

# Improving large animal practice efficiency with credentialed veterinary technicians

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Large animal veterinary practice faces many challenges, including competitive markets, labor shortages, increasing costs of goods, and more. One major concern that our profession currently recognizes is a decrease in the total number of large animal veterinarians available to service producers despite increased demand for large animal veterinary care in many regions.<sup>1,2,3</sup> Recent data from the AVMA states that less than 4% of veterinarians are employed in food-animal practice.<sup>1</sup> There has also been a 15% decline in the total number of veterinarians who practice food animal or mixed animal medicine.<sup>1,3</sup> This makes it extremely difficult for livestock to get adequate veterinary care to keep herds and flocks healthy. The lack of veterinary care and oversight creates a significant concern for animal welfare and food safety. As this shortage continues, the scarcity of large animal veterinarians for foreign animal disease surveillance becomes a significant concern in securing the business continuity of our food supply.

According to the USDA, 500 counties across 46 states report critical veterinarian shortages in 2022.<sup>2</sup> Since the early 2000s, more veterinarians have elected better pay and more reasonable work hours that are observed in practices that focus primarily or exclusively on “companion” animals.<sup>3</sup> You can walk into almost any veterinary practice today and undoubtedly find that veterinary teams are under severe strain. While these issues existed before the Covid-19 pandemic, they have been accelerated post-pandemic.<sup>4</sup> Considering the number of veterinarians who will be retiring and the number of new graduates entering practice, a new study estimates that veterinarians may need to be as much as 40% more productive to fulfill the demand for care by 2030.<sup>4</sup> In recent years, there has been a significant increase in the number of small hobby farms that are vastly spread out geographically, making it more difficult for veterinarians to cover the need without being overloaded.<sup>3</sup> Additionally, traveling excessive distances is not economically sound for a veterinary practice. More time spent in the truck and less time spent seeing patients results in less revenue generated. Furthermore, veterinary care can sometimes be cost-prohibitive in large animal medicine because of an animal’s monetary value.

Many veterinarians leave large animal practices because of long hours, late nights, burnout and a poor work/life balance.<sup>5-7</sup> One study found that mixed animal practitioners’ most frequently reported challenges due to working more hours than scheduled, weekend work, on-call, and financial issues.<sup>7</sup> Unfortunately, bullying and discrediting of other professionals, compassion fatigue, and barely livable wages have also plagued our profession, causing people to leave the industry in astounding numbers creating a workforce challenge.<sup>5,6</sup> A 2022 *Today’s Veterinary Business* survey revealed that 634 of the 925 respondents left veterinary medicine altogether.<sup>16</sup> Of the respondents, 291 were still in veterinary medicine, and of the 291, nearly half (135) reported that they would leave practice within the following year.<sup>16</sup> The main drivers were low wages, burnout, a toxic work environment, and poor workplace culture.<sup>16</sup> Most importantly, 46% of them would return

to practice if the reasons they left were addressed and fixed.<sup>16</sup>

It is essential that we find ways to keep veterinary practices sustainable by maintaining and fulfilling the current generation’s needs without compromising future generations’ desires. Also, it is vital to ensure financial growth, quality patient care, and good social well-being of all veterinary professionals. Two significant problems that warrant solutions have been identified: doctors are burned out because of the increased patient demand and a poor work-life/balance, and veterinary technicians are dissatisfied with not being used appropriately and trusted to do their jobs.<sup>5-9</sup> The lack of technician trust and utilization was revealed in the 2022 NAVTA Demographic survey that found the top barriers to better utilization were a lack of trust or confidence by the veterinarian in the veterinary technician’s skillset and not allowing veterinary technicians to handle tasks they are licensed to perform.<sup>8,9</sup> Forty-seven percent of the survey respondents reported dissatisfaction with job fulfillment in the veterinary technology profession.<sup>8,9</sup> There is also an impracticable fear that veterinary technicians will replace veterinarians. This is improbable because veterinary technicians cannot practice without being employed by a veterinarian. Veterinary technicians do not have the authority to perform certain duties such as prescribing medications, performing major surgeries, or engaging in the practice of regulatory medicine.

One growing business model that is becoming increasingly popular and promotes improved practice productivity is properly utilizing credentialed staff members (VTS, CVT, LVT, RVT). In certain jurisdictions, credentialed staff can act as “providers” of care as an extension of the supervising veterinarian for various veterinary services. This model also promotes the best utilization of a credentialed veterinary technician’s education and skill set while simultaneously alleviating excessive strain on the veterinarian’s patient load. Another way to promote improved practice efficiency is employing well-trained veterinary assistants responsible for blood draws, restraint, running automated laboratory tests, husbandry, environmental management, instrument sterilization, and administrative duties like scheduling appointments and entering charges, much like a medical assistant or nurse assistant would in human medicine.

In a mixed-animal hospital, under direct and indirect supervision, depending on what the jurisdiction allows, credentialed technicians can perform advanced technical procedures, dispense prescribed medications, and provide advanced nursing care.<sup>10</sup> Credentialed veterinary technicians can perform many routine preventive care appointments like vaccines, diagnostic testing and reproductive care, allowing doctors to see more in-depth medical or surgical cases. Credentialed veterinary technicians can assess and manage small and large animal sick appointments from start to finish when a doctor’s schedule is overloaded. This is possible in some jurisdictions under various levels of supervision because credentialed veterinary technicians must follow an established written or verbal protocol

developed by the supervising veterinarian. Protocols include guides for working up sick patients, performing diagnostic testing, and interpreting the results so that the veterinarian can create a medical diagnosis from those findings and prescribe treatment.<sup>10</sup> Credentialed veterinary technicians should be able to consult with the supervising veterinarian in person or by phone for all cases when needed. Consultation is also required when a case does not align with the written or verbal protocol to ensure appropriate collaboration and the provision of a high standard of care.<sup>10</sup> In 2022, IDEXX conducted one of the largest empirical studies on practice productivity, incorporating input from more than 750 practices and analyzing more than 4.2 million clinical visits. Interestingly, 87% of practices saw an opportunity to increase their practice's operational efficiency, and 65% indicated that technician-led appointments positively impacted productivity.<sup>4</sup> Practice personas classified in the study as "well-oiled machines" were evidenced by technician-led appointments for high-value services such as wellness visits and with medical staff supporting the veterinarian who performed higher-skilled tasks during clinical visits.<sup>4</sup> This indicates that practices expanding their model to include credentialed veterinary technicians will achieve higher productivity.

An additional growth opportunity in the profession is the need to improve transparency between veterinarians and the public regarding the titles and roles of non-veterinarians within veterinary practice. Many are led to believe that anyone who is not a veterinarian working in a veterinary practice is a veterinary technician, which is not the case. Many states have title protection for credentialed veterinary technicians, which could result in a fine or misdemeanor for a veterinarian who improperly represents someone in their practice as a veterinary technician. It is essential to understand that a veterinary technician is an individual duly licensed to practice veterinary technology under the provisions of the state's veterinary practice act.<sup>10,11</sup> A veterinary technician receives a certificate from a state-recognized program or an associate degree from an AVMA-accredited college-level veterinary technology program.<sup>10,11</sup> A veterinary technologist is a bachelor's degree recipient from an AVMA-accredited college program.<sup>10,11</sup> To become credentialed, veterinary technicians and technologists must pass a national board certifying examination called the VTNE or Veterinary Technician National Examination.<sup>10,11</sup> A veterinary technician specialist is a board-certified veterinary technician or veterinary technologist who has been mentored by a diplomate or veterinarian. A specialist must complete a formal process of education, training and post-graduate clinical experience before passing a board examination through a specialty academy approved by the Committee on Veterinary Technician Specialties of the National Association of Veterinary Technicians in America.<sup>11,12</sup> This messaging should be passed on to your clients and the public so that they can recognize and appreciate the education and credentials of your veterinary technician, technologist or technician specialist.

Understanding the true value of these technicians in veterinary practice will undoubtedly increase client perception and acceptance of technician-led appointments.

It is crucial that veterinarians trust the credentialing process of veterinary technicians. It should be recognized that all credentialed veterinary technicians must possess a baseline of knowledge to pass the national board examination, similar to veterinarians who must have a baseline of knowledge to pass the NAVLE. Additionally, most AVMA-accredited veterinary technology programs generally have minimum requirements

for veterinary contact hours and passing grades in basic math, sciences and communication prerequisites before a student can start a veterinary technology core curriculum.<sup>13</sup> Many program applicants undergo an interview or application process before being admitted into an accredited program.<sup>13</sup> The average tuition costs for degrees in veterinary technology can range between \$30,000 and \$86,000, depending on the degree level obtained.<sup>14</sup>

The core curriculum in a veterinary technology program includes coursework and adequate clinical experiences in anesthesia, pharmacology, anatomy and physiology, parasitology, clinical pathology, microbiology, nutrition, dentistry, large and small animal surgical nursing, medical terminology, diagnostic imaging and instrumentation, reproductive physiology, laboratory and exotic animal medicine, large and small animal medicine, animal husbandry, and public health.<sup>13</sup>

Considering the high level of education obtained, a loss of practice productivity often results when veterinarians do the work of qualified veterinary technicians. This prevents or delays the veterinarian from attending to complex medical cases, performing surgeries, or executing regulatory duties; therefore, causing revenue losses and further delaying patients the care they need. By utilizing credentialed technicians appropriately, the practice can see more patients without increasing operating hours, thus improving everyone's work/life balance and promoting more timely patient care. Proper utilization also results in a more engaged team, higher job satisfaction, less turnover, and increased practice revenue. In a 2007 JAVMA study, 328 veterinarians responded fully to the questions on gross practice revenue and staff; their responses were included in the analysis.<sup>15</sup> Results indicated that the number of credentialed veterinary technicians per veterinarian in a practice had a significant ( $P = 0.02$ ) impact on gross practice revenue, such that the average veterinary practice generated \$161,493 more gross revenue for each unit increase in the number of credentialed veterinary technicians per veterinarian.<sup>15,16</sup> Adjusting for inflation in 2022, that is approximately \$220,000.<sup>15,16</sup> On the other hand, non-credentialed veterinary assistants per veterinarian were not significantly associated with gross practice revenue.<sup>15,16</sup>

Synergie Veterinary Consulting reviewed simple daily tasks in veterinary medicine, like intravenous catheter placement, and found a significant loss in potential revenue when a veterinarian performed the task. The group concluded that if a veterinarian places a catheter 50% of the time, the potential loss in practice revenue is \$176,175 annually.<sup>17</sup> The revenue-generating roles of a veterinarian are medical diagnosing, prescribing, performing surgeries and executing regulatory roles.<sup>11</sup> The revenue-generating roles of a credentialed veterinary technician can include several advanced nursing and technical skills like endotracheal intubation, anesthetic administration with patient monitoring like ECG, blood pressure, etc., as well as the performance of CPR and emergency resuscitation when warranted.<sup>10</sup> These highly skilled veterinary technicians should perform surgical assisting, suturing of surgical skin incisions, and dental procedures, such as scaling and filling; some jurisdictions also allow simple extractions.<sup>10</sup>

Credentialed veterinary technicians should complete physical examinations, necropsies, collect samples for diagnostic testing (except when in conflict with state or federal regulations, i.e., Coggins), interpret diagnostic results, and administer or dispense prescribed treatments.<sup>10</sup> Technicians are educated on and capable of calculating, administering and monitoring fluid therapy, blood and plasma transfusions, and placing

abdominal, thoracic, nasogastric and orogastric tubes.<sup>10</sup> Furthermore, the application of casts, splints and bandages, as well as the performance of diagnostic imaging, including radiology, ultrasonography, CT and MRI, are well within the scope of practice for veterinary technicians.<sup>10</sup> Other advanced skills like paracentesis, abdominocentesis, cystocentesis and the placement of advanced IV, IO, IA, epidural catheters and intraarticular injections align with a veterinary technician's ability to be a valued asset to a practice.<sup>10</sup> Credentialed veterinary technicians can execute many physical rehabilitation modalities such as laser, shockwave and pulsed electromagnetic therapy.<sup>10</sup> Large animal practices in some jurisdictions may utilize veterinary technicians for semen evaluations, reproductive tract scoring, pregnancy examination of food animals with or without diagnostic equipment, embryo transfer and artificial insemination. Additionally, veterinary technicians can perform many routine livestock management practices like castrations, dehorning, tail docking and managing uncomplicated dystocia and prolapses.<sup>10</sup>

Understanding the language used in a veterinary practice act is critical to ensure compliance. A supervising veterinarian is often defined as a veterinarian who assumes responsibility for the veterinary care given to a patient by an individual working under his or her direction.<sup>10,11</sup> The supervising veterinarian in most states must have an established veterinary-client-patient relationship (VCPR) before a veterinary technician can provide care.<sup>10,11</sup> The term immediate supervision means the supervising veterinarian is in the immediate area and within the audible and visual range of the patient and the individual treating the patient.<sup>10,11</sup> Direct supervision, however, means the supervising veterinarian is readily available on the premises where the patient is being treated.<sup>10,11</sup> Last, indirect supervision means a supervising veterinarian need not be on the premises, but has given either written or oral instructions for the treatment of the patient and is readily available for communication.<sup>10,11</sup> The American Association of Veterinary State Boards (AAVSB) contemplates that this definition of indirect supervision includes and incorporates technological advancements and the ability of persons to communicate through electronic and other means as a form of supervision.<sup>10,11</sup> Of course, such supervision must maintain the necessary contact to be as effective as the veterinarian deems appropriate, using professional judgment.<sup>10,11</sup>

Some jurisdictions allow veterinary technicians to work under indirect supervision.<sup>10</sup> This allows technicians to go out on a farm visit to assess a patient and follow a written or verbal protocol on how to treat or manage the patient.<sup>10</sup> The veterinary technician can also report examination findings to the veterinarian by phone or other electronic means, who may advise and prescribe treatment so that the veterinary technician can dispense or perform treatment without the veterinarian on the premises as long as a veterinarian-client-patient relationship (VCPR) pre-exists.<sup>10</sup> This strategy allows the veterinarian to divide and conquer ensuring all patients within the practice are seen in a timely manner to prevent a delay in care. Veterinary technicians can perform many of the routine management procedures that small farms may need assistance with like castrations, disbudding, dehorning, vaccinations and many reproductive services.<sup>10</sup> This presents an excellent opportunity for veterinary technicians to provide client education on preventive herd health programs and perform disease surveillance to ensure biocontainment when necessary. A thorough review of each state's veterinary practice act on allowable tasks must be performed to determine how a veterinarian can best utilize a credentialed veterinary technician. Unfortunately, many

practice acts are vague, nondescriptive and lack a defined scope of practice; therefore, it would be advisable to contact a state's licensing board to receive the most current and accurate information regarding allowable tasks since legislative changes have recently taken place in several states across the country.

Unfortunately, many veterinary care services have slowly, over time, been cherry-picked from the profession and turned into exemptions in many veterinary practice acts across the country. This has allowed lay individuals to perform procedures that have been traditionally considered the practice of veterinary medicine. Some of those procedures include artificial insemination, embryo transfer, pregnancy determination, equine dentistry and physical rehabilitation treatment modalities like laser, shockwave and pulsed electromagnetic therapy. One option to return these services to the profession and ensure high-quality patient care is to utilize the skills of credentialed veterinary technicians under the supervision of licensed veterinarians. This allows veterinarians to expand their scope of services offered and potentially their service areas by delegating these tasks to credentialed veterinary technicians.

Just like new graduates from veterinary school need mentorship, veterinary technicians need the same. It is unrealistic to expect new graduate veterinarians to hit the ground running when entering practice with one or two dystocias under their belt and limited clinical experience. The same applies to veterinary technicians, who will build on their didactic teachings through daily clinical experiences like new veterinarians. Continuing education opportunities and career advancement guidance through a specialty academy can provide the technician and the practice with new growth opportunities. Advanced clinical instruction in specialties like large animal internal medicine, equine nursing and production medicine can give technicians the expertise to provide consulting services and perform advanced technical duties that may contribute to increased practice profitability and high-quality patient care.

Once a practice devotes time and invests in training new staff members, considerable effort should be devoted to retaining those staff members to promote job fulfillment and to get a reasonable return on the investment. Staff turnover is an expensive problem that can be avoided when practices learn how to motivate their employees properly. The average salary range for veterinary technicians in 2022 was \$26,822-\$52,280.<sup>18</sup> A livable wage ranges from \$30,888 to \$48,110.40, depending on location.<sup>19</sup> A livable wage is the income required to cover basic family needs without reliance on outside assistance.<sup>19</sup> The 2022 NAVTA Demographic survey found that one-third of veterinary technicians have more than one job in order to support their families.<sup>8,9</sup> According to an article by the Bottom-Line Group, labor-intensive service businesses should typically spend 20-30% of revenue on their employees' wages, depending on profitability.<sup>20</sup> A professional employee benefits package may also include health insurance, retirement benefits options, continuing education allowance, association dues and uniforms. A 2019 study in the *Canadian Veterinary Journal* conducted by the Ontario Association of Veterinary Technicians demonstrated that the more veterinary technicians are paid per hour, the higher the clinic's gross annual revenue per veterinarian.<sup>21</sup> This study also highlighted the substantial economic benefits of appropriately utilizing a credentialed veterinary technician and improved work-life balance observed when veterinarians can focus on advanced medical and surgical skills and let technicians perform their duties.<sup>21</sup>



When utilizing credentialed veterinary technicians for veterinary care, a practice must charge a proper fee in exchange for the services rendered. Calculating the cost of veterinary services can be complicated; however, the practice should examine the time of each employee involved in the service and consider the employee's salary and any equipment utilized to complete the service.<sup>22</sup> Most of the time, technician-led appointments minimally involve a veterinarian, but a veterinarian consultation is needed occasionally. A veterinarian's time developing protocols for technicians to follow outside of appointments should also be considered. This often equates to what the practice currently charges for veterinarian-led services. After all, the veterinarian still provides their expertise, and the patient receives high-quality care. If a veterinary practice markets and promotes its veterinary technicians' credentials and professional experience effectively, it could directly influence how clients perceive a service's value and increase their acceptance of technician-led appointments. Gaining the trust and acceptance of clients does not happen overnight for any veterinary professional. Trust must be earned by performing well and through shared experiences; clients will not get the opportunity to trust veterinary technicians if they are never given the chance. Having your veterinary technicians engage with clients regarding patient status updates, explaining disease processes, and developing biosecurity plans or vaccine programs is a great way to build producer confidence in your technical staff. Another way to boost productivity and workplace culture is to utilize veterinary technicians in the emergency on-call rotation with a secondary on-call doctor if a case requires additional medical or surgical intervention. Emergency services must be limited to client-owned animals to comply with the VCPR requirements before a veterinary technician can provide care.

As discussed previously, veterinary clinics with the persona of being "well-oiled machines" have improved productivity.<sup>4</sup> Vital to the practice's success was practice culture, which consisted of ensuring job satisfaction through increased staff compensation designed to reward and motivate employees.<sup>4</sup> These practices had well-bonded teams with clearly defined roles and responsibilities and were continually reinvesting in staff training and empowering their team.<sup>4</sup> Proper utilization of credentialed veterinary technicians and role delineation in veterinary practices can help improve practice productivity. Veterinary clinics that are struggling to remain healthy should consider examining the efficiency of the workplace to identify areas needing improvement. Determine what is required to implement changes to enhance practice productivity while also supporting the high standards of quality veterinary care. Precedence must be given to work-life balance to promote personal well-being when considering the future of veterinary practice models. Empowering and trusting credentialed veterinary technicians to perform assigned duties within the scope of practice provides a unique opportunity for the profession to address many of the current challenges encountered.

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