

#### **Purpose of the Survey**

At the outset of 2025, AIV-Vet wanted to know how veterinary clinics were doing with fluid delivery. So we asked more than 100 clinics currently using fluid delivery equipment for their perspectives on equipment upgrades, workload, purchasing decisions, professional challenges, and technology adoption. We wanted to gain a better understanding of how vets are using fluid warmers and fluid delivery systems in practice across the country.

And we want to share that understanding with you. So your practice can benefit from the experiences of others already using fluid delivery equipment.

#### **Demographics**



Gender Breakdown:

51% female

49% male

Age Range:

29 to 56 years old



Respondent Practice Type: 87% Companion Animal.

5% Mixed

4% Equine

5% Food Animal



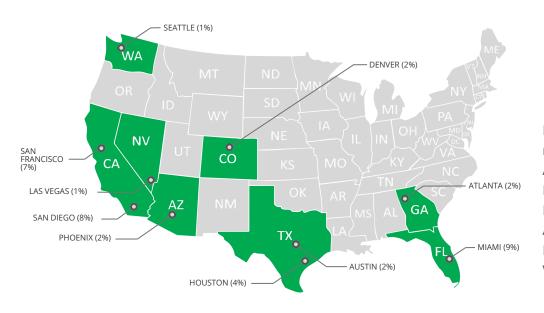
Respondent Racial Groups:

70% White

16% Hispanic/Latino

11% Asian

3% Black or African American



Locations with most respondents: Atlanta, San Francisco, San Diego, Phoenix, Seattle, Austin, Houston, Denver, Miami, Las Vegas

#### **Key Findings at a Glance**

- 80% of respondents agree that infusion pump upgrades improve patient outcomes.
- Strong cost concerns exist, with many professionals struggling to modernize while managing expenses.
- Technology adoption varies, with younger professionals more inclined to integrate digital solutions.



1. Infusion pump workflows vary between routine procedures and critical care scenarios in my workplace.

87% Agree 13% Strongly Agree

87% of respondents answered "Agree".

#### Top Responses:

"Workflows definitely vary between routine and critical scenarios. For routine cases like setting up fluids for a post-op recovery or treating mild dehydration, it's pretty straightforward. But in emergencies like a dog with severe heatstroke or a cat in shock, we follow different protocols that are less defined. We're adjusting rates constantly, monitoring vitals closely, and sometimes switching fluids or meds on the fly. The pumps we have now aren't as strong in those emergency moments as I would prefer"

**Jasmine**, 35 Atlanta, GA Companion Animal

"When I deliver IV medications for post-operative care or administer precise antibiotic protocols, I set a flow rate and check it throughout the treatment. In emergency scenarios where rapid adjustments are needed, I tweak the rate in real time. My preventive maintenance program, which includes regular checklists and performance reviews, helps limit instrument-related errors across everyday procedures and more critical situations."

**Lisa**, 48 Sacramento, CA Companion Animal

"In our practice, during procedures like laparoscopic spays, I set the infusion pump to deliver warmed fluids that help maintain the patient's core body temperature. Before integrating a fluid warmer body temperature was always a concern. Now our usual workflow sort of adapts between standard infusions and more critical adjustments so we get good outcomes as far as families are concerned and good performance in terms of our own benchmarks for quality."

**David**, 40 San Jose, CA Companion Animal

Infusion pump workflows in veterinary settings differ notably between routine and critical care. While standard procedures use preset protocols and consistent monitoring, emergencies like severe heatstroke require rapid adjustments and real-time oversight. This gap highlights a market opportunity for more robust, adaptable infusion pumps.

2. Spikes in patient volume make managing fluid delivery with infusion pumps difficult in my clinic/practice.

# 60% Strongly Agree

32% Agree 8% Neutral

60% of respondents answered "Strongly Agree".

#### Top Responses:

"We can get a rush of patients needing IV therapy in the same afternoon. Sharing pumps between rooms causes delays if the units aren't immediately available. My staff hustles to avoid any bottleneck, though it still adds stress to an already busy schedule."

**Heather**, 39 Tampa, FL Companion Animal

"Sudden surges really test our infrastructure. I've had days when a spike in cases meant coordinating multiple pumps simultaneously during a heat stress outbreak. It's a logistical challenge that can slow down treatment, which isn't acceptable in a high-volume food operation where my customers pay close attention to the value of each individual animal."

**James**, 50 Des Moines, IA Food Animal

"Our patient volume is generally steady, but on occasions when a few emergency cases occur simultaneously, coordination becomes a challenge. Even a small spike requires rapid reallocation of pumps. The digital alerts in our system help me quickly reassign devices to ensure that no treatment is delayed, keeping our workflow smooth without overwhelming the team."

**Stephanie**, 37 San Diego, CA Companion Animal

Surges in patient volume lead to treatment delays and increased staff stress due to shared infusion pumps. While digital alerts offer some relief, managing multiple patients, especially during emergencies, remains challenging. This highlights a market need for pumps with convenient forms of automation and streamlined case allocation.

3. The same frustrations/failure points often reoccur with the infusion pumps we currently use.

97% Agree Strongly Agree

97% of respondents answered "Agree".

#### Top Responses:

"Two machines repeatedly flag line occlusion or air-in-line alerts. Resetting them is manageable, though these disruptions add up over a packed workday. Tracking each alert helps me decide if a repair will extend the machine's lifespan or if a refurbished or new replacement is more practical."

**Robert**, 49 Houston, TX Companion Animal

"Some older infusion pumps seem to get stuck in a loop of random sensor alarms. My staff resets them, and they behave for an hour or a day, then the alarm flashes again. We keep a log to see if there's a pattern or if we're better off investing in something more reliable."

**Daniel**, 43 Las Vegas, NV Companion Animal

"I've noticed the same issues cropping up. A few times, the pump would alarm during a routine IV for a pet, and I've had similar glitches on field calls treating dehydrated sheep. These recurring problems make it hard to rely on the equipment fully."

**Richard**, 47 Dallas, TX Mixed

"We get battery errors or random sensor alerts more often than I'd like. Sometimes the pump's interface freezes, and we have to power cycle it. It's repetitive and annoying, especially in time-sensitive situations."

**Brittany**, 31 Seattle, WA Companion Animal

Current infusion pumps often suffer from recurring issues like sensor alarms, battery errors, and interface freezes, disrupting work and increasing the burden of troubleshooting, maintenance, repairs. These failures raise concerns about reliability and lifespan, prompting practitioners to weigh the value of continuing with repairs against investing in newer instruments that will reduce administrative burdens.

4. Equipment malfunctions have a noticeable impact on client satisfaction and clinic reputation in my experience.

## 81% Agree

13% Neutral 6% Strongly Agree

81% of respondents answered "Agree".

#### Top Responses:

"Every equipment failure sets us back and can reflect poorly on our overall service. Even if the problem is minor, it forces us to shuffle schedules and occasionally reschedule procedures, which impacts satisfaction."

**Marcus**, 40 Baltimore, MD Companion Animal

"One that comes to mind happened in the middle of an IV infusion for a cat with kidney complications. We had a spare on hand, although swapping took extra minutes and added some stress. These incidents affect how my team feels about using older machines, and they want me to consider either thorough refurbishment or new models that won't stall."

Eric, 41 San Jose, CA Companion Animal

"We had a pump fail during a routine surgery last year. The client didn't know but we did tell them afterward as per our policy. We had to scramble to replace it mid-procedure. Stuff like that makes us look unprofessional even if it's not our fault. Clients expect reliability and when equipment fails it reflects poorly on us."

**Danielle**, 35 Portland, OR Companion Animal

"A pump once stalled halfway through a fluid infusion for a dog experiencing postop complications. Switching devices mid-infusion meant recalibrating everything while managing a high-stress situation. Though the dog was fine, I prefer to proactively maintain each unit so we can keep our focus on clinical care rather than tech glitches."

**Michelle**, 45 San Diego, CA Companion Animal

Minor malfunctions—like pump stalls or sensor errors—disrupt workflows, erode client trust, force treatment rescheduling, and increase staff stress. These issues damage a clinic's reputation, highlighting the need for more robust infusion pumps that minimize downtime and ensure consistent performance.

5. Client and staff expectations significantly influence our decision to purchase new versus used infusion pumps.

50% Agree Some Neutral

50% of respondents answered "Agree" and "Neutral".

#### Top Responses:

"Both my staff and my clients have high expectations surrounding the technology we use. My team wants straightforward and reliable, while clients appreciate knowing that every aspect of their pet's care is supported by equipment that isn't 30 years old. I strongly feel that investing in newer or well-maintained refurbished units is a good mix, where the investment meets expectations from both."

**Nicole**, 39 Sacramento, CA Companion Animal

"My team wants equipment that's straightforward to set up and consistently reliable. Clients trust we're not cutting corners, so they feel at ease when they see a well-run clinic. Smoother operations also mean we can manage our caseload efficiently without losing the personal touch (ie - book a fuller schedule without seeming like an assembly line)."

Alicia, 37 Miami, FL Companion Animal

"We all want equipment that's straightforward to set up because my junior staff do find themselves second-guessing steps even in our documented way of doing thing. Our neighbors talk to us about getting reliable care at a fair cost. Showing them we invest in solid gear, even if refurbished, helps everyone trust we're giving the care they want for their pets while paying close attention to the reality of the cost of living."

**Anthony**, 49 El Paso, TX Companion Animal

Both staff and client expectations strongly influence decisions between new and used infusion pumps. Staff prioritize reliability and ease-of-use to minimize errors, while clients favor modern equipment that signals high-quality care. Consequently, clinics often opt for newer or well-maintained refurbished pumps that balance cost-effectiveness with a progressive, dependable image.

6. When deciding between repairing and replacing infusion pumps, costbenefit considerations strongly guide our decisions.

## 86% Strongly Agree

14% Agree

86% of respondents answered "Strongly Agree".

#### Top Responses:

"If one repair keeps a pump going strong for another year, I'm all in. If it's breaking every month, though, we wind up spending more overall and frustrating my staff. I'd rather channel funds into a more dependable option, so we don't keep hitting the same roadblocks."

**Anthony**, 49 El Paso, TX Companion Animal

"Servicing an older model can save money for sure and we always look at a fix first. The line between a wise fix and a waste, however, can be thin. When we see recurring breakdowns or if our provider says parts availability is becoming tough, it's time to weigh the cost more carefully. I discuss with my staff so they understand the nuts and bolts of running the clinic outside of what we do with our patients."

**Felicia**, 48 Sacramento, CA Companion Animal

"I look at repair costs versus the longevity of a new pump. The upfront expense of a new unit is high, but frequent repairs on older models can add up. I weigh factors like downtime, service costs, and potential disruption in care. It's a constant balancing act between fiscal responsibility and ensuring patient safety."

**Emily**, 42 Los Angeles, CA Companion Animal

Clinics weigh repair costs against new equipment expenses. Occasional repairs may be cost-effective, but recurring malfunctions and downtime often justify investing in new pumps, with parts availability and operational disruptions as key factors.

7. The cost of new versus used infusion pumps plays a critical role in our purchasing decisions.

94% Agree

6% Strongly Agree

94% of respondents answered "Agree".

#### Top Responses:

"Budget is always a constraint here. New pumps give us better programmability and lower failure rates I think, but generally higher upfront cost can be a hurdle. If a used pump is in excellent condition it can be a viable alternative as long as it meets the need we're filling."

**Jessica**, 34 San Francisco, CA Companion Animal

"I look at price tags closely. A new pump can be pricey, yet a used one might need more upkeep. It's a balancing act between initial cost and ongoing costs."

**Angela**, 29 Austin, TX Companion Animal

"We weigh the higher cost of a new unit against the potential risks of a used one. Sometimes a refurbished model works great, especially if parts are easy to find. Still, budget constraints are always part of the conversation."

**Heather**, 39 Tampa, FL Companion Animal

"A brand-new machine often comes with a steep price tag. A refurbished model can still serve well if parts are accessible. People around here watch their wallets carefully, so I try to balance an economical choice with our practice standards. Saving money right now doesn't help if I'm paying double or triple or more for repairs sooner."

**Anthony**, 49 El Paso, TX Companion Animal

Clinics balance the benefits of new pumps—better programmability and reliability—against their high upfront costs. Many opt for quality used or refurbished units if parts are available, weighing immediate savings against long-term maintenance expenses.

8. When evaluating a new vs. used infusion pump or fluid warmer purchase, warranties or service agreements play a role in the decision.

89% Agree

11% Strongly Agree

89% of respondents answered "Agree".

#### Top Responses:

"A solid warranty or service plan cuts down on risk. We rely on quick turnaround for repairs. Having technicians on call to fix or replace critical components prevents drawn-out downtime that might send our patients elsewhere."

**Rebecca**, 50 Tampa, FL Companion Animal

"If a warranty covers critical components for at least a year or two, it significantly reduces my financial risk. We also value service agreements that promise a quick turnaround on repairs."

**Ryan**, 39 Sacramento, CA Companion Animal

"Warranties provide a sense of security, especially given how critical this equipment is. They help justify a higher price by ensuring support and reducing downtime. Service agreements can be a lifesaver if something goes wrong, so they're definitely a factor in making a decision that balances cost with reliability."

**Emily**, 42 Los Angeles, CA Companion Animal

"A good service agreement can be the deciding factor when allocating budget. I don't want to chase down obscure parts or spend hours on tech support calls. Having a clear warranty or service plan is very valuable in a practice that's open seven days a week."

**Anthony**, 47 Phoenix, AZ Companion Animal

Warranties and service agreements are crucial in evaluating infusion pumps and fluid warmers. They reduce financial risk by covering key components and ensuring rapid repairs, minimizing downtime and justifying higher costs or refurbished options in busy settings.

9. Trends in routine, emergency, or specialized care (e.g., oncology) in my practice drive demand for specialized equipment.

86% Agree

14% Strongly Agree

86% of respondents answered "Agree".

#### Top Responses:

"We see more animals with chronic conditions that need long-term fluid therapy. Our practice also handles periodic emergencies that call for precise flow adjustments. These trends shape our need for pumps with good programmability and consistent reliability."

**Rebecca**, 48 Sacramento, CA Companion Animal

"We take on dogs for oncology treatments, which means precise dosing and special IV setups. We also do a lot of blood transfusions so we need pumps that handle those higher volumes quickly. These evolving patient needs shape the kind of equipment we invest in."

**Megan**, 39 Denver, CO Companion Animal

"We are treating more complex cases now. I have seen an increase in patients who require tailored fluid therapy such as those with cancer or severe infections. This shift means our equipment must be versatile enough to handle both routine care and more demanding scenarios."

**Sarah**, 38 Atlanta, GA Companion Animal

"We've expanded our in-house surgical capacity over the last year, so we need infusion pumps that handle different sedation protocols and antibiotic drips. There's also a growing number of pets needing fluids for chronic conditions. This has resulted in buying new gear that can handle specialized tasks more precisely."

**Anthony**, 47 Phoenix, AZ Companion Animal

Evolving patient needs—from chronic care to emergencies and specialized treatments—are driving demand for infusion pumps with precise dosing, versatile programmability, and reliability. Clinics are investing in advanced equipment to meet diverse treatment requirements and improve outcomes.

10. We have a clear process to measure the success of an equipment upgrade or replacement in our clinic.

85% Agree

14% Neutral 1% Strongly Agree

85% of respondents answered "Agree".

#### Top Responses:

"I usually look at factors like reduction in downtime, improvements in treatment accuracy, and overall staff confidence with the new system. There's also a bit of client feedback thrown in. While we have a basic set of metrics, I believe there's room to refine our process further to really capture the impact on patient care."

**Emily**, 42 Los Angeles, CA Companion Animal

"I track improvements by looking at fewer treatment delays and smoother workflow during critical cases. I also check if our team feels more confident with the new equipment. Feedback from staff gives me a good sense of whether an upgrade was worthwhile."

**Sarah**, 38 Atlanta, GA Companion Animal

"We monitor how frequently each unit requires service or interrupts a procedure. We also note any effect on patient outcomes, such as reduced infusion errors. If breakdowns or complaints decline, we see that as a positive indicator of success."

**David**, 44 San Jose, CA Companion Animal

"We chart error frequencies and track how many minutes each procedure is delayed by equipment issues. If those numbers drop after an upgrade, or if staff error rates go down, we see it as proof of success. We also monitor patient outcomes more closely to confirm benefits."

**Samantha**, 33 San Diego, CA Companion Animal

Clinics use both quantitative metrics—like reduced downtime, delays, and errors—and qualitative feedback from staff and clients to assess equipment upgrades. While effective, there is room to refine these methods to better capture impacts on patient care and efficiency.

# **Key Insights**

## **Survey Overview**

This comprehensive survey gathered perspectives from veterinarians across the United States regarding their experiences with infusion pumps and fluid warmers. With respondents primarily from companion animal practices (87%), the survey provides valuable insights into equipment usage patterns, common challenges, and decision-making factors.

## **Critical Insights for Veterinary Practices**



## **Workflow challenges and patient outcomes**

- 87% of veterinarians report significant differences in infusion pump workflows between routine and critical care scenarios
- In emergency situations (heatstroke, shock), current equipment often falls short of handling rapid adjustments and critical monitoring needs
- **80% of veterinarians** confirm that infusion pump upgrades directly improve patient outcomes







## **Reliability and practice reputation**

- 97% of practitioners experience recurring issues with their current infusion pumps, including sensor alarms, interface freezes, and battery failures
- 81% acknowledge that equipment malfunctions negatively impact client satisfaction and clinic reputation
- Equipment failures frequently disrupt procedures, force rescheduling, and create stress during already challenging clinical situations

97% 81%



### **Resource management challenges**

 60% strongly agree that patient volume spikes make managing fluid delivery difficult with current equipment



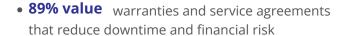
- Sharing pumps between treatment areas creates bottlenecks and delays in care delivery
- Staff stress increases when dealing with equipment limitations during busy periods



#### **Economic considerations**

• **94% agree** that cost is a critical factor in purchasing decisions











89%





## **Evolving care requirements**

 86% note that trends in specialized care (oncology, chronic conditions) drive demand for more precise and versatile equipment

 Practitioners increasingly need equipment that can handle both routine procedures and complex treatments



## Implications for practice management

The survey reveals a clear connection between equipment reliability and practice success. While veterinarians balance fiscal responsibility with quality care, the data shows that equipment limitations directly impact:



#### **Clinical outcomes**

Particularly during emergencies when rapid adjustments are crucial.



#### **Client satisfaction**

Equipment failures can damage trust and professional perception.



#### **Staff efficiency**

Recurring equipment issues consume valuable time and create workflow disruptions



#### **Practice economics**

The balance between upfront costs and ongoing maintenance/repair expenses affects long-term financial health.

As practices evolve to handle more complex cases and client expectations continue to rise, investment in reliable, versatile fluid delivery technology appears increasingly essential for maintaining quality care, staff morale, and business reputation.

