Technology advances and the impact on veterinary practices

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Christopher Shivelton Queen BSc, BVSc, MRCVS, takes a look at how technology developments impact life in practice and beyond

Summary

The word technology means different things to different people. Many of us think of smartphones or sophisticated computers as cutting-edge technology and perhaps don’t imagine much in the way of technological advancement is occurring in everyday clinical practice. The truth is a lot of advancements in a variety of technologies are taking place in veterinary practice, and it is some of these this article will explore.

Key words

Veterinary technology, e-learning, practice marketing, digital imaging, CPD

TECHNOLOGY is, for me, anything that helps us do our jobs better, whether it enables us to perform tasks faster and more effectively, or enables us to achieve a better outcome for our patients and clients. In essence, technological advances should enhance both our personal and working lives. There are three areas in which we see advances in technology in practice. The first is clinical technology: the classic “vetty” gadgets, gizmos and systems that make the process of diagnosing, treating and managing our patients easier and more effective. Secondly, there are advances in practice management and client communication technologies, an area that I believe has seen the biggest changes and that offers the biggest opportunities to impact on our clinics’ bottom lines. The third area is the use of technology
Clinical technology

Although this article focuses on first opinion practice, it is worth noting that, as general practitioners, we have ready access to the latest clinical technology and cutting-edge diagnostics and treatments through referral to our specialist colleagues. The veterinary team is able to do pretty much anything that is clinically possible, due largely to huge advances in knowledge, expertise and technology at our disposal within specialist fields.

Imaging is one of the areas in which technology is at its most obvious. For many of us, the days of spending long periods stuck in a dark, hot and generally uncomfortable radiography suite taking multiple radiographs and getting frustrated at how long it can take just to get a series of simple images are over. It was a revelation when I moved to my second job and discovered the joys of digital radiography. No more fumbling in the dark with open cassettes and film or handling noxious chemicals, and the images were available immediately. The system I first encountered was CR-tech, or computed radiography technology, which involved the exposure of a plate and then the processing of these films by way of a digital system. Further advances include the emergence of DDR-tech (direct digital radiography), in which the plate is exposed and an image quickly appears on screen without the need to manually place the plate in a processing unit. This is possible due to a scintillated plate, or direct digital panel, which replaces the plethora of film cassettes that we’re used to using. Never has the phrase “take a quick x-ray” been so accurate.

Parallel to hardware advances are developments in software, meaning that taking, processing and working with radiographic images is more user-friendly and clinically helpful. Bespoke software packages will guide the vet through the correct measurements required for planning a tibial plateau levelling procedure, for example. The reduction in the size and amount of hardware, coupled with the options of cloud storage, where digital files are stored on a remote server away from the clinic (think Facebook, whereby your profile is actually hosted on a server in the US, or elsewhere, and not on your desktop) has meant that even the smallest clinics can boast an impressively powerful and versatile radiography capability, with none of the hassle associated with secure storage, organisation and retrieval of hundreds of radiographs.

Ultrasound technology is another area where we have seen impressive changes in practice. From super-powerful, all singing, all dancing set-ups, such as the Logiq S7 Expert – which makes use of new matrix probes – and B-flow technology, useful for assessing vascularisation in tumours, for example, to the miniaturisation of scanners, allowing us to both reduce the amount of space taken up in clinics and take the scan to the patient, whether in a hospital or out on calls, the changes are staggering. To have that kind of imaging power in a device no bigger than a laptop is perfect example of the advances in technology we are enjoying in practice.
**Revolutionary thinking**

A true technical advance is one that takes an established way of doing something and completely rethinks it or revolutionises it. One such example is the v-gel, a new airway system for ventilating anaesthetised patients. The point to note is that it isn’t an endotracheal tube – that’s the revolutionary thing about it. Instead of inserting into the trachea, through the larynx, the v-gel creates an effective seal around the pharyngeal, laryngeal and upper airway tissues, thus positioning a large-diameter opening directly over the larynx to permit normal gas exchange with no trauma to, or even contact with, the larynx.

A key advantage to this system is that rather than needing a tube that is in effect smaller in diameter than the trachea, the v-gel allows the tube to be larger in diameter than the patient’s trachea, thus, maximising air flow and exchange. The soft rubber tip, which automatically “plugs” the oesophagus, also serves as a good counter to the risk from regurgitation under anaesthetic. Currently available for rabbits and cats, with dog versions in development, these new devices represent an example of a smart, cleverly designed advance to an existing technology.

**Client engagement**

We’re all aware of the need to better engage with and market to our clients – current and prospective – with competition between practices apparently on the increase. Methods for doing so have never been so plentiful nor powerful, yet many of us are still failing to maximise on the potential returns that doing so could bring.

A simple way to engage with clients, and those who show an interest in our services, is through email and the careful but effective management of email lists. Email management services, such as MailChimp, which enable even the most technophobic of users to set up a mailing list, design a web form to be posted on a website, social media, or even accessed via a link that can be emailed, and then organise, manage and communicate effectively with the people on that list, are brilliant for practices. Imagine, for example, how impressed your clients would be to receive an email on their pet’s birthday wishing them many happy returns. Combining this thoughtful gesture with the suggestion of a senior health check (if the pet has just turned seven, for instance), is an easy yet effective way of driving more business through your doors.

Through careful segmentation of lists, such as having a list containing only those clients who own cats under seven, it becomes much easier to offer them relevant information they will find interesting and useful, resulting in a greater level of trust in and bonding with you and your practice.

How many of us actively ask our clients or new prospects for their email address? My guess is very few. These days people almost expect to be asked for it and we should be making better use of the advances in email and online marketing, much of which is available either free or at very low cost, especially when compared to other marketing media, such as print. Done well, email could be the best use of technology you have in your practice at present.
Social media

Social media is another powerful way to engage with clients and make us stand out from the crowd. People are interested in what we do as vets and nurses and, what can often seem like a mundane event in our clinics, may form the basis of a fantastic Tweet or Facebook post, sparking a conversation and raising the prominence of the veterinary professions and our clinics in a good way. Care must be exercised, but social media is a surefire example of a technology development that veterinary practices have a lot to gain from. Some clinics have embraced this aspect of marketing, using it to converse with clients and to provide updates, information and education through the use of videos, for example. Engaging clients in this manner is a great way of strengthening the bond between client and practice.

Some clinics have embraced technology more than others, with some rewriting the rule books on how to manage a practice. Vets Klinic in Swindon has just one desktop computer in the practice, with each vet and nurse issued his or her own personal iPad, on which the clinic’s bespoke practice management system is accessed. This means that patient records are readily accessible no matter where you are in the clinic, making the consulting rooms and other areas clutter-free. Use of tablets also enables patients’ time within the clinic to be recorded, and photos and notes about their stay easily uploaded to their clinical “timeline”.

Owners can access their pet’s timeline and see in real time how their hospitalised pet is getting on. Clients are encouraged to register and book everything from appointments to surgery online, with an airline-style booking system showing prices and times of appointments with each vet, and featuring real-time variable pricing and a discount for clients who pay in advance of their appointment. Tablets are excellent devices for use in a busy hospital environment, with the ability to readily access a patient’s notes wherever you, as the vet or nurse, happen to be within the clinic.

E-learning

The internet has revolutionised the way we access and consume CPD, with webinars and online learning resources becoming ever-more commonly used, and available across virtually every platform, from smartphones to tablets and the trusty desktop computer. The advantages are clear: access to reliable, interesting CPD without the need and expense of taking time out of our busy clinical lives or the hassle of travel to attend lectures. With a plethora of providers, including many of the drug companies, learning online can be achieved at little to no cost and represents a very cost-effective way of ensuring we keep our CPD current and maximises our CPD budgets.

The only limitation I can see from my experience of “attending” a webinar is the fact that as the event was taking place on my computer and in the comfort of my own home, unless the speaker was particularly engaging, it was very easy to get distracted while convincing myself that I was still learning as I had the lecture playing. This, coupled with the knowledge that I could always go back
to the lecture and view it again at another time, only fuelled my distraction. Somehow there just
seems less risk of this happening when you’re physically present with the lecturer and other CPD
delegates in the same room. Or maybe that’s just me and everyone else is a consummate good
student at home?

With so many other distractions vying for our valuable attention, the challenge, as I see it, is for e-
CPD providers to ensure their content is as engaging and interesting as possible. It should include
mixed media, from standard lecture-style presentation slides and speech, to clever use of graphics,
video and animations to really bring subjects to life and inspire learners. After all, the last thing any
nurse or vet wants after a long, hard day in the clinic is to sit through a dull lecture, even if you do
have the option of switching over, as it were.

Challenges

A challenge for the future is to see how e-CPD can deliver more practical training, with a physical
presence still very much required for practical CPD courses. Maybe a stepping stone will be the
provision of learning kits, complete with equipment and materials that the student can make use of
while receiving remote instruction via a webinar or other e-learning tool. Although e-learning is
delivering a wider and more accessible range of CPD to the profession, available at any time,
anywhere, and from any platform, it is unlikely it will usurp the strong desire we have as humans to
actually congregate in the same space to receive educational instruction and socialise, as is clearly
demonstrated by the continuing popularity of congresses.

Technology and advances in it are all around us in practice, regardless of whether we realise it.
From the scanners we use to make diagnoses to the equipment we employ to safely manage our ill
patients, or the plethora of software tools, technology is pervasive and empowering. It has changed
the way we engage with clients, market our services, and continue our professional development,
and all pointers are in the direction of yet more innovation and technological advancement. I watch
with excitement.

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