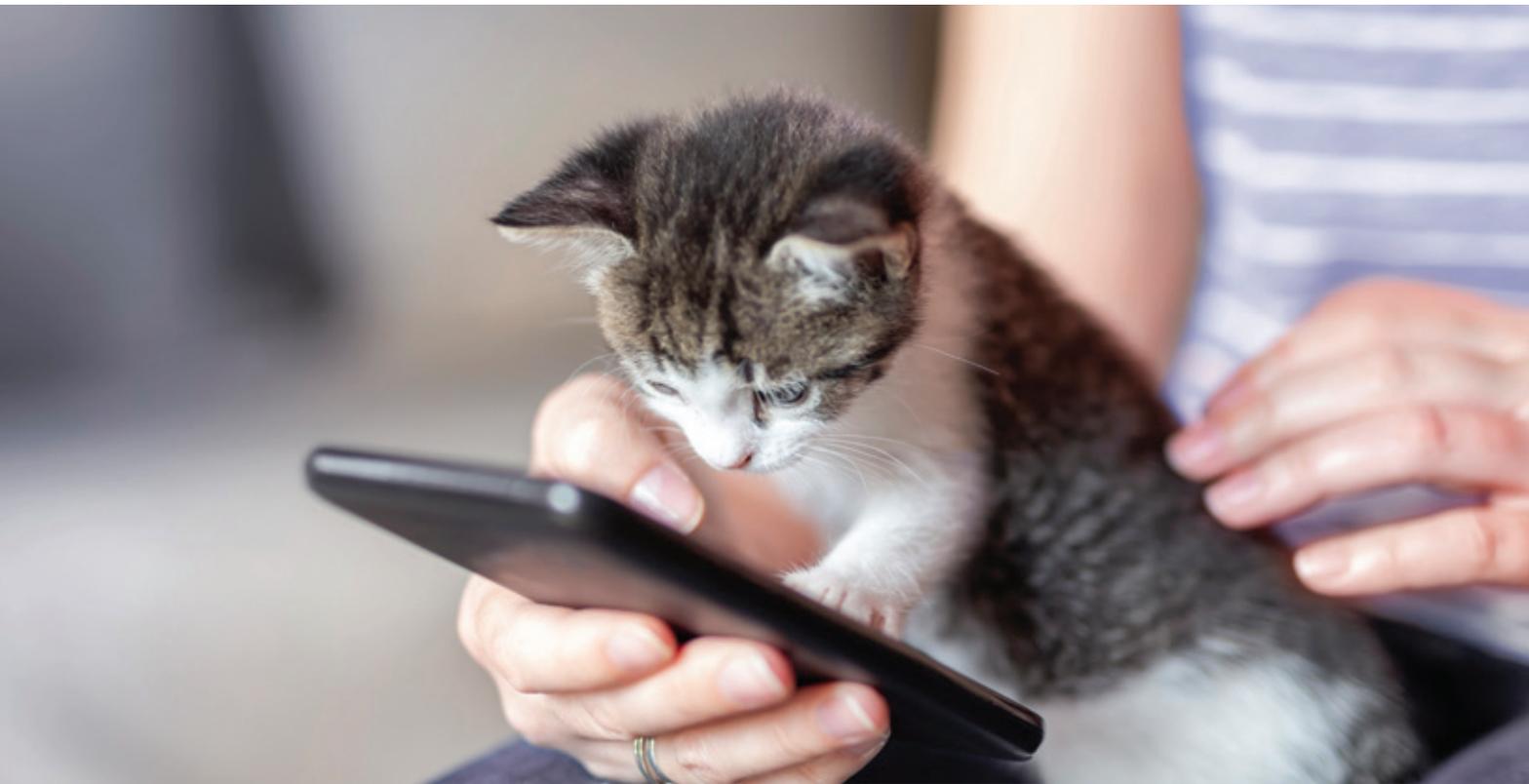
As with any other veterinary service, it is critically important to develop a telehealth pricing strategy that works for your practice. This means considering how each telehealth offering fits into the overall service mix you provide.

If you offer a veterinary healthcare plan that bundles preventive services, consider including an audio/video consultation as part of the plan. This allows you to promote virtual consults as a value-added service for clients and provides flexibility in how clients can access your veterinary healthcare team when questions arise about their animals' health. For example, if your healthcare plans for patients are structured around life stage, you can consider adding a telemedicine consultation as one of the evaluations you recommend for senior patients, or a behavioral consult for clients with newly acquired animals. In the case of food animal or equine patients, costs for telehealth services can be integrated into existing retainer for service fees, individual consultation fees, or can be accounted for in your hourly rates.

2021 AAHA/AVMA

Telehealth Guidelines

for Small-Animal Practice



Incorporating Connected Care



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Boehringer Ingelheim Animal Health USA Inc., CareCredit, and Merck Animal Health have supported the development of the *2021 AAHA/AVMA Telehealth Guidelines for Small-Animal Practice* and resources through an educational grant to AAHA.



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Abstract

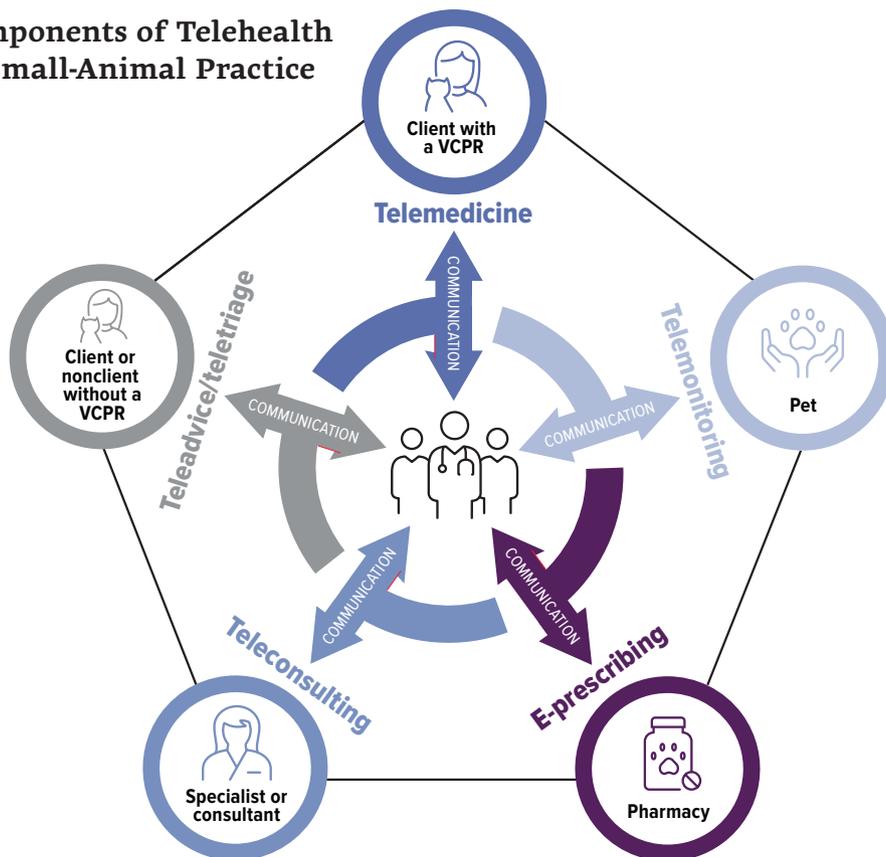
AAHA and the AVMA are very pleased to present these jointly produced Telehealth Guidelines for Small-Animal Practice in response to member requests.

They are designed to support the AVMA's *Guidelines for the Use of Telehealth in Veterinary Practice*, which can be found at avma.org/telehealth. Understanding how COVID-19 accelerated consumer expectations for on-demand and virtual services in every aspect of life, a Task Force of experts was convened to develop this content and ensure its relevance for veterinary practices. The result: a "how-to" resource offering step-by-step, ready-to-implement recommendations to better integrate Connected Care (telehealth) into small-animal practice. Topics include considerations for technology and platform selection, external and internal marketing strategies, and a look at how new technologies have the potential to improve patient outcomes. How to identify a

Telehealth Champion, streamline workflow, and monetize services are also discussed. Throughout, references are made to components of telehealth, including teleadvice, teletriage, telemedicine, telemonitoring, and teleconsulting (see Figure 1). For additional resources, visit aaha.org/telehealth.

Establishing a veterinarian-client-patient relationship (VCPR) is not discussed within this document. For information about state-level VCPR requirements, please contact your state board of veterinary medicine. Veterinarians must follow federal VCPR requirements for extralabel drug use and issuing Veterinary Feed Directives.

FIGURE 1 | Components of Telehealth in Small-Animal Practice



Dear Colleagues:

There may never have been a more challenging, or more appropriate, time to increase our attention to patient- and client-centered Connected Care than right now. We've all had to think beyond our norms and beyond our walls to meet patients and clients where they are while protecting and leveraging our healthcare teams to the fullest.

There's been renewed consideration of how Connected Care utilizes familiar digital tools, including texts, video messaging, websites, and social media to interact remotely and on-demand 24/7.

But by fully engaging your practice in Connected Care—which integrates digital technologies for improved communication, diagnosis, and monitoring—you can open up even bigger opportunities and propel your practice into a more competitive future.

Ask yourself, are we using

- streaming video in exam rooms to allow owners to be “present” as diagnoses and decisions are made?
- photos and videos of patients to support our assessments?
- video systems to monitor patients' behavior in their homes?
- remote monitoring technology to track patients' vital signs, glucose levels, exercise, and sleep?
- artificial intelligence to support our diagnostic work?

What about online patient education that establishes you as a trusted authority available for ongoing, personalized healthcare guidance, as opposed to a random web search? Or how about new technologies that enable you to consult with specialists anywhere in the world, expanding the value of your connected practice?

The key to making Connected Care work is involving your entire healthcare team. Veterinary technicians and assistants can share their expertise and skills, providing support on everything from housetraining puppies to appropriate nutrition to how to administer insulin injections.

And Connected Care means the front-desk staff has time to offer that extra word of encouragement a client might need because the practice has streamlined routine scheduling, forms, histories, and billing to make client relations a priority.

Integrating the tools of Connected Care into your practice is not difficult. You can choose to use as few or as many as you like over time. You want to choose what is right for *your* team and *your* circumstances to meet *your* goals.

Step one is getting started, and that's why we've put together this resource to support your success.

There are practical, step-by-step recommendations for approaching each decision point and tips based on the experiences of others. Each section can stand alone, or you can read this start to finish, and you might even pick up some pointers you hadn't thought about for things you're already doing. We encourage you to pass this resource around your practice to start conversations on how you all can embrace Connected Care more fully.

There is no better time to take that first step.



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Introduction

Telehealth is not something that's coming—it's here! And the truth is you're already doing it, whether you're currently using video technology to connect with your clients and patients or not. Every phone call, email, and text is part of telehealth. Automating prescription refills or sending a radiograph for a second opinion—telehealth. Electronic transfer of medical records—telehealth.

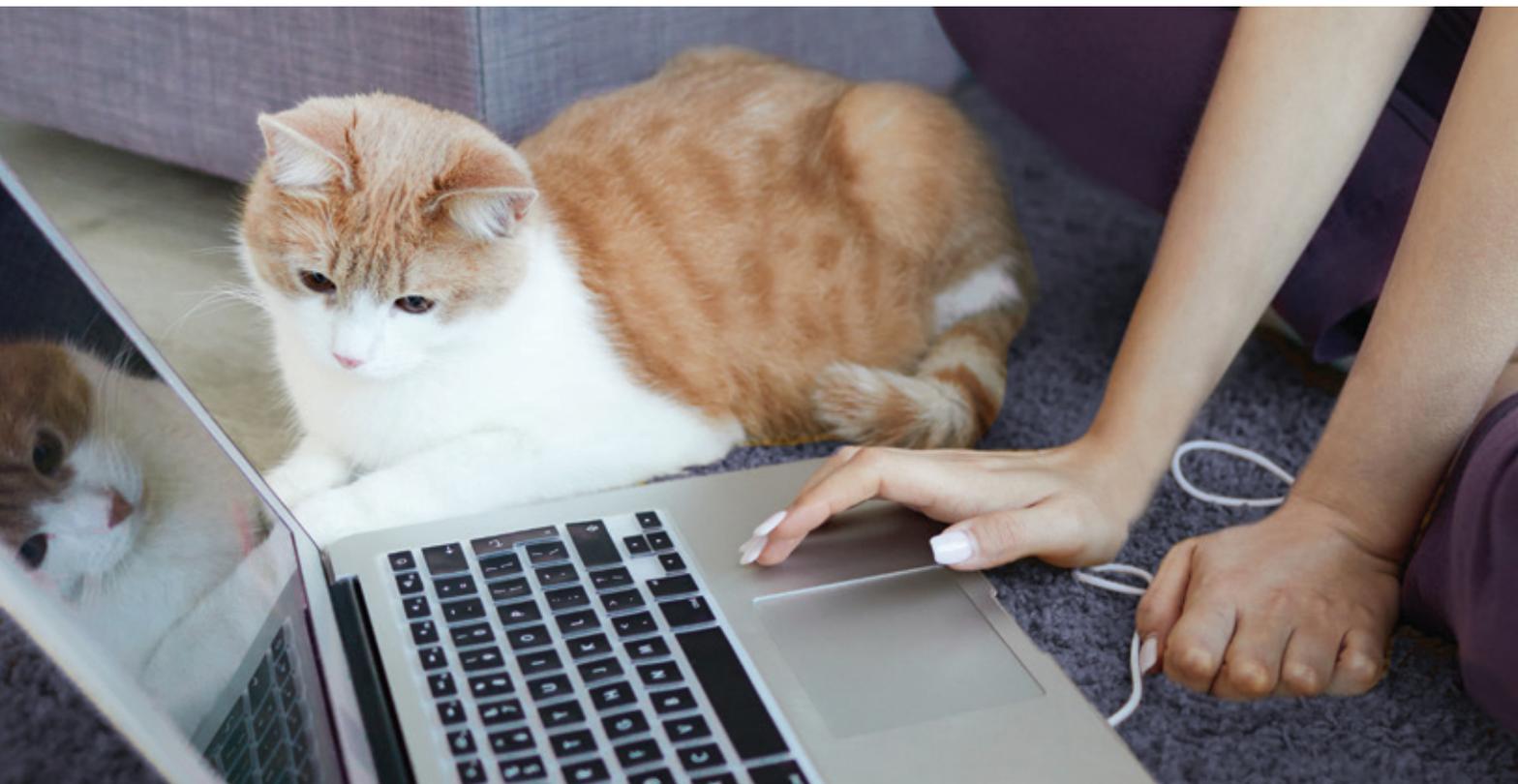
What most practices don't have, however, is a well-thought-out approach that streamlines processes to make Connected Care seamless for staff, clients, and patients. We understand that even thinking about telehealth can be exhausting these days, but to remain competitive it's a must.

That's where this resource can help, by offering step-by-step outlines to follow. It will take you from assessing your needs to considering technology

products (including platforms), and from developing workflows to creating marketing messages. Naturally, we hope you will read this cover to cover, but you can also choose which sections are most relevant to you. You can return to a topic when you have questions, or review others as needed. Whenever you see this symbol  you'll find helpful tips from our experts.

And there's something for those of you who have already embraced telehealth and its many components as well. No matter how far along you are in integrating Connected Care, there's always a next step to consider to improve the health of your patients, your relationship with your clients, and the sustainability of your practice.

Every phone call, email,
and text is part of telehealth.



Aspiring to Connected Care

“Connected Care” is the integration of digital technologies to enhance and support the veterinarian-client-patient relationship to facilitate continuity of care through improved communication, diagnosis, and monitoring. It is about patient- and client-centered practice. It’s about meeting your clients and your patients where they are, rather than limiting your connection to the few minutes they spend in your exam room.

Digital tools provide an opportunity to identify potential or real health concerns in patients more quickly, to more accurately pinpoint the cause of those concerns, and to initiate earlier intervention, monitor owner compliance with veterinary recommendations, and track patient progress in a more timely and consistent way.

Review the following scenarios. Which actions are you already taking? Which others could benefit your practice?



Examples of When Telehealth Might Be Used



When clients call to ask for advice and you determine that an in-person visit is not required, consider offering a telehealth consult to allow the client the chance to interact with the doctor and resolve any concerns they may have about their pet.



When tech-savvy clients express interest in wearable tech for their pets, ask how you might help them interpret the data.



When considering a specialist consult, offer clients a three-way teleconsult between them, you, and the specialist.



Ask your diagnostic service providers if they are utilizing artificial intelligence (AI). Offer to send them data (with appropriate security protections) to feed into their AI systems to help make them “smarter” and clinically useful.



When pets have hospital stays (dentals, surgery, boarding), have your team text clients frequent status updates so they know how their pet is doing.



When your veterinary healthcare team delivers a specialized service, consider making those paid services and determine which ones might be facilitated as a telehealth service.



When scheduling follow-up assessments, consider whether a paid video consult would be appropriate and offer that to clients as a convenient means to continuity of care.



Before clients leave the hospital, be sure to forward-book their next appointment so they know you care about the long-term health of their pet.

Integrating Telehealth into Your Practice

These seven steps serve as a foundation to help with practical implementation, whether you are just beginning to consciously structure your telehealth services or are expanding your offerings. They are enhanced with examples to deepen your understanding of the choices you have in adapting telehealth to meet the goals for your practice. The following three topics—technology products, including platforms; monetization; and communicating the benefits of telehealth services—each have their own section after these steps.

1. **Identify a Telehealth Champion**
2. **Determine Needs and Opportunities**
3. **Develop Service Plans**
4. **Design the Workflow**
5. **Prepare Your Team and Clients**
6. **Implement Your Program**
7. **Evaluate and Improve**



TIP: Buying equipment is not the first step! You should start with a Telehealth Champion to demonstrate value for your staff and to engage their support toward common goals.

STEP ONE

Identify a Telehealth Champion

Implementing or expanding Connected Care is an organizational change, and the success of your program will depend more on people than it will on technology. Certainly, selecting the right technology is vital for service delivery, but it is your team who facilitates change and ensures consistency with the vision and mission of your practice.

ACTION ITEMS

- Identify a Telehealth Champion who is a true agent of change with the vision and passion to bring it about, instill enthusiasm in others, and lead your team (see Figure 2).
- Recognize that your Telehealth Champion is the primary advocate for your program and that success depends upon the full support of the wider organization—do what is necessary to ensure the Telehealth Champion and other advocates succeed.
- Assess available resources (e.g., time, funds, equipment, training).

FIGURE 2 | Telehealth Champion

Successful Telehealth Champions:

- ✓ Solve problems
- ✓ Support effective workflow
- ✓ Keep their focus on the goals
- ✓ Communicate often and clearly
- ✓ Provide training
- ✓ Motivate
- ✓ Multitask



For additional resources to support your Telehealth Champion, visit aaha.org/telehealth

Your Telehealth Champion is your team's key enthusiast for telehealth, point person for troubleshooting during the implementation process, and continuing advocate for its successful marketing to clients and staff.

Any practice member who believes in telehealth can be the Telehealth Champion! Whether it's a practice manager, customer service representative, technician, or veterinarian, it just takes enthusiasm and the willingness to help with selecting technology products, determining the telehealth workflow and staffing, and assisting with problems as they arise.

STEP TWO

Determine Needs and Opportunities

Telehealth has a wide variety of applications and uses from front-desk scheduling, prescription refills, and billing all the way to patient evaluations and follow-ups. Understanding your practice's specific needs and your clients' aspirations is central in the planning phase to making wise telehealth service choices.

ACTION ITEMS

- Convene a focus group that includes a cross section of your clients and veterinary team members to better understand what they see as opportunities and areas of need.
- Determine which of the identified areas can be addressed by telehealth. *Examples* of pain points might be barriers to in-person visits, hours of current operation, low compliance with follow-ups, staff shortages, and compassion fatigue. *Examples* of opportunities might be integrating AI-assisted diagnostic services, ongoing remote monitoring to improve patient assessments and outcomes, or teleconsultations with specialists to expand

Any practice member who believes in telehealth can be the Telehealth Champion!

your services beyond your clinic walls for complex cases.

- Identify anything that would impact your ability to move forward with delivering telehealth services and consider possible solutions. *Example:* You would like to identify an appropriate location to conduct telehealth consultations and recognize you will need proper lighting, quality audio, a viewing monitor, and potentially other electronic equipment. You would also like to incorporate an exam table for those times when the patient may be present in your practice and you want to communicate with an owner remotely. One option is to outfit an existing patient exam room appropriately so that it may be used for both in-person visits and telehealth consultations. Reviewing space use, however, you see you also have two part-time staff on alternate schedules who could share an office, freeing space for repurposing.
- Assess your available resources and prioritize your telehealth options and objectives around the most urgent needs or greatest demand.



TIP: Start small by focusing on your top priority, then scale into others as team and client adoption increases.

STEP THREE

Develop Service Plans

At this point, you are ready to make a decision about which telehealth services you want to implement based on priorities assigned during your needs and opportunities assessment. To move forward with the best chance of success, you must first understand what will be necessary organizationally, clinically, and technologically to develop your telehealth program. And, it's very important that everyone understands what the goals are and how success will be measured.

ACTION ITEMS

- Identify 3–5 short- and long-term goals, with measurable metrics, that are most important to your practice.
- Determine what data are needed to assess progress and how you will collect and evaluate it and at what frequency.
- Consider what capabilities and functions you need to deliver your desired telehealth services.
- Identify what technology and equipment are needed and if you can use existing resources or if you want or need to evaluate external providers (see the Considerations for Choosing Telehealth Technology section for more detail).
- Keep in mind that the best equipment or technology for your program might not necessarily be the most expensive or elaborate.
- Determine what telehealth services should be billable and at what rates. Decide which financial model associated with the delivery of telehealth you prefer (see the Monetizing Telehealth in Your Practice section for more detail).



TIP: When partnering with technology providers, select a vendor that is worthy of a long-term relationship. Ensure they will provide support throughout your implementation and remain motivated to support successful outcomes for your practice.

STEP FOUR

Design the Workflow

Implementing new telehealth services in your practice may require modifying your workflow to ensure a positive experience for clients, patients, and the veterinary team. Logistics such as work and exam space; appointment scheduling; data monitoring; and management, staffing, and communication may

need to be adjusted. If you're just starting to expand, you may want to begin with appointments as that may create the least amount of workflow disruption, especially in the early stages.

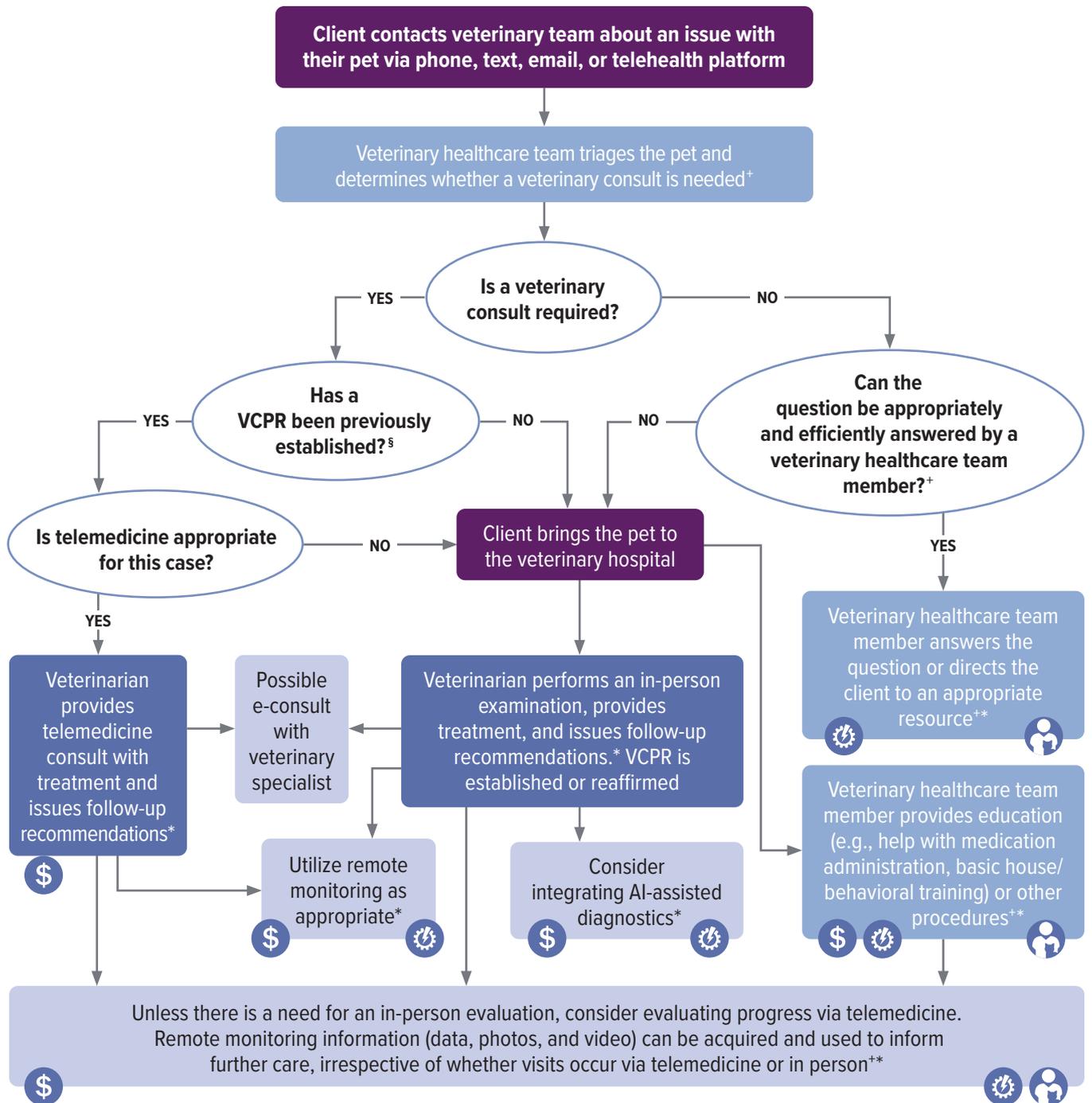
ACTION ITEMS

- Review your existing clinical processes and workflow.
- Determine how you need to modify your workflow, then incorporate necessary changes to integrate telehealth into daily practice operations (Figure 3).
- Develop resources to incorporate the modified workflow within your practice, including policies, procedures, and protocols for when using telehealth tools is appropriate or not.
- Identify any standard operating procedures that will need to be modified (e.g., scheduling, approach to diagnostic workups, forms and reminders, staff training, consent, communication templates, invoicing).
- Determine how and when telehealth services will fit into your schedule (certain days, specific hours each day, exams at particular times with call-backs at others).
- Create a physical environment that will support successful delivery of the telehealth services you have chosen to integrate (e.g., ensure appropriate Wi-Fi connections and internet bandwidth; provide a visually appealing, well-lit, and quiet space for audio and video consultations).
- Develop client educational materials or source them from your vendors, if applicable, to help set expectations.



TIP: Create telehealth policies, procedures, and protocols that are as close as possible to the practice's protocols for other types of services; recognizable protocols will lead to consistent clinical results and will instill comfort and confidence in your veterinary team.

FIGURE 3 | Sample Practice Workflow



+ Any assessment or procedures performed by a member of the veterinary healthcare team must be within their scope of practice

§ Veterinarians should consult state requirements to determine whether it is possible to establish a VCPR electronically. If so, they will still need to comply with federal requirements for the VCPR when using drugs extralabel or issuing Veterinary Feed Directives

* All interactions should be captured in the medical record



STEP FIVE

Prepare Your Team and Clients

Successful implementation or expansion of a telehealth program is a team effort. Success depends on buy-in and return on investment for both your veterinary team and your clients, and it's important that your patients actually benefit as well. Your goals should be for your team and clients to be engaged and active advocates of your telehealth services.

A client-centered approach to both education and adoption is important. How can you ensure the transition is seamless and frictionless? Think through the telehealth experience from the client's perspective and be prepared to respond to questions about when the use of telemedicine is appropriate, how to access the technology, and how to make appointments or schedule follow-ups. When introducing telehealth technology (e.g., wearables for remote monitoring) into your diagnostic or treatment plan, make sure clients understand how this technology has the potential to improve patient outcomes. Or, when you choose to integrate AI-assisted diagnostics to support in-house capabilities or share ECGs, radiographs, or lab results with specialists for a teleconsultation, point out how this expands your practice to a world of global experts.

ACTION ITEMS

Team Members

- Educate staff on the new workflows, clinical protocols, and operations.
- Ensure there is clarity about individual roles and responsibilities for team members (e.g., veterinarians, veterinary technicians, client service representatives).
- Identify the types of training needed and who is going to provide it.
- If you are introducing new technologies and your staff resources are limited, ask vendors about training support.
- Have one or more staff members who are unfamiliar with the technology test it. If they cannot easily use it, the technology may be too complicated.
- Conduct internal telehealth appointment “dry runs” prior to seeing actual clients. Use these as rehearsals and to make adjustments or troubleshoot any technology that needs to be recalibrated or repositioned, or for which additional training is needed.



TIP: Start by engaging your most enthusiastic team members to build momentum and collect successful case studies to share as encouragement for other team members.

Clients

- Develop marketing messages to highlight telehealth's benefits, including greater accessibility, convenience, more timely and accurate diagnosis, increased access to specialty care, and faster response times. Create or source from vendors client educational materials on how to use communication platforms; how to share photos, videos, and data from remote monitors for assessment; and best practices for successful appointment outcomes.
- Ensure client enthusiasm for telehealth by setting clear expectations up front—from what tools are available and how they can be used, to invoicing, to how technologies and consultations integrate with and support in-person visits.



TIP: Consider having a team member offer less digitally savvy clients a practice telehealth session to help them prepare for their appointment.

STEP SIX

Implement Your Program

You are now ready to implement your program. All aspects should have been tested and tweaked.

ACTION ITEMS

- Be prepared to offer additional workflow and technical support to team members and clients during initial visits. Have a capture system for issues and comments alerting the Telehealth Champion to things that may need to be addressed.
- Be flexible and revise processes as you learn what works best. Communicate changes to everyone to ensure consistent quality.
- Communicate with clients at multiple touchpoints to promote continuing awareness and to drive engagement with your new offerings. *Example:* Use front-desk reminders, notes on invoices and receipts, videos on monitors in the waiting and exam rooms, and articles in newsletters. Email success stories and post testimonials on websites and on social media. When sharing success stories, be sure that you have complied with requirements for client/patient confidentiality and obtained written permission to share.



TIP: Plan additional appointment time during the infancy of your program, or when you expand offerings, to allow for technology troubleshooting and getting comfortable with this new approach to patient evaluation and client interactions.

Success depends on buy-in and return on investment for both your veterinary team and your clients, and it's important that your patients actually benefit as well.

STEP SEVEN

Evaluate and Improve

Define success early on and collect data from the beginning of your program. Starting with a clear vision of success allows the practice to highlight improvements made with each metric and, ultimately, the overall success of its telehealth services.

ACTION STEPS

- Data collection does not have to be difficult, especially when it is integrated as a part of workflows and operational processes up front. Some technology products have the means to track metrics built in.
 - If a formal quality improvement process already exists in the practice, use it. Otherwise, develop one to regularly review performance, client and provider satisfaction and utilization, then evaluate the data and forward results to the appropriate staff for any needed adjustments.
 - Each practice should identify its own metrics, but suggestions include numbers of telehealth interactions overall and broken down by the type of visit (e.g., surgical follow-up, dermatology consult, gastrointestinal issue, hospice care) or service (e.g., prescription refill, AI-assisted diagnostics, review of data from a remote monitoring device). Additionally, practices may want to log increased traffic on websites, blogs and vlogs, social media references, and client phone inquiries. Gathering demographics is important to gauge which groups your telehealth services are appealing to most so you can identify ways to share telehealth's value with those who may be less frequent users. Staff will be interested in ways telehealth is streamlining their work, allowing technicians to better utilize their skills, and improving positive results for patients.
- Electronic survey options are available that enable you to ask clients about their visit and can help you secure testimonials at little or no cost. Again, be sure you have obtained permission to use your clients' comments in any marketing material.
 - Make sure while you are tracking client satisfaction, you are also tracking patient outcomes. Better patient care and results not only support your professional mission, they are also one of your best marketing tools.
 - Review data with an open mind and adjust as necessary.



TIP: Join forums for networking and connect with colleagues who have implemented telehealth in their practice to share ideas and lessons learned. Celebrate every success!

Gathering demographics is important to gauge which groups your telehealth services are appealing to most so you can identify ways to share telehealth's value with those who may be less frequent users.



Frequently Asked Questions: Implementation

Q There are so many telehealth options to consider. Which ones should our practice start with?

A Because every practice is unique, there is no universal telehealth strategy. Asking clients what they need or want and identifying the challenges they want solved is a must, as is determining what is likely to best support better outcomes for your patients. Additionally, you must determine your practice goals as well as the problems you want to solve. For example, are you trying to attract millennials who account for the largest segment of pet ownership and are comfortable with technology? Are you wanting to overcome staff frustrations and administrative bottlenecks? Or are you hoping to introduce a new area of care, such as hospice care or behavior consults? Or do you want to expand your use of technology to remotely track patient activity for more accurate assessment and diagnosis? Once you have evaluated your resources and practice goals, you can tailor your approach. Remember there is no one right way to offer telehealth, and it must fit your practice, circumstances, and goals.

Q I'm already overwhelmed. Now you're telling me I should spend time setting up telehealth?

A First, remind yourself you're already doing telehealth and the objective is not to go from some uses to all possible choices at once, or maybe ever. Start slowly and grow as your comfort level and needs dictate. Identifying a Telehealth Champion to help set goals, evaluate and select technologies, train and motivate staff, and monitor effectiveness will be a huge help and a big factor in your success. Done well, telehealth can spread client touchpoints so they take place in the most efficient manner possible. Consider that telehealth allows you to leverage skilled technicians, your website, and other resources to provide information at times most convenient for you and your clients. More and better information and more frequent interactions can support improved preventive care and treatment compliance, meaning better outcomes for your patients. And, you can get compensated for many of the interactions you have been giving away for free.



Considerations for Choosing Telehealth Technology: Products and Platforms

After conducting a self-assessment and identifying the types of client services and interactions you want your practice to offer, your next big challenge is choosing the appropriate technology. There is no one-size-fits-all option, but there are choices that will work for you.

Telehealth technologies, including but not limited to communication platforms, AI-assisted diagnostic services, and wearable remote monitoring devices, are numerous and ever changing; new features may be added quickly and new products are created frequently. Consequently, this section will not discuss specific vendors but rather offer recommendations for how to evaluate them and determine which one might be right for you.

Review your assessment for what human and technology resources you currently have available, to help you determine what you can manage short term and where you'd like to be long term. You must also understand who is going to be using your technology and how you hope it will fit into your normal practice workflow.

A Few Fundamental Choices

- **What do you want now and in a year?**
 - Finding technology that offers the essentials for immediate use, but also includes more advanced tools you can grow into, is a great way to start. As with any new technology, the platforms are constantly adapting and new features are added on a regular basis, so check with the providers to understand what their upgrade deployment plans are to evaluate if they meet your practice's needs and goals.
 - Your telehealth team can be a single doctor or include every member of your staff. Starting

small is recommended. If you need more than one team member contributing to your telehealth services, ensure any technology you are considering allows multiple log-ins and roles.

- **Do you want your communications to be asynchronous, synchronous, or both?**
 - Asynchronous communication, or communication between parties that is not live, may allow practices to be more efficient in managing their schedules by eliminating phone and email tag. It also provides more opportunities for marketing and engagement. Younger generations often prefer asynchronous communication like texting.
 - Synchronous communication may be required or be more appropriate for specific services including triage, video patient evaluations, real-time behavior observations, or compassionate quality of life consults for clients with pets receiving hospice care. Older clients may be more comfortable with phone and in-person communication. Some clients and veterinarians prefer live telemedicine evaluations because they feel more like an in-person visit.
 - Understanding how these forms of communication differ and what is appropriate in each situation is critical to achieving the goals of your telehealth program. (See Figure 4 for pros and cons of asynchronous and synchronous communication.)

Some clients and veterinarians prefer live telemedicine evaluations because they feel more like an in-person visit.

FIGURE 4 | Pros and Cons of Asynchronous and Synchronous Communication

Synchronous or asynchronous communications—or both? Reaching out to your clients requires different approaches and technologies depending on the circumstances. Many factors go into your choice including the urgency and complexity of your interaction, your need for audio or visual evaluation, your available tools and equipment, the demographics of your clients, and the level of interaction required. Pros and cons of each method are shown below.

Asynchronous Communication (text, email, voice messages, etc.)

Pros



Delayed reply may allow the veterinarian to gather all information and add clinical context (e.g., data review, consult with specialist).



It minimizes interruptions, which may improve individual productivity.



Information communicated in another language can be translated through various applications.



Information is generally stored and can be readily retrieved for medical record documentation.



Photo or video can be retaken to send best image (view, lighting).



It gives the ability to record image/video when pet is most clearly displaying clinical signs.



It allows transmission of images or large amounts of data for review at a convenient time (e.g. specialist consults; technologies that collect data over time, such as glucose monitors).

Cons



Delays in response may translate to delays in evaluation and treatment.



It is less personal—if communication is only via text, chat, or email, you miss the opportunity to ask clarifying questions and foster the relationship.



It may result in a lack of clear intent (inability to detect facial/vocal cues).



If a text, chat, or email is overlooked, it might leave the client with the impression that their message is not important or not urgent. This can lead to gaps in patient care, as well as miscommunication and frustration among the involved parties.



The animal owner interprets which images are needed/best, which may not be what is needed by the veterinarian.



It does not support use of more interactive remote monitoring technologies.

Synchronous Communication (live two-way audio/video)

Pros



It allows more in-depth interaction. Iterative interaction allows efficient exchange of information about the pet and the assessment. It provides the opportunity to acquire details pertinent to care during the session, seek additional information or data, and, potentially, make clinical decisions in real time.



It allows for simultaneous, three-way engagement of veterinary specialists, primary veterinarian, and owner.



It provides immediacy—real-time access to the veterinarian that supports response to urgent situations, even those that the client may not recognize as urgent.



It allows for better clarification of intent (facial/vocal clues).



It supports the use of interactive remote monitoring technologies.



Audiovisual contact with client/patient may be required for prescribing of controlled substances.



It allows for simultaneous engagement of language translators.



Photos, videos, and documents can be uploaded by an owner before a scheduled appointment so the veterinarian can review; in some cases, the veterinarian can utilize screenshare to show the client abnormal findings found on images.



It better maintains the concept of the veterinarian-client-patient relationship through real-time interaction.



Synchronous video allows real-time monitoring of hospital patients.



It provides the ability to see an animal's environment when needed (behavioral assessments).

Cons



Poor lighting, noise, and other distractions may impact the quality of communication.



Pets may not be immediately cooperative.



Video transmission may be affected by internet quality.



It may be less amenable to transmission of large-set or longer-term remote monitoring data.



Depending on the application used, interaction may not be automatically stored to support documentation for medical records.



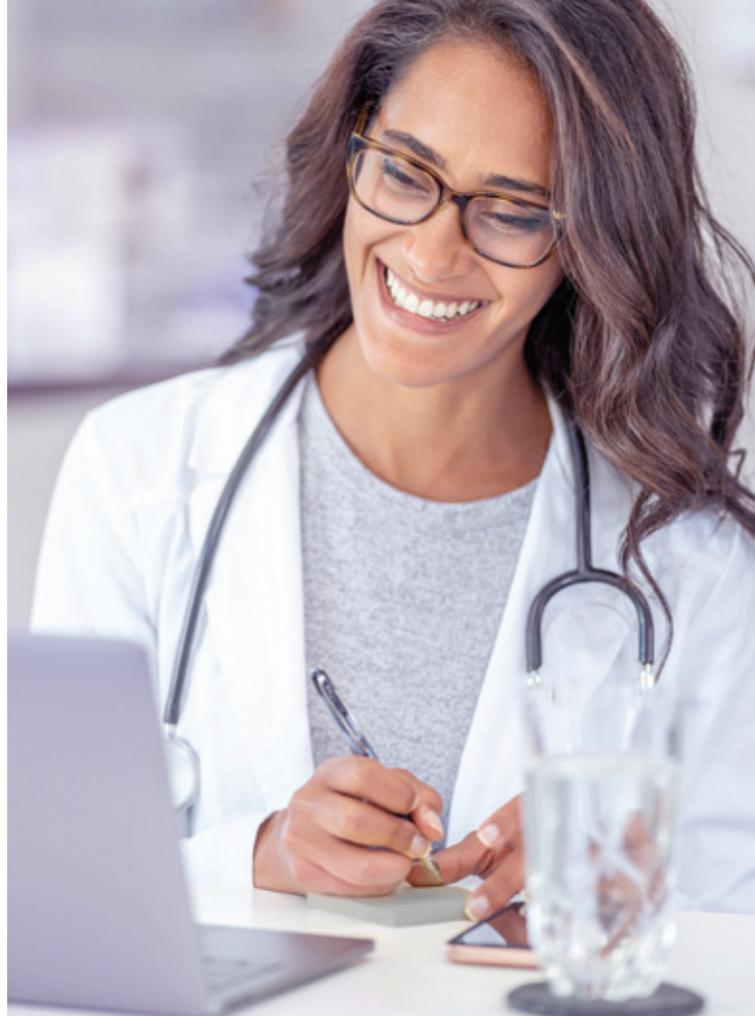
Integration with your practice management system (PMS) is variable and may have to be done manually.

- **What do I need to think about when selecting a platform for communicating with my clients?**

- Make sure the platform you choose works with everyone's technology.
 - Do you practice in an area with great internet service, or in a rural area with no, low, or inconsistent signal strength? Attempting to integrate live video in an area with limited to no internet service is likely to fail, but text messaging might be possible.
- Check to see if your platform works on all operating systems.
 - Some platforms are app-based only while others provide both downloadable content and applications for desktop use. Test usability on mobile phones and tablets. Make sure applications are compatible with Microsoft, Android, and Apple products. Downloading an application may be a barrier to use for some less tech-savvy clients.
- Does the platform integrate with my practice management system (PMS), and what are the pros and cons of that?
 - Platforms that are compatible with your PMS can make you more efficient and usually provide a better experience for both the client and the practice team, but they are typically more expensive.
 - Platforms that integrate with your PMS may not adopt new features as quickly as those that do not.
 - When choosing a platform, ask if you can speak with current customers about their experiences.

- **How do I charge the client?**

- If you are using Zoom or FaceTime, you'll need to find a separate payment provider, or your customer service representative can collect payment prior to or immediately following the appointment.
- Many telehealth platforms have built-in payment systems, allowing you to automatically charge your client before or after the consultation, set pricing for different appointment types,



apply coupon codes, or charge by time. Some platforms may integrate more easily than others with your PMS.

- If you are planning to offer services that include AI-assisted diagnostic services, ask the providers if they charge extra for that service or if it is included with the routine services you already receive from them.
 - If you are incorporating wearable remote monitoring devices into patient monitoring programs, you'll need to consider whether your fees for analyzing the patient data can be captured within existing service fees or if a separate fee makes sense for how you manage this at your practice.
- **How will the third-party provider charge?**
 - Some platforms charge per use, per doctor, per month, or a combination. Make sure you ask about fees and ensure there are no unexpected charges.

- There may be fees for both the platform vendor and for the credit card processor, so make sure you understand what you will be billed for each visit.
- You can expect higher costs for platforms that communicate directly with your PMS.



TIP: Before you purchase any technology, ask for a full capability demonstration.

Security

While veterinary practices and veterinarians don't currently have to be HIPAA compliant, client confidentiality is required under many state veterinary practice acts, and business requirements for protecting the privacy of personal and financial information also apply. Therefore, practices should ensure communication and internal record systems, whether they are handling patient and client contact and health information or financial information, are secure and data are kept private.

- Data security implies protecting your essential business data from potential destruction caused by malware.
- Before deciding on a technology product, including platforms, be sure to ask how the data used by the system is accessed, stored, and secured.
- Pay particular attention to ensuring the security of your clients' credit cards and banking information.
- Ask providers what they do with the practice's and patients' data. Inquire if they are used for internal research and/or sold to third parties.

Auxiliary Vendor Services and Support Teletriage and Teleadvice

Some client communication platform providers offer third-party general advice to your clients. This can be during normal business hours or after hours to help clients avoid unnecessary visits to the emergency

clinic and instead redirect them to your practice for an evaluation. While this does add to the cost of the platform, it may be a valuable service that benefits clients, patients, and practices.

Education and Marketing Support

Providers may offer free flyers, calendared social media posts, and educational and promotional support. They may also offer training and materials for team members as well as community educational items at little or no cost. Ask whether you can add your practice name or logo to educational websites or materials.

Evaluation Tools

- In addition to your own metrics, you may be able to take advantage of the data analysis tools that some technology providers offer to ensure you and your team are thoughtfully and appropriately utilizing the technology and tracking performance, including patient outcomes, client satisfaction, and financial return on investment.
- A good question to ask potential technology providers is how they measure their own accuracy and success and how they use that information to improve their products.

Continuing Support

- Ask providers about their customer service support:
 - Will representatives be available to you during implementation and for ongoing support? You want to make sure if you encounter a problem, they are committed to helping fix it.
 - Ask how often software updates happen and how they ensure minimal disruptions in service when updates are deployed.



TIP: Ask for a trial period for the technology you are considering. Most vendors will be happy to let you try the system before committing to buy.



Frequently Asked Questions: Platforms

Q Do I have to use a “dedicated” platform to support telehealth communications?

A No! Many practices use a prepaid cell phone for the practice to provide text-based asynchronous telehealth services (including sending pictures and videos) and then use a free synchronous video platform (Zoom or FaceTime). You can start with these free solutions while you investigate established platforms that allow integrations with your PMS, schedulers, and payment systems.

In all cases, be sure that security protections associated with the technology/software meet ethical and regulatory requirements, and that you are appropriately integrating information gained through these communications into your patients’ medical records.

Q What is the procedure for retaining medical records when I use a free audiovisual service?

A If you are utilizing a product that integrates directly into your PMS, this likely happens seamlessly between systems. However, if you are utilizing products or services that do not integrate into your PMS, you should create a process that allows you to capture information gained from or shared during your telehealth interactions (e.g., client communications, AI-assisted diagnostics, remote monitoring, specialty consultations) and either write summary notes in or append them to the patient’s medical record as appropriate for your recordkeeping practices.



Considering Other Technologies

Advances in telehealth technologies are helping shape the future of veterinary healthcare. Telemedicine consults, remote monitoring devices, and AI are all evolving to provide healthcare teams new ways to gain deeper levels of patient information that enhance diagnosis and treatment decisions, while also fostering client relationships.

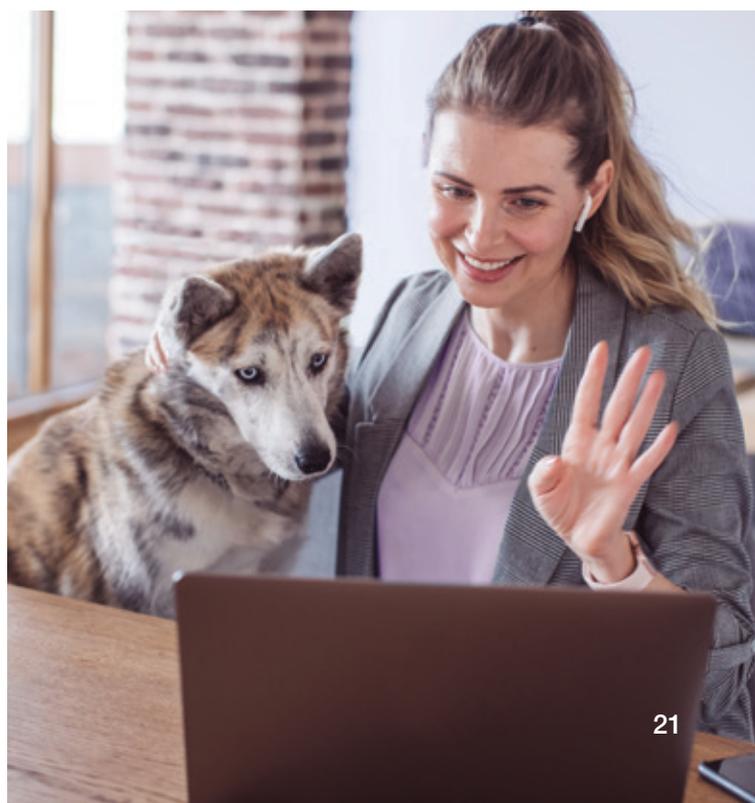
- **Considerations for Remote Monitoring and Wearable Devices**
 - These devices can collect and analyze data both synchronously and asynchronously.
 - Data may be retrieved from remote locations on multiple devices including smartphones, personal computers, laptops, and tablets.
 - Tracking trends can help identify warning signs and trigger interventions before problems reach an acute stage.
 - The information obtained from these devices helps healthcare providers to identify

appropriate preventive care and manage chronic medical conditions such as diabetes, heart disease, and arthritis.

- Real-time facts can help clients understand the importance of adherence to medication and other treatment regimens, which may reduce hospital admissions and readmissions, leading to better outcomes and patient health.
- **Considerations for AI-Assisted Diagnostics**
 - Recent advances in AI research are now working their way into AI-assisted veterinary diagnostic services. Ask your diagnostic service providers which AI-assisted services they have available for use today.



TIP: If clients have purchased wearables or remote monitors for their pet(s), discuss if, how, and when you would like to receive data and how you would use that information as part of a wellness or treatment plan.



Monetizing Telehealth in Your Practice

Veterinarians are comfortable charging for in-person services but have a long-held tradition of providing phone consultations and responses to email and text questions for free. And even though most understand their advice and assessments don't lose their value because they're delivered virtually, it remains a challenge for many practices to monetize telehealth services.

Are clients really willing to pay? Which services would I charge for and how much for each service? Who bills and who collects, and what about security? What if I find on an initial assessment that my patient needs to be seen in person? So many questions—all with relatively straightforward answers.

Let's start at the beginning. Yes, clients are willing to pay for telehealth. Experiences with human telehealth are driving comfort with such services, and clients generally see the value in veterinary telehealth as they are able to more easily and conveniently access professionals they trust. A live video recheck that means not having to leave work to bring a dog across town or being able to get after-hours reassurance via phone about a cat under hospice care is valuable. Being able to send an e-prescription refill request on one's lunch break or email data for interpretation is valuable. Being able to update a patient history prior to an annual physical using a phone app or signing onto a three-way teleconsult with the veterinarian and an oncology specialist are valuable as well.

How to Charge and How to Collect Payment

There are numerous models available that can assist in monetizing your telehealth services.

- Charges can be based on
 - time spent
 - specific procedures
 - skill level of healthcare team member(s) involved
- Services can be incorporated
 - in wellness plans
 - in subscription bundles
 - in palliative care packages
 - or charged per use

ACTION ITEMS

- Determine your fees for telehealth services based on the time spent by the veterinarian and by members of the veterinary healthcare team, the cost of the services to the practice, the value of the services to the patient and client, and competitive considerations in the marketplace. Remember that your advice does not lose all value just because it is not provided in person.
- In general, most third-party platforms will have the client enter payment information when the appointment is scheduled (much like many on-demand transportation services obtain and retain your credit card information). Some platforms will automatically process the payment when the appointment begins; others will allow you to modify the fee or capture the payment at the end of the appointment. If you use a platform like Zoom or FaceTime, then you will need to determine if your customer service representative will collect payment at the time the appointment is scheduled or once it is completed.
- Make sure your staff and clients understand how appointments are billed. If you are concerned that a client may be a "no-show" for a virtual visit, then you may want to have the customer service representative collect payment when the appointment is scheduled.
- If you charge a technician fee for nutritional consultations or other services delivered by your support team members, consider the expanded range of services that you can make available through a telehealth service.
- As was discussed earlier in the context of implementing telehealth plans, it is important to

have policies and procedures for payments in place before monetizing any telehealth services. Will there be different fees for after-hours services? What happens if, while you are conducting a telemedicine evaluation, you determine the patient needs to be seen in person? Should you consider giving some type of credit for the in-person physical exam? What if there are technical difficulties during the virtual visit?

- If diagnostic service providers are charging additional fees for utilization of AI-assisted services, determine if those fees are reflected in the fees your practice charges your clients or if additional service fees should be added as part of your expanded offerings.



TIP: Create and circulate a script so everyone uses the same information when talking about fees for telehealth services. And, if charging for telehealth is a new process, pilot collecting fees internally before introducing services to clients.

Make sure your staff and clients understand how appointments are billed.

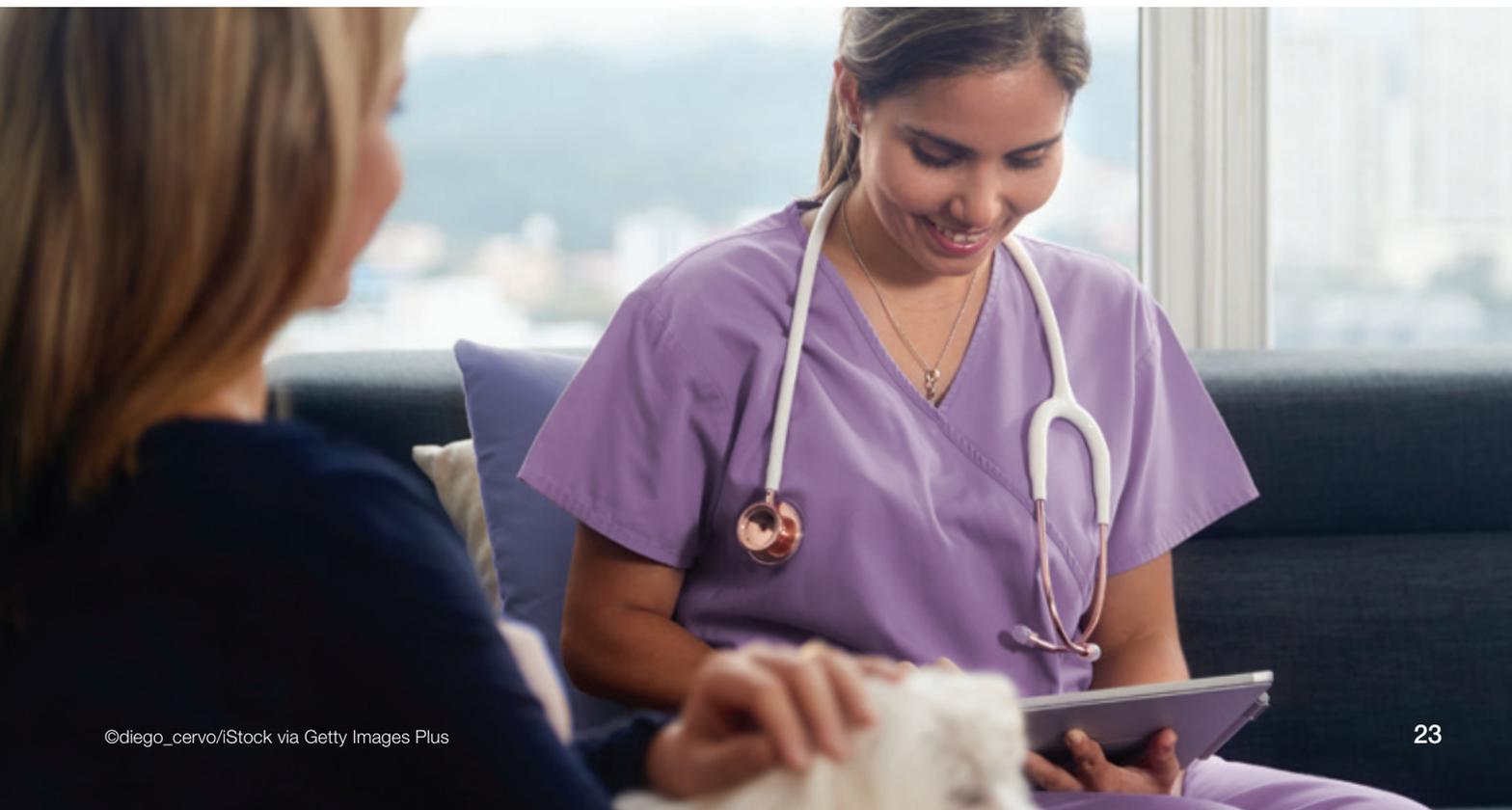
Strong Client Relationships Pay Off

Telehealth interactions done well can leave pet owners feeling valued and that their pets' well-being is truly the focus of your practice. This influences client loyalty, which returns significant value through client retention for your practice.

You Are Worth It

Your medical knowledge is valuable no matter whether delivered in person or through telehealth.

Pet owners today have access to a nearly infinite amount of information via the internet, but they desire and are willing to pay for reliable, personalized guidance from their veterinarian. You have the advantage of knowing the client and the pet, and this relationship, coupled with medical advice they can trust because of your training and experience, is worth paying for.





The Benefits of Loyalty

Being available to your clients outside of the practice walls in their time of need can increase their loyalty to you and drive a positive sequence of events:

- Having more touchpoints and communication builds trust.
- Clients who trust you are more likely to approve your recommendations, saving time and potentially leading to faster interventions.
- Clients who trust you may comply with treatment recommendations for better outcomes.
- Client retention improves when they trust you and can access your knowledge and compassion.

Consider this situation that typifies communications a practice might receive from a client:

I first noticed a raised, red sore on my cat's thigh two weeks ago after a recent vaccine appointment. It started getting smaller and looked less inflamed, but tonight, it looks bigger and angrier than it did when I first saw it. He doesn't seem to be in pain, but he is licking it a lot. I was wondering if there is an email I could send pictures to in order to avoid an in-person appointment. If it does need to be biopsied or to be examined in person, I will make an appointment, but he gets really nervous when he has to go in his carrier, so I'd prefer to avoid that unless it's necessary.

Until recently, such a client would only have had one option: to bring their pet to the clinic for an assessment. This client, however, can now be seen via a telemedicine appointment with the veterinarian and be provided with the facts needed to make the best decision for their cat. The appointment can also reinforce the veterinarian's authority as the trusted source of information for the client to turn to first in the future. Furthermore, the veterinarian can be compensated for the services.

Communicating the Benefits of Telehealth

Many people see telehealth solely as a live audio or video service, but conducting remote consultations is actually only a very small part of what telehealth is about. Instead, provision of telehealth services is most successful when it is focused on easing communication bottlenecks, improving clients' access to care and information, and capturing revenue usually given away for free.

Connected Care seeks to integrate all digital technologies to enhance and support the veterinarian-client-patient relationship through improved communication, diagnosis, and monitoring. It is thus of immense value for clients, patients, and the practice. In this section, you will find suggestions for promoting the benefits of telehealth to staff and clients.

Effective marketing relies on promoting the benefits, not the features, of telehealth.

External Marketing

When marketing to your clients through social media, newsletters, email blasts, fliers, blogs, or direct mail, the benefits fall into four categories:

Convenience

- The ability to communicate asynchronously (at separate times as with texts or online forms), allows for the exchange of information at convenient moments without having missed callbacks or delays.
- Clients can send photos, videos, or reports from remote monitors, which can be reviewed and responded to or used to identify the need for an in-person examination. This ensures rapid feedback and timely intervention.

- Using available software technology, clients can also schedule appointments, fill out pre-examination histories, or request prescription refills when it works for them, whether that is late at night, while riding public transit, or during a break at work.
- When a veterinarian can arrange a live teleconsult with a specialist, the veterinarian and clients can get expert advice simultaneously without having to wait. This allows for earlier intervention.

Access

- If clients have disabilities, or they find it hard to take off work, hate traffic, live at a considerable distance, lack child care, or have a challenging pet to get into a carrier or a fragile one under hospice care, then telehealth services can help improve access.
- When your practice leverages technicians and assistants to provide results, instructions, or patient information via phone, text, or video conferences, clients have more touchpoints with the practice, which strengthens that relationship.
- Whether you use telemedicine to provide after-hours care or educational information, be sure to make clients aware of these opportunities.
- Beyond the walls of your practice, you can schedule teleconsultations with various specialists. This access to specialty care can potentially benefit patient treatment, recovery, and quality of life, which has significant value.

Time and Cost Savings

The tools and touchpoints mentioned above can cut down on clients' coming in for unnecessary appointments, saving them time and money and freeing up the practice schedule for patients that

need in-person exams. Other savings potentially can come through virtual rechecks or creating subscription pricing models for clients using telehealth.

Improved Diagnostics and Patient Monitoring

Clients pay attention to technology trends happening with their own healthcare and often ask their veterinarians which of these might be appropriate for their pets. With some of the new veterinary AI-assisted diagnostic services and remote monitoring devices, there is now an opportunity to promote these to your clients as an extension of your practice's services. The benefits of more accurate diagnoses, earlier intervention, and improved client compliance all support improving treatment outcomes for your patients and enhanced client experiences.

Internal Marketing

Your Telehealth Champion is responsible for internal marketing to staff, ensuring everyone understands how telehealth is being used to help clients and patients. Ideally, you'll want all staff to become enthusiastic advocates.

Improved Patient Care and Outcomes

The Telehealth Champion needs to share stories and metrics illustrating improved patient outcomes resulting from earlier intervention, better client compliance, and more timely follow-ups. It's important to track and

tell how remote monitoring data collection, specialist consults, and compassionate care for hospice patients are some of the ways technology and Connected Care are supporting the practice healthcare team deliver personalized patient care.

The Telehealth Champion also needs to track and share examples of the following benefits for the practice:

- **Client Relations**
 - Reduced bottlenecks, leading to more streamlined communications with clients
 - More time to show interest and compassion for patients and clients
- **Practice Sustainability**
 - Monetizing more client interactions
 - Opportunities for staff to use more of their skills
 - Potential for some staff to work remotely
 - Potentially greater control over work-life balance through improved workflow



TIP: Your marketing doesn't have to be costly. Messages to both staff and clients just have to be clear and consistent, conveying that competence and caring are valued.





Frequently Asked Questions: Marketing

Q How can I make sure everyone in our practice can speak effectively about our telehealth efforts?

A Your Telehealth Champion should keep staff members informed about the services being offered, and any changes to those services. This can be done by circulating staff memos, creating scripts for support in answering specific questions (Figure 5), or developing lists of frequently asked questions (FAQs) with answers for distribution. Everyone loves success stories and you will need quotes for testimonials to support your marketing, so ask the staff to share these with your Telehealth Champion as well. Again, be sure to respect client and patient confidentiality and that you have obtained permission to use your clients' comments in any marketing material.

Q I've never done video sessions and wonder how I can convey a good “websiteside” manner during a telehealth visit. I want to be the person my clients will feel confident in and comfortable with.

A Before you start seeing patients and communicating with clients using video consultations, put the video in record mode and rehearse in front of the camera. Play it back to see how you come across. It may take several rehearsals before you feel at ease. It can be harder to exude warmth and create a personal connection when body language clues are limited. Show your client you're listening by nodding every so often when they are speaking. Make eye contact by looking into the camera lens, not at the client image on the screen. When you have to look away to consult a record, be sure to let your client know and ask permission as a courtesy. Watch for visual clues from your client and be mindful of the ones you are expressing. After your first few sessions, review the exam videos to see what you might want to improve, but know that as with anything else, you will naturally get better with practice.

FIGURE 5 | Sample Script for Marketing the Benefits of Telehealth Services to Clients

When introducing new procedures to clients, lead with a clear value proposition to support their adoption.

For example: We know it's difficult for you to get off work to bring your dog in, so how about we schedule a telemedicine appointment for you and Rex? You can send photos or a video of his surgery site to the doctor, who can see how things are healing before your virtual visit. That way, you won't have to come in if all is OK, which will save you time. Are you available this Thursday between 10 am and noon?



Conclusion

Demand for telehealth services is accelerating, and veterinary practices need to keep pace to remain relevant. The goal is not to replace necessary in-person consultations and exams, but to consider using technology for such services as

- Client education
- Some types of preventive care
- Postsurgical follow-ups
- Behavioral consults
- Monitoring chronic conditions
- Palliative/hospice care
- Nutritional consults
- Prescription and pet food refills
- Triage
- Specialist consults

The goal is offering improved access and convenience that provide pet owners with excellent customer service and high-quality patient care leading to better patient outcomes and increased client retention. The goal is using technology to streamline care so staff don't burn out, internal processes flow efficiently, and everyone's skills are maximized and monetized.

As we hope you can see, telehealth is not about the gadgets, it's about results and relationships.

Staying connected with your clients and patients is critical. You want your clients to think of calling you first when they have questions or concerns. You want to be able to provide your clients answers and reassurance when they need it 24/7. Plan to provide telehealth services on your time and potentially use a third-party provider after hours so you don't have to always be on call and your clients can still receive services.

You don't have to take on all of telehealth at once. Assess your situation, your clients, your patients, and your resources. Determine how to incorporate Connected Care into your practice and what your desired return on investment looks like. Feel confident that making small adjustments now will provide huge dividends in improved patient outcomes, client retention, and staff satisfaction in the future.

The most important step you can take today is your next one! Visit aaha.org/telehealth for more resources.

A photograph of a middle-aged Black man with a short beard and mustache, smiling warmly. He is wearing a white lab coat over a light blue collared shirt and a dark blue tie. A black stethoscope is draped around his neck. He is holding a white tablet computer in his hands. The background is a blurred indoor setting, likely a hospital or clinic, with vertical lines suggesting a doorway or window frame.

Acknowledgments

We acknowledge the excellent contributions of the Task Force members and offer a special thanks to the volunteers and staff from AAHA and the AVMA who provided review and comment and facilitated approvals and production with purposeful speed. Finally, we also acknowledge J.P. O'Connor, FASAE, our facilitator and writer from Burbank, California.



Established in 1933 by leaders in the veterinary profession, AAHA is best known for its accreditation of companion-animal veterinary practices. To become accredited, companion-animal hospitals undergo regular comprehensive evaluations by AAHA veterinary experts who evaluate the practice on approximately 900 standards of veterinary care. AAHA also develops publications and educational programs and resources designed to help companion-animal hospitals thrive. Today, more than 4,000 practice teams (15% of all veterinary practices in the United States and Canada) are AAHA accredited. For more information about AAHA, visit aaha.org.



The American Veterinary Medical Association, founded in 1863, is one of the oldest and largest veterinary medical organizations in the world, with more than 96,500 member veterinarians worldwide engaged in a wide variety of professional activities and dedicated to the art and science of veterinary medicine.



AVMA guidelines for the use of telehealth in veterinary practice

IMPLEMENTING CONNECTED CARE



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To view hyperlinks found throughout these guidelines, go to avma.org/telehealth and download the electronic version.

INTRODUCTION

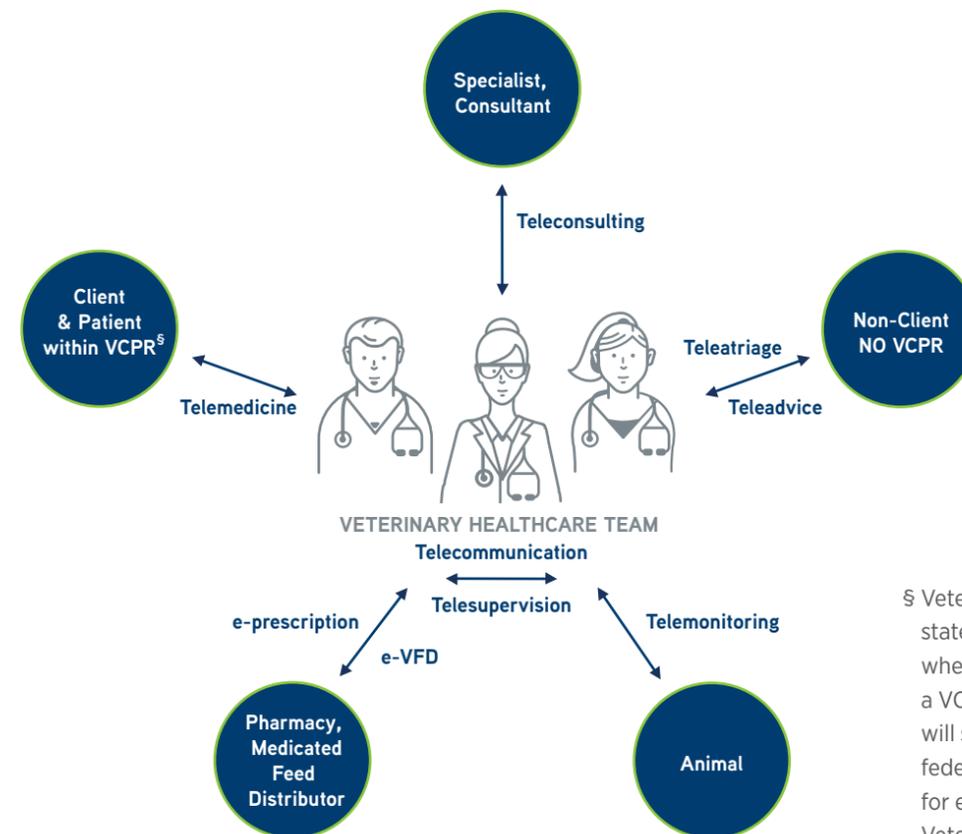
This document has been developed to help you thoughtfully integrate telehealth into your veterinary practice. Doing so provides an opportunity to improve access to your services, enhance the medical care you provide for your patients, and better support and strengthen your relationship with your clients.

ABOUT VETERINARY TELEHEALTH

Veterinary telehealth is the use of telecommunication and digital technologies to deliver and enhance veterinary services, including veterinary health information, medical care, and veterinary and client education. Technologies that support telehealth have been around in various forms since the mid to late 19th century. The earliest uses of telehealth likely involved transmission of veterinary health information via telegraph, and later over the telephone. While electronic transmission of veterinary health information has occurred in some form for decades, there is no question that the opportunity and ability to acquire, process, and transmit high volumes and quality of data, including health information, is increasing at an exponential rate. E-mail and text messaging, live audio and audio/video conferencing, store-and-forward electronic transmission of a variety of types of data, remote patient monitoring, electronic medical records, and artificial intelligence (AI)-assisted diagnostics are examples of modern technologies currently used in veterinary telehealth. Telehealth is a tool of practice, not a separate discipline within the profession.

DEFINITIONS

There is confusion surrounding the many terms that are used within the field of telehealth. While many are related, they each have a specific meaning.



§ Veterinarians should consult state requirements to determine whether it is possible to establish a VCPR electronically. If so, they will still need to comply with federal requirements for the VCPR for extralabel drug use or issuing Veterinary Feed Directives.

The terms used in this guidance have the following meanings:

Connected Care is the integration of digital technologies to enhance and support the veterinarian-client-patient relationship (VCPR) and facilitate proactive and ongoing care through improved communication, diagnosis, and monitoring. It is an approach to veterinary practice that is patient- and client-centered, and actively engages the entire veterinary healthcare team.

Telehealth is the overarching term that encompasses all uses of technology to remotely gather and deliver health information, advice, education, and care. Telehealth can be divided into categories based on who is involved in the communication. For communication between veterinarians and animal owners there are two important categories that are distinguished by whether a VCPR has been established:

- Without a VCPR, telehealth includes the delivery of general advice, educational information, and teletriage (to support the care of animals in emergency situations).
- Telemedicine includes the delivery of information specific to a particular patient, and is allowable only within the context of an established VCPR.

Teleadvice includes the provision of any health information, opinion, guidance or recommendation concerning prudent actions that are not specific to a particular patient's health, illness or injury. This general advice is not intended to diagnose, prognose, treat, correct, change, alleviate, or prevent animal disease, illness, pain, deformity, defect, injury, or other physical or mental conditions. Examples include recommendations made by veterinarians or non-veterinarians via phone, text or online that all animals should receive physical exams or premise visits as part of a comprehensive healthcare plan, or reference to the importance of attending to regular vaccination or parasite prevention as a key part of preventive care.

Telemedicine involves the use of a tool to exchange information about a patient's clinical health status electronically from one site to another. Examples include using technology to communicate with a client and visually observe the patient during a postoperative follow-up examination and discussion.

Teleconsulting refers to a primary care veterinarian using telehealth tools to communicate with a veterinary specialist or other qualified expert to gain insights and advice on the care of a patient.

Telemonitoring, mHealth or mobile health employs mobile devices. Some mHealth applications and wearables are designed to augment animal health care within VCPRs, while others are designed and marketed directly to consumers for their education and for animal monitoring without clinical input (outside of a VCPR).

Teletriage is the safe, appropriate, and timely assessment and management (immediate referral to a veterinarian or not) of animal patients via electronic consultation with their owners. In assessing a patient's condition electronically, the assessor determines urgency and the need for immediate referral to a veterinarian, based on the owner's (or responsible party's) report of history and clinical signs, sometimes supplemented by visual (e.g., photographs, video) information. A diagnosis is not rendered. The essence of teletriage is to make good and safe decisions regarding a patient's disposition (immediate referral to a veterinarian or not), under conditions of uncertainty and urgency.

Telesupervision is the supervision of individuals using mediums such as audio or audio/video conference, text messaging and email. Clinical supervision is integral to continuing professional development of health professionals. While telesupervision may be useful in any context, its value is amplified for health professionals working in rural and remote areas where in-person access to supervisors within the local

work environment is often diminished. While telesupervision offers innovative means to undertake clinical supervision, there remain gaps in the regulatory parameters of use in clinical practice. State regulators will need to address whether telesupervision is considered direct or indirect supervision, or some new, to-be-defined category of supervision. Telesupervision involving the practice of veterinary medicine should not be undertaken without a clear regulatory framework in place.

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WHAT CAN BE ACCOMPLISHED THROUGH TELEHEALTH TECHNOLOGY?

You likely have been using telehealth throughout your veterinary career. Every time you take a phone call from a client whose animal you recently saw in your practice as a means to follow up on a case, you are practicing telemedicine. You have likely struggled, at times, to determine whether a patient needed to be re-evaluated sooner than planned. By adding audio/video conferencing to the equation, you now have information from two more senses (sight and sound) and the potential to obtain visuals of the patient, in addition to the owner's description of progress (or not), to help you make that decision. Information from remote monitoring, as well as from AI-assisted diagnostics, may further support your clinical acuity in making decisions and delivering good recommendations for your patients' care.

POTENTIAL APPLICATIONS OF TELEHEALTH IN YOUR PRACTICE

How might telehealth be integrated into your practice? It could take many forms, depending on the needs of your current and potential clients, and those clients' level of interest and comfort with electronic technology and communications. Here are some possible applications to consider as you decide how telehealth might support delivery of services for your existing patients and clients, as well as potential patients and clients.

Sharing general animal health information

Veterinarians and their teams already offer general, non-patient-specific information (teleadvice) over the phone, and via text, email, and their practice website or social media pages. Often this information is provided free of charge. Offering more structured teleadvice services can provide an opportunity for veterinarians and their team members (e.g., veterinary technicians, veterinary assistants) to use and be compensated properly for their training and skills, and can also create unique opportunities to attract new clients, particularly if your veterinary hospital has one or more areas of special interest or particular expertise and that is evident in your offerings.

Expanding access to veterinary care

Despite all the advances in veterinary medicine, there are still clients who struggle to access routine veterinary care for their animals for a variety of reasons. Excessive distances, available transportation (including availability and ease of transportation for the patient), disability, language barriers, and financial issues are some examples of roadblocks. Today's high-quality telecommunication tools and software applications can provide almost seamless communication between clients and veterinary healthcare teams at a distance, making it easier for clients to access veterinary expertise.

If you have clients for whom recurring trips to the veterinary hospital serve as a deterrent to accessing veterinary care, consider customizing a telemedicine offering that makes your services more convenient for them to utilize. Many services are possible with telemedicine, as long as a VCPR that satisfies state and federal requirements is in place, and the attending veterinarian is comfortable assessing the patient remotely and feels able to exercise good clinical judgment in caring for the patient.

Potential clients may benefit from educational offerings addressing the importance of preventive care or safety for and around animals.

After-hours care

Clients want and expect 24/7 services, including veterinary care. Traditionally, access to after-hours care has meant that the client leaves a message with an answering service and waits for the veterinarian to call them back. Today's client generally expects more. Implementing teletriage services can help meet client expectations and patient needs, assist in scheduling with prioritization given to urgent cases, while also allowing veterinarians to better manage their work-life balance.

Implementation of telehealth within a practice should stay focused on three goals:

1) Improve the level of care for the patient, 2) Increase access of underserved populations to veterinary medical care and 3) improve utilization of all members of the veterinary healthcare team.



Assessing client compliance and patient progress

Evaluating progress after treatment - including checking client compliance with your recommendations and adjusting those recommendations as needed - is critical for successful outcomes. Using tools of telemedicine can enhance continuity of care. For example, you can use photos and video to help evaluate healing of incision sites; video to monitor the patient's gait and overall mobility; video to see the patient's general demeanor and evidence of return to normalcy after treatment; and electronic transfer of herd records to keep an eye on health and production. Such consultations can be conducted in real time or asynchronously depending on needs and preference. Cases that may lend themselves to electronic appointments include, but may not be limited to, medical rechecks (e.g., chronic dermatological cases; gastrointestinal issues pending additional workup; osteoarthritis; herd or other animal group record evaluations; including assessments of regularly collected laboratory, health, and production data), post-surgical evaluations; follow-up behavioral consults; and digital necropsy (a standard set of images is obtained during the procedure and shared with the veterinarian). Using tools of telemedicine can support coordination with onsite paraprofessionals, such as the exchange of diagnostic images and case status between veterinarians and farriers involved in the management of certain conditions of the equine foot. Telehealth tools can also be used to provide clients with up-to-date information about hospitalized patients, including - for longer term patients - an opportunity to view their animal and see what progress has been made during the course of treatment.

Palliative care

When the stress of a trip to the hospital might exacerbate an animal's already deteriorating health, telemedicine provides a convenient way to check in on these patients. This is especially helpful for patients when clients might otherwise forego a veterinary hospital visit because of the frequency of visits required and time limitations, challenges the animals themselves may present for transportation (e.g., cats who dislike both the carrier and the vehicle ride), and/or how the animal reacts to hospital visits overall. A telemedicine evaluation allows you to get a general sense of the animal's overall wellbeing and can help determine whether treatment plans should be adjusted or an in-person examination is needed.

Artificial intelligence-assisted diagnostics

Virtually every area of life has been touched by AI, enhancing our understanding of complex issues and increasing the likelihood of better outcomes because large amounts of data can be more rigorously analyzed. With its robust ability to integrate and learn from large sets of clinical data, AI can serve roles in diagnosis, clinical decision making, and personalized patient care. Veterinary medicine is experiencing rapid advancements in AI, including deep learning, machine learning, natural language processing, and robotics, with current applications in the areas of triage, image interpretation (radiologic and pathologic), disease/condition diagnosis, patient monitoring, drug development, and even robotic surgery. Applying AI to health care supports veterinarians, including those in both primary care and specialty practices, by better integrating information and increasing the accuracy of a diagnosis, reducing the likelihood of errors in diagnosis, and earlier identification of subtle changes in patient health that can lead to more proactive intervention.

Remote patient monitoring

Remote patient monitoring (RPM) uses digital technologies to collect medical and other types of health data from patients in one location and electronically transmit that information securely to healthcare providers in a different location for assessment and recommendations. It can be used by veterinarians and their clients to increase the amount of information available about a patient's health and, thereby, improve diagnostic and treatment decisions and assess client compliance with recommendations.

- Synchronous or real-time monitoring/communication is where video or other data are shared and evaluated in real-time. Live video streaming is the most common approach to synchronous RPM, but a variety of technologies are available that can deliver information about an animal's environment, feed consumption, activity, and physiological parameters (e.g., heart rhythm, temperature) in real time.
- Asynchronous monitoring/communication is where video or other data are recorded and then sent to the veterinarian at a later time.

Examples of RPM being used in veterinary medicine include microchips that also measure body temperature, with the potential for earlier detection of certain diseases and stressors; continuous monitoring of glucose concentrations in diabetic patients; time lapse videography to evaluate lying time in dairy cattle as a measure of cow comfort; the use of smart-sensing technologies to provide critical environmental information in poultry production facilities; electronic feeding stations that record individual animal feeding patterns and daily intake; evaluation of lameness in a variety of veterinary patients via accelerometer-based monitors or cameras; and assessment of growth rate and external parasite loads of finfish via video sampling. Some veterinarians even use video monitors in their hospital so that they can keep an eye on their hospitalized patients or those continuing to recover from anesthesia even when they are not in the immediate vicinity.

Sometimes veterinary paraprofessionals or clients may directly participate in such monitoring, such as when technology is employed that allows a stethoscope or similar monitor to be positioned on the patient with the sounds and, sometimes, an ECG tracing then transmitted electronically to the veterinarian.

Specialty consultations

Creative and appropriate use of telehealth can improve access to specialists for primary care veterinarians and their patients/clients. Live video teleconference and e-consultation can be used by primary care veterinarians to connect with providers of specialized services for real-time support. Such consultations are enhanced by electronic technology that allows rapid sharing of medical records, high-quality radiologic images and other test results. And, just as for primary care veterinarians, telemedicine allows specialists who have established a VCPR to better connect with their patients and clients and manage chronic cases.

Three-way consultations including the client, primary veterinarian, and specialist may be considered in situations where the specialist needs to interact remotely with the client and/or patient, but where the specialist has not been able to establish a VCPR. Such an approach can help with access to specialists in areas where a particular specialty is currently unavailable or existing specialists are overutilized impacting their ability to schedule

in-person appointments in a timely fashion. State and federal regulations should be clearly understood in these situations before taking this approach.

Education

Connected Care provides multiple opportunities to support your client education efforts. Informed clients better understand their animals' health status and may be more likely to comply with your recommendations with a net improvement in patient outcomes. A thoughtful approach to client education can also improve utilization of the training, skills, and time of the entire veterinary healthcare team.

- Digital diagnostics — Digital microscopes and otoscopes can provide clients with a real-time view of exactly what the veterinarian is seeing, and digital stethoscopes allow clients to hear exactly what the veterinarian is hearing. These tools can provide great support for client understanding of their animals' health concerns and make them more amenable to following your advice. While still somewhat expensive for routine veterinary use, digitally enabled drug containers with accompanying smartphone applications provide reminders when it's time to administer medication and can also provide a gentle compliance assist.
- Client webinars — For years it has been common for veterinarians to offer educational classes in the clinic or in community venues, such as the local library. Now these same types of classes can be offered via live and/or recorded webinars or livestreams and videos delivered via social media. Live presentations allow clients to interact with the presenter, while recorded ones offer the convenience of viewing whenever the client has time. Webinars can be used to provide general health or animal care information (e.g., importance of regular examinations and preventive care, basic house/behavioral training, grooming and hoof care, holiday hazard proofing) or may be customized to target clients, individually or in groups, whose animals may have a commonly encountered medical condition the management of which benefits from more complete understanding (e.g., endocrine conditions, such as diabetes; renal disease; laminitis). Multiple members of your veterinary healthcare team can and should participate in providing this

education, consistent with their training and within their scope of practice.

- Individual client instruction — Veterinary technicians and veterinary assistants can use tools of telehealth to review with clients how to administer subcutaneous fluids, ophthalmic ointment, and other medications; provide routine dental care; care for wounds and manage bandages, splints/casts, or external fixators; understand and manage their animal's undesired behavior; and implement nutritional recommendations. As always, the role of the team member in providing these services needs to be consistent with their scope of practice.

Don't forget that tools of telehealth can also be used to deliver and receive education for members of the veterinary healthcare team. Examples include arrangements with specialists that permit referring veterinarians to participate in daily or weekly rounds and learn more about complex cases, remote video instruction provided by vendors that supports better use of diagnostic equipment and more accurate interpretation of test results, and real-time viewing and discussion of unusual cases with surgeons, pathologists, behaviorists, or rehabilitation specialists.

THE PATH TO IMPLEMENTATION

Telehealth services can expand access to veterinary care, support better patient triage, improve clinical outcomes, and benefit patients, animal owners, and the veterinary practice. In addition to recognizing the opportunities presented by Connected Care, below you will find some additional things to consider as you implement telehealth successfully in your practice.

KNOW THE RULES

You might already have some solid ideas about how you'd like to incorporate Connected Care into your practice. Even if that's the case, it's critical that you first familiarize yourself with the rules that govern the use of telehealth, including the regulatory and legal landscape around the delivery of telemedicine. In addition to helping to protect you, your patients and your clients, doing the following will ensure you don't spend valuable time pursuing services that cannot be legally offered in your area.

- Familiarize yourself with the [AVMA Policy on Telemedicine](#).
- Understand how the VCPR and licensing requirements apply to the provision of telehealth services, particularly telemedicine services (see below).
- Review federal, state and local requirements, so that you are familiar with the statutes, regulations, and rules that apply in your area. Such information is often located in:
 - State veterinary practice acts
 - State pharmacy laws
 - State licensure requirements
 - State veterinary telehealth laws
 - [State VCPR requirements](#)
 - [Federal VCPR requirements](#)
 - Federal/[state](#)/local record retention requirements
 - [State veterinary client/patient confidentiality laws](#)
 - State and federal controlled substances laws

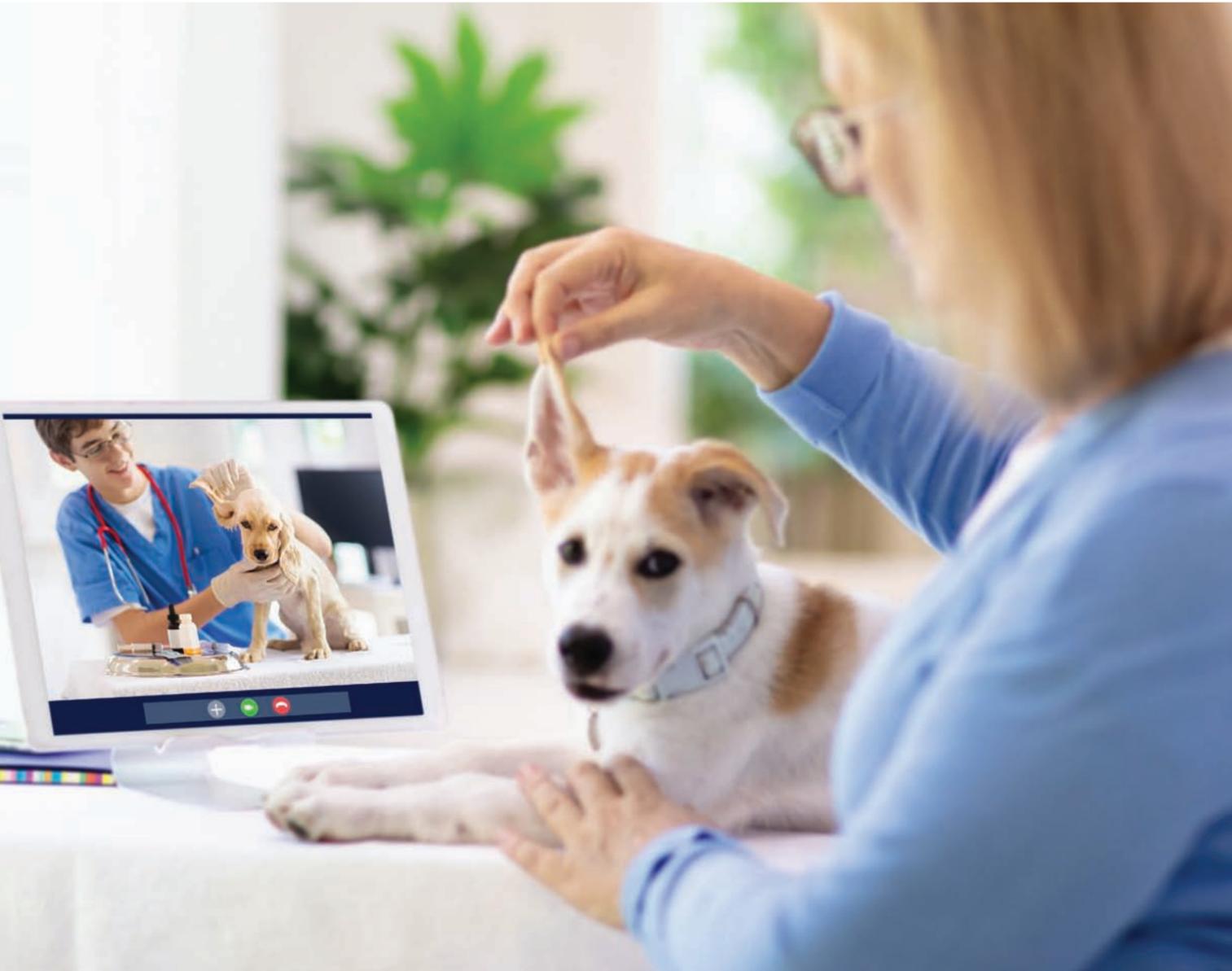
Be sure to not only review applicable statutes, but also the regulations, rules and policies that may be in place to implement them.

TELEHEALTH AND THE VCPR

Having a VCPR in place is critical whenever practicing veterinary medicine, whether you are practicing in person or remotely using telemedicine. The [AVMA Model Veterinary Practice Act](#), which many governmental bodies use as a guide when establishing or revising laws governing veterinary practice, includes the following definition of the VCPR:

The veterinarian-client-patient relationship is the basis for veterinary care. To establish such a relationship the following conditions must be satisfied:

1. *The licensed veterinarian has assumed the responsibility for making medical judgments regarding the health of the patient(s) and the need for medical therapy and has instructed the client on a course of therapy appropriate to the circumstance.*



2. *There is sufficient knowledge of the patient(s) by the veterinarian to initiate at least a general or preliminary diagnosis of the medical condition(s) of the patient(s).*
3. *The client has agreed to follow the licensed veterinarian's recommendations.*
4. *The licensed veterinarian is readily available for follow up evaluation or has arranged for:*
 - a. *Emergency or urgent care coverage, or*
 - b. *Continuing care and treatment has been designated by the veterinarian with the prior relationship to a licensed veterinarian who has access to the patient's medical records and/or who can provide reasonable and appropriate medical care.*
5. *The veterinarian provides oversight of treatment.*
6. *Such a relationship can exist only when the veterinarian has performed a timely physical examination of the patient(s) or is personally acquainted with the keeping and care of the patient(s) by virtue of medically appropriate and timely visits to the operation where the patient(s) is(are) kept, or both.*
7. *Patient records are maintained.*

“A VCPR cannot be established solely through telemedicine.”
 – 2017 FDA letter to AVMA from Dr. Stephen Solomon, Director, Center for Veterinary Medicine. Applicable to extralabel drug use and VFDs.

Both the licensed veterinarian and the client have the right to establish or decline a veterinarian-client-patient relationship within the guidelines set forth in the AVMA Principles of Veterinary Medical Ethics.

A licensed veterinarian who in good faith engages in the practice of veterinary medicine by rendering or attempting to render emergency or urgent care to a patient when a client cannot be identified, and a veterinarian-client-patient relationship is not established, should not be subject to penalty based solely on the veterinarian's inability to establish a veterinarian-client-patient relationship.

Many states have adopted this definition of the VCPR, or a very similar one, as a component of their state veterinary practice act or regulations. In addition, federal law requires a veterinarian to establish a VCPR before undertaking any [extralabel drug use in animals](#), issuing a [Veterinary Feed Directive](#), or the [creation and use of certain types of biologics](#). It is also important for veterinarians to understand that they must comply with the federal law requiring a VCPR under these circumstances, regardless of how a state may ultimately define a VCPR in state law or regulation.

Given current technological capabilities, available research, and the existing state and federal regulatory landscape, the AVMA believes veterinary telemedicine should only be conducted within an existing VCPR. An exception may be made for advice given in an emergency until a patient can be seen by a veterinarian. Ultimately, how a state defines the VCPR, the congruence of that state VCPR with federal requirements, and whether or not a VCPR exists in a given situation based on those definitions, determine what services can be offered.

Within an established VCPR

A variety of telehealth and telemedicine service models are available to veterinarians and veterinary practices. Client-facing telemedicine services may include use of tools that allow the veterinarian to remotely and securely gather essential patient health information from the animal owner or another caretaker; access the patient's medical records; and conduct a virtual evaluation of the patient through real-time video or transmitted photographs or other data.

Without an established VCPR

The veterinarian may provide non-patient-specific advice, but must stay clear of diagnosing, prognosing, or treating patients. Two exceptions may apply: (1) your state law allows a VCPR to be established electronically, you have met the requirements for doing so, and activities that would invoke a requirement for adherence

to the federal VCPR are not conducted or (2) advice given in an emergency until a patient can be seen by a veterinarian. Non-client electronic communications that include the provision of non-patient-specific advice and general educational content are usually acceptable.

LICENSURE CONSIDERATIONS WHEN USING TELEMEDICINE

Treating patients across state lines

One of the many benefits of telemedicine is that it collapses distances and makes it easier for veterinarians to work with patients and clients who are physically remote from the clinic. When conducting telemedicine consults across state lines, it is advisable and *may be required* for the veterinarian to be licensed both in the state where they are located and the state where the patient(s) is located. Should issues arise, being licensed in both states ensures the veterinarian is legally authorized to practice. Just like an appropriately established VCPR, licensure in both states protects veterinarians, patients, and clients.

Consulting with specialists

A primary care veterinarian working within a VCPR may use his/her professional discretion to consult with specialists or other consultants. In such cases, the veterinarian who is asking for the specialty advice must have a VCPR in place, as well as the necessary license(s) to practice. The AVMA believes the consulting specialist should not need to meet these same requirements, so long as they are working through the primary care veterinarian. If the consultant were to begin treating the patient independently of the primary care veterinarian, then the consultant would need to establish a separate VCPR and be licensed within the patient's state.

Ultimately, veterinarians need to review state veterinary practice acts in both the state where they are located and the state where their patient(s) is located, if different, to ensure they and any consultants with whom they may be working are meeting VCPR and licensing requirements in each of the respective states that are pertinent to the situation in which they are providing services.

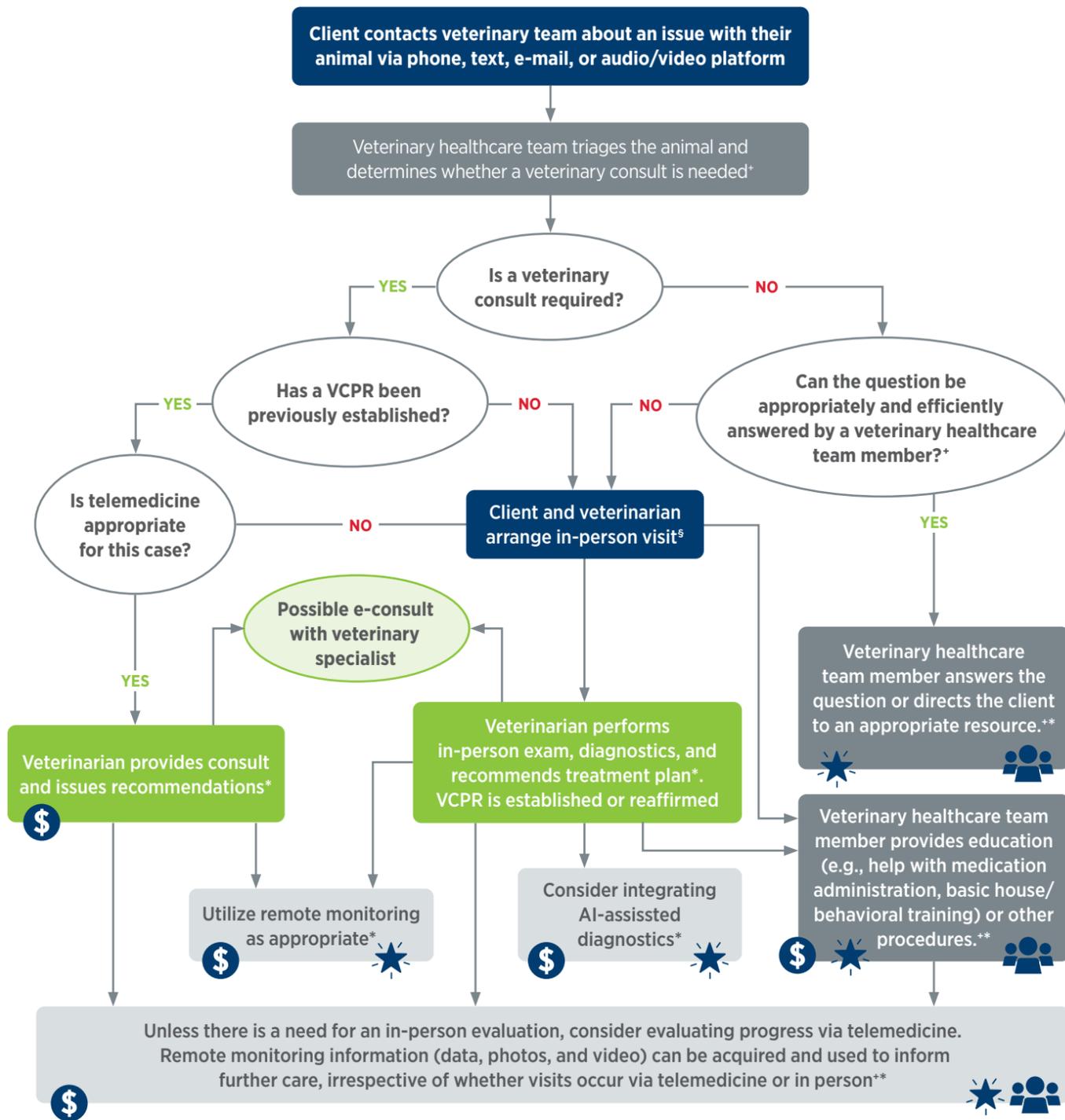
DEFINE YOUR SERVICE OFFERINGS AND INTEGRATE THEM INTO YOUR PRACTICE OPERATIONS

Once you understand the laws, regulations, and rules that apply to telehealth and, specifically, to telemedicine, you're ready to decide on the type(s) of services you want to implement. The options are numerous (see "Clinical scenarios supporting applications of telehealth" found on the AVMA telehealth resource webpage titled "[Service models for veterinary telemedicine](#)" for examples), and you can pick and choose those that make the most sense for your practice. Don't forget that your services can be implemented over time—you don't have to do everything right now. Be sure to keep track of outcomes for your patients, clients and healthcare team so that you can determine which services are netting the most value for your practice. Give consideration to demand, in addition to need.

You will also need to think about how Connected Care fits into your clinic operations and workflow. Considerations include, but are not limited to: space; technology; scheduling; approach to diagnostic workups (how/when do remotely acquired data and AI play a role?); translation of information into the medical record; staff training; client awareness, understanding and consent; and invoicing. For success, telehealth needs to be mainstreamed into your approach; it should not be pigeon-holed as a "different" way of taking care of patients and clients. In-person visits and telehealth then become seamless partners in delivering cohesive, high-quality patient care.

On the next page is one example of what an integrated workflow might look like. It includes potential applications of telehealth, such as teletriage, telemedicine, AI-assisted diagnostics, RPM, specialty consultation, and client education, while supporting the engagement of your entire veterinary healthcare team.

Sample Practice Workflow



* All interactions should be captured in the medical record
 + Any assessment or procedures performed by a member of the veterinary healthcare team must be within the team member's scope of practice.
 § Pertains to situations where a VCPR must be established via an in-person examination

Potential telehealth income Increases efficiency Better utilize veterinary healthcare team

CHECK YOUR LIABILITY COVERAGE

In most instances there is no additional liability coverage required for veterinarians who offer telehealth services, including telemedicine. However, it's wise to check with your professional liability insurance carrier. Make sure you clearly describe what services you are offering, including the use of any equipment or software, and who will be engaged in delivering those services, because the coverage required for various types of activities (including who needs that coverage) may be different, particularly if members of your team may be traveling to locations outside the regular place of business. If you have obtained your liability insurance through the AVMA PLIT, the [AVMA PLIT website](http://www.avma.org/telehealth) is a good place to start.

EVALUATE TECHNOLOGY AND SERVICE PROVIDERS

Different telehealth services require different types of hardware, software and office support.

Client communication platforms

Some veterinarians communicate with their clients using technologies that already exist in their practice, such as smartphones and general audio- and video-conferencing platforms. Other practices may choose to use a telehealth-specific client communication platform that integrates with their practice management software, schedulers and payment systems. In all cases, be sure you are appropriately integrating information gained through these communication tools into your patients' medical records and that the security and privacy associated with those communications meets ethical and regulatory requirements.

If you are considering partnering with a provider of a telehealth-specific client communication platform, it is important to understand each provider's capabilities, limitations, and costs. Are you wanting communication with your clients to be asynchronous, synchronous or both? Do you want a built-in payment system or do you want to bill from your practice? Make sure the platform works with the technology available to you and your client, including hardware, operating system, your practice management software (if you are wanting integration), and internet service. Some client communication platform providers employ veterinarians or veterinary technicians to assist with triage and/or providing general advice for clients. This may be offered during normal business hours or after hours, with patients

for which an in-person visit seems appropriate redirected to your clinic for an appointment or to an emergency facility when calls are received outside of normal business hours. Telehealth-specific client communication platforms may require an ongoing monthly or per-use investment in addition to new hardware. Another consideration is the amount of support available from the provider during implementation and use. As is typical of new technologies, telehealth-specific client communication platforms are continually evolving, so check with the provider to be sure you understand how they upgrade and how those upgrades are passed on to you. A practical Service Provider Evaluation Checklist is available on the AVMA website, at www.avma.org/telehealth, to help you with this assessment. The AVMA has also put together a [table](#) of available telehealth-specific client communication platform providers with a breakdown of what they offer, also available on the website.

Artificial Intelligence-assisted diagnostic products

AI-assisted diagnostic products typically employ predictive analysis algorithms to filter, organize and search for patterns in big data sets from multiple sources. As such, they provide a probability analysis that can help veterinarians make better informed decisions more rapidly.

When determining whether to add an AI-assisted diagnostic product to the technologies in your practice, there is some basic information you should gather. For example, who is the intended user of the product (e.g., veterinarian, technician, client); what disease/need does it target and for what population of patients; whether additional data processing is required to fully take advantage of the product; and how it supports your decision making. In addition, you should ask about the data set it is using to provide its assist (e.g., how well does the data set fit the patient population for which you want to use the tool in your practice); what happens to any data you enter into the system, including security around that data; the anticipated accuracy of the product and what steps the vendor takes to continually improve and update it; and what kind of vendor support is provided for its use.

It's important to remember that AI-assisted diagnostic products are not a replacement for your expertise or the expertise of consultants (veterinary specialists and others). Care must be taken when interpreting AI-assisted diagnostic results.

Remote patient monitoring

Remote monitors, including wearable devices, collect and support the analysis of data (both synchronous and asynchronous) that healthcare providers, including veterinarians, can use to make informed decisions that may lead to better patient care and outcomes. Most RPM technologies include the following components: sensors on a device that are enabled by wireless communication to measure desired physical parameters; local data storage at the remote site that interfaces between the sensors and a centralized data repository; a centralized data repository where larger amounts of data are collected and analyzed; and diagnostic application software connected with the central depository that creates intervention alerts based on the data analysis. Data and alerts from RPM may be accessed by multiple types of devices, including smartphones, personal computers, laptops and tablets.

When implementing RPM, a few considerations are key. First, the technology must be easy for both clients and veterinarians to adopt and continue using. The equipment and user interface must be intuitive, the set up must be easy, and the patient data delivered by the remote monitor should be well-organized and simple to evaluate. Second, like other aspects of telehealth, to deliver on its promise, RPM must be integrated into your practice's workflow and operations. RPM only works if you pay attention and are prepared to act on the information being provided. Third, much RPM is dependent on a wireless telecommunications infrastructure, which may not be available in some areas. And, finally, since RPM involves transmission of patient and client data across networks, information security needs to be addressed as well.

Consider starting with a pilot for patients or facilities where you anticipate a good return on investment (e.g., weight management, diabetics, milk production monitoring) and then expand after you have had an opportunity to reflect on its success (or not). Think about whether you will supply the equipment or it will be purchased by your client upon your recommendation. You'll also want to consider whether your fees for reviewing and analyzing patient data can be captured within existing service fees or whether a separate fee for such services makes sense for your practice.

TRAIN STAFF, MARKET YOUR SERVICES AND ENGAGE CLIENTS

Implementing new telehealth services is an excellent way to more fully utilize the expertise of the veterinary healthcare team. Make sure the entire team is on board with delivering the new services and knows their role in providing and marketing them. Training your hospital staff will be key so that every one of your team members understands the why, what, and how of you offering these services for your patients and clients.

As with any new product or service, you need to let both existing and potential new clients know about the new telehealth services you are offering. Put together a communication plan to get the word out and generate interest. Create marketing materials, such as in-clinic displays, email to all existing clients, digital displays for your practice website, and promotion via your social media channels. Consider developing a script for your veterinary healthcare team to use when communicating with clients via phone or text about your new service(s). For example: "Our doctors are now available for telemedicine consultations" or "We have integrated new digital tools into our practice to support better patient care. Our new services include AI-assisted diagnostics and remote patient monitoring..." In-person conversations with clients, colleagues and friends can also help you spread the word.

SET EXPECTATIONS

Your first telehealth engagement with a client might be their first time ever using such services. As with any new experience, there will be questions and teachable moments for everyone involved. Before any client makes use of your telehealth services, make sure they are educated about the advantages and disadvantages of using such services in veterinary health care and what to expect from each. Using simple language that your client can easily understand, explain:



- How your telehealth offerings work, including scheduling, needed technology for telemedicine consults, availability of doctors, turnaround time on AI-supported diagnostic services, what the potential is for RPM, and billing/payment for those services.
- The scope of the services, and what will be involved in evaluating patient progress.
- What your expectations are for communication between visits.
- The role of any third-party services or products you will be using (e.g., client communication platform, AI-supported diagnostic product, RPM product/service).
- Record keeping, privacy, and security, including any potential risks. Discuss how patient and client information will be collected and stored and describe the security precautions you take to help ensure confidentiality.
- The potential for technical failure, and outline an explicit emergency plan, particularly for clients in settings where in-person access to the veterinarian/practice may be more difficult.
- Procedures for coordinating care with other professionals.
- Prescribing policies, including adherence to state/territorial and federal regulations and limitations.
- The conditions under which telemedicine services may be terminated and a recommendation made for in-person care.

TECHNOLOGY AND WORKSPACE NEEDS SPECIFIC TO TELEMEDICINE

Client-facing telemedicine models exist that allow the veterinarian to remotely and securely gather essential veterinary medical information from the animal(s) owner (or other caretaker), access the patient's/herd's medical records, and gather additional information about the patient through video, photographs, RPM, or other means. How extensively you want to incorporate these technologies into your practice is up to you, so long as there is a VCPR in place that follows state and federal requirements.

Delivering an extraordinary client experience takes preparation and planning. This is especially important when you are implementing new services intended to

enhance the high-quality veterinary care your patients need and your clients have come to expect. To make telemedicine successful for your practice, you need to ensure that both the setting and tools are optimized for seamless communication and effective interaction with clients and patients. Arrangements that keep the clients' and patients' experience as their focus generally meet with the most success.

Below you will find technology and workspace considerations that will help you conduct successful telemedicine consultations.

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CLINIC SETTING

When communicating with clients through synchronous communication platforms, choose a location that provides privacy, avoids distractions and background noise, has adequate lighting, and otherwise supports quality communication and consultation. Consider whether and how an existing examination room(s) or workspace might be adapted to accommodate telehealth. If space is limited, you might consider a mobile solution (e.g., a telehealth cart) that can be moved from one location to another to support flexibility.

Privacy The room you use for virtual consults should assure privacy for your client. Prevent unauthorized access and interruptions, and make sure your team members know not to open the door when it is closed for a consultation.

Noise Soundproofing should be sufficient that you can focus fully on your patients' and clients' needs, and provide privacy for your clients when they are speaking with you.

Furnishings/appearance The setting should be designed for both comfort and professional interaction. Especially if you conduct video consults, the room should convey a professional atmosphere.

Lighting Ensure lighting is sufficient to allow your client to see you easily, and for you to clearly and effectively view the video screen or other hardware you will use for the consultation.

Video setup Place your camera on a secure, stable platform to avoid any wobbling during videoconferencing. Position the camera so that your face will be clearly visible to your client, with the camera at eye level. If you are performing an in-person examination of a patient and are streaming the examination to the client, you may wish to use a camera that pans, tilts, and zooms for maximum flexibility in viewing. As for any veterinarian-client-patient interaction, a summary should be entered in the medical record.

EQUIPMENT

You don't have to break the bank when choosing equipment. However, your equipment must allow you to efficiently and effectively receive needed electronic data (e.g., medical records, images, activity data), deliver a high-quality medical consultation, and project a professional demeanor to clients. Use modern telecommunication equipment, such as smartphones, tablets, or laptops with high-quality audio and video capabilities and secure data storage (including off site).

If you are conducting video consultations, make sure your viewing screen is large enough to see patients clearly. A small smartphone screen might suffice for remote face-to-face communication with your client, but you will probably want a larger monitor if you need to view your patients' activity or evaluate wounds, incisions, behavior, or environment.

Many AI-supported diagnostic products can be used with most current equipment, but make sure you verify how this works. RPM devices may transmit data directly to you, or your client may need to send you the data or authorize your access to it. It is important to understand how data transfer occurs, what equipment is needed, whether/how the data will be stored in the patient's record, and how the data is secured.

If you are using a third-party application/service, ask your vendor what additional equipment is needed to properly support the service. Also consider if you will need to execute appropriate service contracts for hardware and software.

CONNECTIVITY AND SECURITY

Connectivity is critical.

This means reliable internet service and adequate bandwidth, resolution, and speed for clinical consultations. You can test your connection and bandwidth with free online testing sites. Searching keywords like "speed test" will help you locate these sites.

Make sure your:

- **Internet and bandwidth** are adequate for the platform you are using. A bandwidth of at least 10 Mbps in both the downlink and uplink directions is recommended.
- **Internet connection** is reliable. This might mean using a wired connection rather than Wi-Fi.
- **Screen resolution** is sufficient to accomplish the purpose of the interaction. A minimum screen resolution of at least 640x360 is recommended.
- **Video speed** is at least 30 frames per second.
- **Network** is secure, not only during consultations, but whenever you are exchanging information electronically with your clients. Always use an encrypted network, with the highest encryption form available (WPA/WPA2 is current standard). In addition, online testing sites can help you test your firewall.
- **Service providers** protect client information and ask whether/how they use or sell any information, whether client-specific or anonymized.
- **Client's telephone number** is readily available in the case of a connection interruption, so you can re-establish contact.
- **Client** has approved, in writing, any use of client or patient information that you might share publicly as a teaching example or otherwise.

TEST YOUR SETUP

Once you have your workspace for virtual consultations set up and needed equipment in place, test it by conducting a few trial sessions with people who are offsite. Check sound and picture quality, network speed, and background noise levels. Make sure your camera can be positioned so that the veterinarian, another veterinary healthcare team member, and/or the patient are clearly visible. Use test cases to ensure you are able to transmit photos, videos, documents, and other data successfully.

YOUR CLIENT'S TECHNOLOGY NEEDS

Environment and technology are important on the receiving end of your consultation as well. Here's some advice you can share with clients before their first virtual consultation:

- Plan to be in a well-lit space. Avoid back-lighting.
- Choose a quiet spot without a lot of distractions. Look for a place where you won't be interrupted.
- If available, use a camera that can pan, tilt, and zoom for maximum flexibility in viewing. A smartphone generally provides this flexibility.
- Discuss privacy and security and advise clients to use a secure network connection.
- Share with your client the same technology requirements listed above for your clinic: bandwidth of at least 10 Mbps in both the downlink and uplink directions; screen resolution of at least 640x360; and video speed of at least 30 frames per second.
- Where practical, you may recommend preferred video conferencing software and/or audio/video hardware.

HAVE A BACKUP PLAN

In the event of a technology breakdown that disrupts a session, you should have a backup plan in place. The plan should be communicated to the client before the session begins.

Your backup plan for a video consultation should include making sure you have the client's phone number so that you may call them directly in the case of a disrupted consultation. A telephone connection provides an opportunity to troubleshoot the issue together. It may also include referring the client to another provider or completing the encounter by voice only, with the option to request an in-person visit.

MONETIZATION OF VETERINARY TELEHEALTH

How do you decide what your veterinary practice should charge for telemedicine services? The good news is that you can customize your approach to what's best for your patients, clients, veterinary healthcare team, and practice workflow. Pricing models to consider include:

- Pay per use (e.g., \$X per consultation, graduated fee depending on length of consultation)
- Bundled pricing (e.g., included in overall cost of veterinary healthcare plan [per visit, monthly, annual])
- Subscription pricing (e.g., \$Y per month/per animal for unlimited access to the service[s])

Each practice should independently determine its fees for various telemedicine services based on the time spent by the veterinarian and other veterinary healthcare team members, the costs of these services to the practice, the value of the services to the client and patient, and competitive considerations in the market.

DETERMINE A PRICING STRATEGY THAT WORKS FOR YOU

As with any other veterinary service, it is critically important to develop a telehealth pricing strategy that works for your practice. This means considering how each telehealth offering fits into the overall service mix you provide.

If you offer a veterinary healthcare plan that bundles preventive services, consider including an audio/video consultation as part of the plan. This allows you to promote virtual consults as a value-added service for clients, and provides flexibility in how clients can access your veterinary healthcare team when questions arise about their animals' health. For example, if your healthcare plans for patients are structured around life stage, you can consider adding a telemedicine consultation as one of the evaluations you recommend for senior patients, or a behavioral consult for clients with newly acquired animals. In the case of food animal or equine patients, costs for telehealth services can be integrated into existing retainer for service fees, individual consultation fees, or can be accounted for in your hourly rates.

Maybe you are considering telehealth as a strategy to expand access to veterinary services after hours. That might mean offering video consultations as a separate service, with pay-per-use, pay-per-time spent, or pay-per-animal/-group of animals pricing, or some other model of your own choosing. If your practice has a large number of clients who struggle to fit veterinary visits into busy schedules, or you or your clients need to travel a considerable distance for in-person evaluations, it may make sense to offer subscription pricing that allows telehealth to be a key part of the service model for clients who want that option and with whom you have an established [VCPR](#).

When pricing telemedicine visits, you'll also want to think about what is involved in that visit as compared with what happens during a hands-on, in-person visit. Some things to consider:

- What are your costs in offering telemedicine, and to what extent will your appointment schedule need to be adjusted to appropriately accommodate telemedicine consultations and in-person visits?
- Will the added flexibility offered by a telemedicine visit offset the perceived value of an in-person examination in your clients' minds?
- Should you consider an "introductory rate" for telemedicine visits to encourage clients to try them?
- If a telemedicine visit leads you to recommend an in-person exam, do you want to bundle the costs to avoid charging for two full separate exams (e.g., a recheck charge for the in-person examination, because the history and other basic information have already been obtained)?

Fees incurred for the use of AI-assisted diagnostic products or RPM equipment and data analysis may be charged separately or integrated into fees for the diagnostic or professional services they support.

There's no one-size-fits-all approach to monetizing telehealth. What's important is to consider the needs and interests of your clients and patients, as well as your veterinary healthcare team and practice. Just as is the case when you offer any other new service, you might want to test the waters to see how receptive your clients are to various approaches before settling on the best one for your practice.

VENDOR CONSIDERATIONS

If your clinic uses a telehealth product or service provider, it's important to consider how the vendor structures its fees when deciding on your own pricing model. Sometimes, if the platform itself uses a third-party payer, additional fees may be involved. Arrangements can vary greatly depending on the provider, so it's important to understand the details. It also is important to ensure that the fee arrangement with the service provider complies with applicable state law related to fee-splitting, kickbacks or other payments for referrals.

WILL INSURANCE COMPANIES COVER A TELEMEDICINE VISIT?

It is wise to advise clients who have purchased insurance to assist in caring for their animals to check with their insurance provider to determine whether and how telemedicine visits are covered.

ADDITIONAL RESOURCES

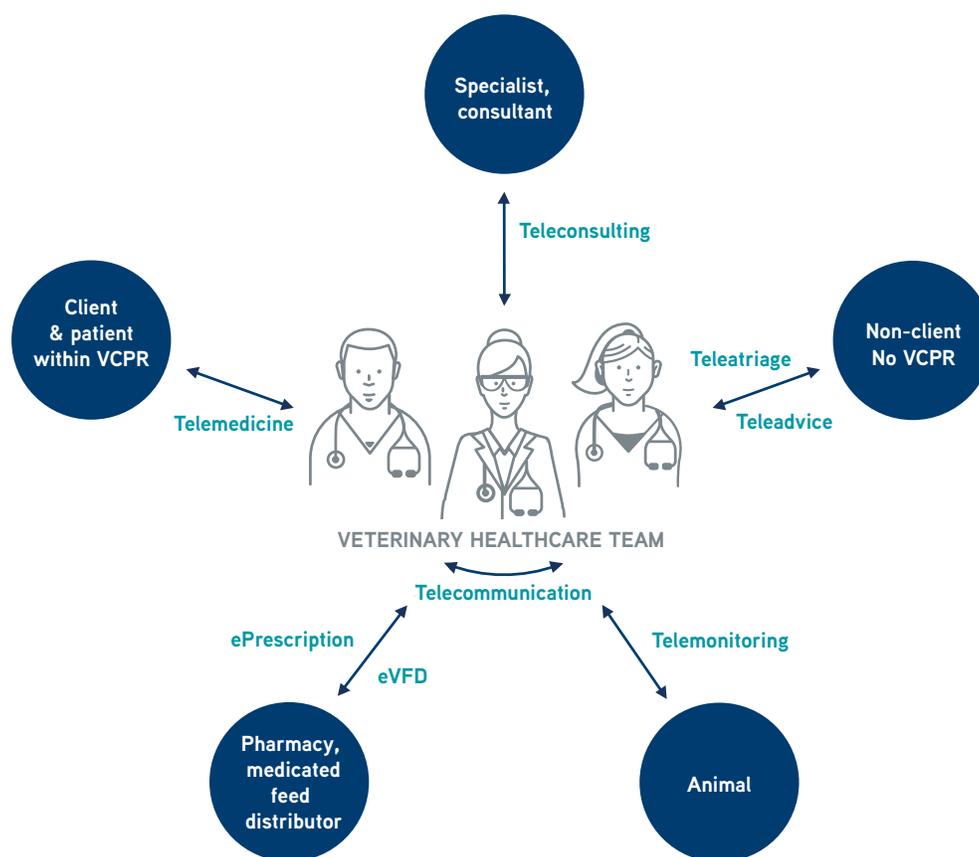
AVMA telehealth webcenter at www.avma.org/telehealth.

AAHA/AVMA Telehealth Guidelines for Small Animal Practice at www.aaha.org/telehealth.



Talking about telehealth

CONVERSE LIKE A PRO



Many terms are used when talking about telehealth. While they are related, each has a specific meaning.

Telehealth is the use of technology to remotely gather and deliver health information, advice, education, and patient care. Telehealth is divided into categories based on who is involved in the communication. For communication between veterinarians and animal owners there are two important categories that are distinguished by whether a veterinarian-client-patient relationship (VCPR) has been established.

- General advice, educational information, and teletriage are aspects of telehealth that may be delivered without an already established VCPR.
- Telemedicine includes the delivery of information specific to a particular patient and requires that a VCPR be established.

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Teleadvice includes providing any health information, opinion, guidance that is not specific to an animal patient's health, illness, or injury. This general advice is not intended to diagnose, prognose, or treat a patient's (or group of patients') physical or mental illness or injury. A VCPR is not required.

Example: *Members of the veterinary healthcare team make general recommendations about the importance of regular examinations, vaccination, and parasite prevention.*

Teletriage is the safe, appropriate, and timely assessment and management (immediate referral to a veterinarian or not) of animal patients, under conditions of uncertainty and urgency, via electronic consultation with their owners. A diagnosis is not rendered, and a VCPR is not required.

Example: *A veterinarian considers the owner's report of history and clinical signs and views a video of a patient to determine whether immediate referral to a veterinarian is needed.*

Telemedicine uses telehealth tools to exchange information about a patient's clinical health status electronically from one site to another. A VCPR is required.

Example: *The veterinarian uses technology to communicate with a client and visually observe the patient during a post-operative follow-up examination and discussion.*

Teleconsulting refers to a primary care veterinarian using telehealth tools to communicate with a veterinary specialist or other qualified expert to gain insights and advice on the care of a patient.

Example: *A veterinarian communicates electronically with a veterinary orthopedic surgeon regarding an equine patient with a fetlock injury.*

Telemonitoring (or remote monitoring) uses digital technologies to collect and transmit health data from a patient in one location to the veterinarian in a different location for assessment and recommendations. Telemonitoring may be synchronous or asynchronous.

Example: *A veterinarian evaluates glucose readings obtained from a wearable device affixed to a feline patient.*

ePrescribing/eVFD is the electronic generation, transmission, and filling of a medical prescription or order. State and federal requirements, including those for prescribing controlled substances, apply.

Example: *A veterinarian issues a Veterinary Feed Directive (VFD) with an electronic signature that authorizes use of a VFD drug or combination VFD drug in an animal feed.*

Tele-education is the application of information and communication technologies to distance learning.

Example: *A veterinary technician provides basic house/behavioral training for clients who are new pet owners by means of a live or recorded webinar.*

For more resources, visit avma.org/Telehealth



Federal requirements for the veterinarian-client-patient relationship

THE BASICS

The federal government regulates veterinary medicine and animal drugs very differently than it does human health care and drugs intended for human use. This is, in part, because veterinarians are key to maintaining a healthy, safe, and wholesome food supply and because they also play an important role in overseeing the judicious use of antimicrobials in animals. One important difference between human and veterinary medicine is that the U.S. Food and Drug Administration (FDA) has authority under the federal Food, Drug and Cosmetic Act (FDCA) over the **use** of animal drugs and human drugs by veterinarians, and the authority to define how a veterinarian-client-patient relationship (VCPR) is established for certain uses of animal and human drugs.¹ For these uses, FDA has authority to require the keeping of veterinary medical records and to access them at any reasonable time to verify and copy them.² Use of animal and human drugs by veterinarians that violates the federal VCPR parameters set forth in the FDCA and its implementing regulations results in the drug being statutorily deemed unsafe for the use and, if in animal feed, the feed is statutorily deemed adulterated.³

The USDA, which regulates veterinary biological products, also has promulgated rules defining a VCPR using the same language as the FDA.⁴

APPLICATION OF THE FEDERAL VCPR

The federal VCPR applies to any use of an FDA-approved human drug in animals, including over-the-counter (OTC) human drugs.⁵ It applies to any use of an FDA-approved animal drug in any manner that differs from its approved labeling (Extra Label Drug Use⁶), such as a different frequency of administration, different dose, different medical indication for its use, different route of administration, or use in a different species.⁷ It also applies to the use of compounded drugs by veterinarians⁸ and a veterinarian's authorization of a veterinary feed directive (VFD).⁹ All of these are very common occurrences in the day-to-day practice of veterinary medicine.

Establishing the federal VCPR requires a physical examination of the animal or timely and medically appropriate visits to the premises where animals are kept. The FDA does **not** allow the VCPR to be **established** through electronic means.¹⁰ FDA does allow the VCPR to be **maintained** electronically through telemedicine.¹¹ Veterinarians must comply with the federal VCPR in each of the circumstances in which it applies, irrespective of whether state law defines it differently.

The federal VCPR also applies in two important, but more limited, circumstances under USDA authorities. Veterinarians who manufacture biological products for use in their patients must do so within the context of the federal VCPR.¹² Veterinarians also must have established a federal VCPR when using prescription platform product biologics, which are a new category of biotechnology vaccines.¹³

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CONFLICTING STATE AND FEDERAL VCPR DEFINITIONS AND TELEMEDICINE

- Conflicting state and federal VCPR definitions (e.g., states allowing the VCPR to be established electronically) would cause significant confusion. The FDA and USDA have used the same regulatory definition to avoid such confusion.
- Veterinarians must comply with the federal VCPR requirements where they apply, regardless whether state laws are more lax. Activities where the federal VCPR applies are extremely common in day-to-day veterinary practice.
- State law and regulations relating to the establishment of a VCPR that conflict with federal law would also cause telemedicine encounters to be frustrating for many veterinary clients. A veterinarian who has not already established a VCPR that complies with federal requirements (i.e., by conducting an in-person examination/visit) could not even recommend the use of an FDA-approved human OTC product for an animal without violating federal law.
- There are many valuable uses of telemedicine within the parameters of a federal VCPR.

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1. 21 USC 360b; 21 CFR Part 530
 2. 21 CFR 530.5
 3. 21 USC 360b(a)(1), (2), (4) & (5); 21 USC 342(a)
 4. 9 CFR 107.1(a)(1)
 5. 21 USC 360b(a)(5); 21 CFR 530.2; 21 CFR 530.3(a)
 6. <https://www.fda.gov/animal-veterinary/resources-you/ins-and-outs-extra-label-drug-use-animals-resource-veterinarians>
 7. 21 USC 360b(a)(4); 21 CFR 530.2; 21 CFR 530.3(a)
 8. <https://www.fda.gov/animal-veterinary/resources-you/ins-and-outs-extra-label-drug-use-animals-resource-veterinarians#compounding>; FDA Draft Guidance for Industry #256
 9. 21 CFR 558.6(b)
 10. FDA letter to the American Veterinary Medical Association, April 6, 2017 – “Therefore, for the purposes of the federal definition, a VCPR cannot be established solely through telemedicine (e.g., photos, videos, or other electronic means that do not involve examination of the animal(s) or timely visits to the premises).”; During the pandemic FDA announced they will **temporarily** suspend enforcement of the federal VCPR physical exam and premises visit requirements. <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/cvm-gfi-269-enforcement-policy-regarding-federal-vcpr-requirements-facilitate-veterinary>. In this announcement FDA reiterated that under normal circumstances - “Given that the Federal VCPR definition requires animal examination and/or medically appropriate and timely visits to the premises where the animal(s) are kept, the Federal VCPR definition cannot be met solely through telemedicine.”
 11. *Id.* “The regulations do not specifically address the use of telemedicine to maintain an established VCPR. However, based upon the language of the VCPR definition provided above, nothing would prohibit the use of telemedicine (e.g., use of photos, videos, or other electronic means that may be considered virtual) to allow the veterinarian to keep informed and able to make medical judgments regarding the health of the animal(s) and the need for medical treatment between periodic examinations of the animal(s) and/or timely visits to the premises where the animal(s) are being kept.”
 12. 9 CFR 107.1(a)
 13. USDA Veterinary Services Memorandum 800.214