

vet

January 2020

Veterinary Emerging Topics (VET)[™] Report



Overweight pets: let's talk before
the problem gets any bigger





Banfield Pet Hospital® and the North American Veterinary Community (NAVC) are pleased to share the fourth annual Banfield Veterinary Emerging Topics (VET)™ Report, once again combining the power of data with open, solution-based dialogue to help improve patient outcomes. As the largest general veterinary practice in the U.S., Banfield has an immense amount of information that can be harnessed to shed light on barriers and opportunities within veterinary medicine. NAVC is dedicated to advancing veterinary healthcare through education, collaboration and innovation. Together, we believe we can draw on our strengths to maximize the important lessons in the VET Report.

The veterinary industry is challenged with overcoming widespread acceptance of excess body weight in pets. The 2019 VET Report focused on the diagnosis and treatment of osteoarthritis in dogs and cats and its relationship with excess weight, exploring barriers and opportunities for veterinary teams to ensure proper diagnostic and therapeutic management of osteoarthritis. The complexity of these intertwined conditions merited continued exploration this year.

We are facing an epidemic of pets considered overweight or obese. Using new methodology, we found a higher percentage affected than previously reported with 51% of the more than 1.9 million adult dogs seen at Banfield classified as overweight. Of those, less than 10% are successful at losing weight, regardless of their age. Sadly, of the limited number of pets able to lose weight after diagnosis, roughly 40% regain weight and resume their overweight status within 12 months.

Despite these sobering statistics, educating and engaging pet owners throughout the weight loss process is the single most important step we can take as veterinary professionals to help overweight pets get the care they deserve. In doing so, we can limit the risk of comorbidities such as osteoarthritis, ultimately improving a pet's comfort, mobility and quality of life. In this report, we explore how to best engage the pet owner through individualized treatment plans that include nutritional assessments, as well as how to leverage the entire hospital team in a pet's weight loss journey.

Tackling osteoarthritis and excess weight must continue to be a priority for companion animal practitioners if we are to reverse current trends. We hope the 2020 VET Report provides actionable insight into the barriers and opportunities that hospital teams face when treating pets with these conditions.

Respectfully,

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Clinical bottom line

Excess weight in pets is associated with other detrimental health conditions. Veterinary professionals play a critical role in identifying overweight pets and educating pet owners on the importance of a healthy body weight. In some cases, pet owners might believe their overweight pet is healthy. When this occurs, it is crucial for veterinary professionals to explain why pet weight loss is a priority.

Through analysis of Banfield pet medical record data and surveys, three major opportunities are identified in this report:

1. Incorporation of a nutritional assessment into all regular veterinary visits, even when the pet is at a healthy weight, can help provide early guidance on nutrition, increase owner ability to provide a diet history, enable discussion about healthy body weight and identify increasing body weight trends sooner.
2. Empowerment of all hospital team members to engage in weight loss conversations can positively impact understanding of pet diet and health and improve pet owner commitment to change.
3. Weight loss plans should be tailored to each individual pet, their home environment and their relationship with their owner. Not understanding these factors may impact the ability to engage owners and keep them committed to completion of the plan.

Because multiple factors contribute to pet weight gain, there are many challenges in achieving weight loss. Weight loss plans commonly require ongoing modifications and regular check-ins to identify what is or isn't working for the pet. Weight loss takes commitment, engagement and patience — not just from pet owners, but from the entire veterinary team. In the end, many owners will realize the fruits of the labor: improved quality of life for their pet and preserved or strengthened bond with their pet. Seeing these benefits can motivate owners to maintain good habits, which can result in their pet maintaining a healthier weight.



Introduction

As veterinary professionals, we strive to provide the best care to pets and the people who love them. Since 2017, the annual Veterinary Emerging Topics (VET)[™] Report has introduced the tenets of healthcare quality improvement, using concepts and tools modified from the human health care industry, while simultaneously describing a topic currently challenging the veterinary profession.

The 2019 VET Report¹ focused on osteoarthritis and related musculoskeletal conditions (hereafter, referred to as OA) in overweight pets. It identified opportunities to improve OA management in pets and applied the five domains of veterinary quality to OA diagnosis and management. Ultimately, the end goal is to improve patient outcomes, such as increased comfort, mobility, activity and quality of life.

Dogs and cats are considered overweight if they are at least 10-20% heavier than their ideal weight². Of concern is that the veterinary industry has witnessed the condition become increasingly common^{3,4}. The overweight condition in pets is associated with serious health conditions, including endocrinopathies, metabolic abnormalities and cardiovascular disease, as well as functional alterations, such as joint disorders and decreased immune functions⁵. The Global Pet Obesity Initiative⁶ has garnered support from many professional veterinary organizations in recognition of this alarming trend and identified the need for the veterinary community to improve efforts in keeping pets at healthier weights.

To complement the 2019 VET Report, the 2019 State of Pet Health[®] Report⁷ dove into the relationship between OA, activity/mobility and being overweight. Overweight dogs are 2.3 times more likely to be diagnosed with OA. Conversely, dogs with OA are 1.7 times more likely to also be overweight. The report also featured Banfield's research partnership with the Whistle Pet Insight Project. Preliminary analysis of pet activity data found:

- Overweight dogs are up to 20% less active than dogs at healthy weight;
- Adult dogs that become overweight are 10% less active than those that maintain a healthy weight; and
- Adult German Shepherds with OA are 25-30% less active than those without OA.

These findings, while preliminary and do not elucidate a defined cause-effect relationship, help paint the picture of the links between OA, being overweight and mobility/activity in pets. Continued collection of activity data and research may provide a better understanding of the impacts of conditions, such as OA, on pet activity levels.

As a sequel to the previous reports, which focused primarily on OA, the 2020 VET Report continues the conversation of weight and OA, with a focus on overweight pets and weight management. A multi-faceted study was conducted, with a deeper dive into understanding the overweight dog population and surveys of Banfield veterinary professionals and pet owners regarding weight management experiences.

Research

Analysis of Medical Record Data: Pet Weight Trends After Initial Identification as Overweight

Methods

Partnering with the Mars Petcare Kinship Data Science and Analytics team, a novel approach was taken to analyze Banfield's electronic medical records to investigate characteristics of overweight pets and subsequent weight loss success. Banfield's proprietary electronic medical record (EMR; Petware®) system contains both structured and unstructured data. Structured data is entered in a systematic fashion and is more readily accessible for analysis, while unstructured data consists of free-text fields. Previous prevalence estimates of overweight pets seen at Banfield were based solely on the use of structured data fields for body condition score (BCS) and diagnosis of "overweight" or "obese".

Within the unstructured medical notes field, there can be valuable information that is not recorded in the structured fields (e.g., diagnosis) or that differs from information recorded in the structured fields (e.g., BCS). Through Natural Language Processing (NLP) techniques, medical record information recorded in the EMR system was extracted for adult dogs (at least 2 years old) seen at Banfield in 2016 through 2018. Regular expressions (a flexible language for specifying text search strings which can include characters, symbols and numbers) were used to identify and capture this information from the unstructured records.

The information from the structured and unstructured fields was merged to create an enhanced and queryable view of a pet's body condition over time from which an analysis to better identify overweight pets was performed.

For this analysis, overweight pets were subsequently identified based on an adult dog meeting at least one of the following criteria:

1. BCS of 4 or 5 (5-point scale) in the structured body condition field;
2. Diagnosis of "overweight" or "obese" in the structured diagnosis field;



3. Recording of BCS > 3 (out of 5) or BCS>5 (out of 9) in the medical notes;
4. Mentions of overweight (and other synonyms) in the medical notes; and/or
5. A change in weight above the earliest “healthy” weight (body condition noted as ideal and no entry of overweight or obese diagnosis) recorded in adulthood. An increase in weight of 15% for medium and large breed dogs and of 20% for small and toy breeds was used.

Successful weight loss was defined as those pets that lost at least 10% of their body weight in the 3 to 6 months after first identification as overweight. This enabled investigation into age and breed differences.

Finally, an analysis of weight change in the 6- to 12-month period after an overweight diagnosis (as recorded in the second half of 2016) was conducted. For those pets that lost weight in that time frame, any further weight change in the next 6 to 12 months was analyzed to investigate if pets that successfully lost weight were also successful in keeping the weight off.

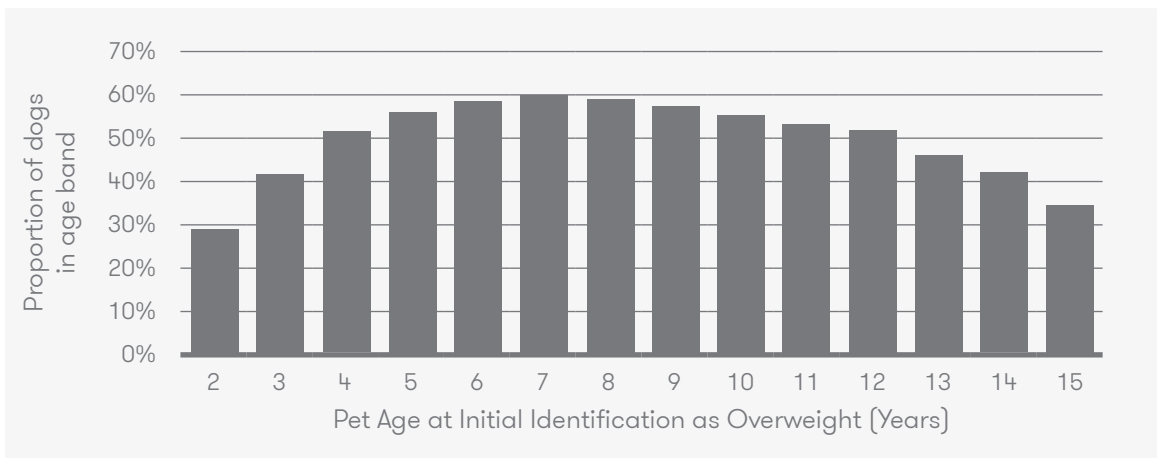
Findings

In 2018, over 1.9 million adult dogs visited a Banfield Pet Hospital. Utilizing only the structured fields for dogs seen at Banfield Pet Hospital in 2018, approximately 39% of these dogs were recorded as overweight. This prevalence estimate is an increase over the prevalence of 32% previously reported¹⁴ due to the exclusion of puppies from this study population. Incorporating the medical notes information and the change in weight to further identify overweight pets increased the prevalence to 51%. Analysis of records of dogs seen in 2016 and 2017 found similar estimates.

Key findings:

- Prevalence of overweight condition increased with age, until approximately 7 years of age (figure 1).

Figure 1. Dog age when overweight condition is detected, based on Banfield visits in 2018.

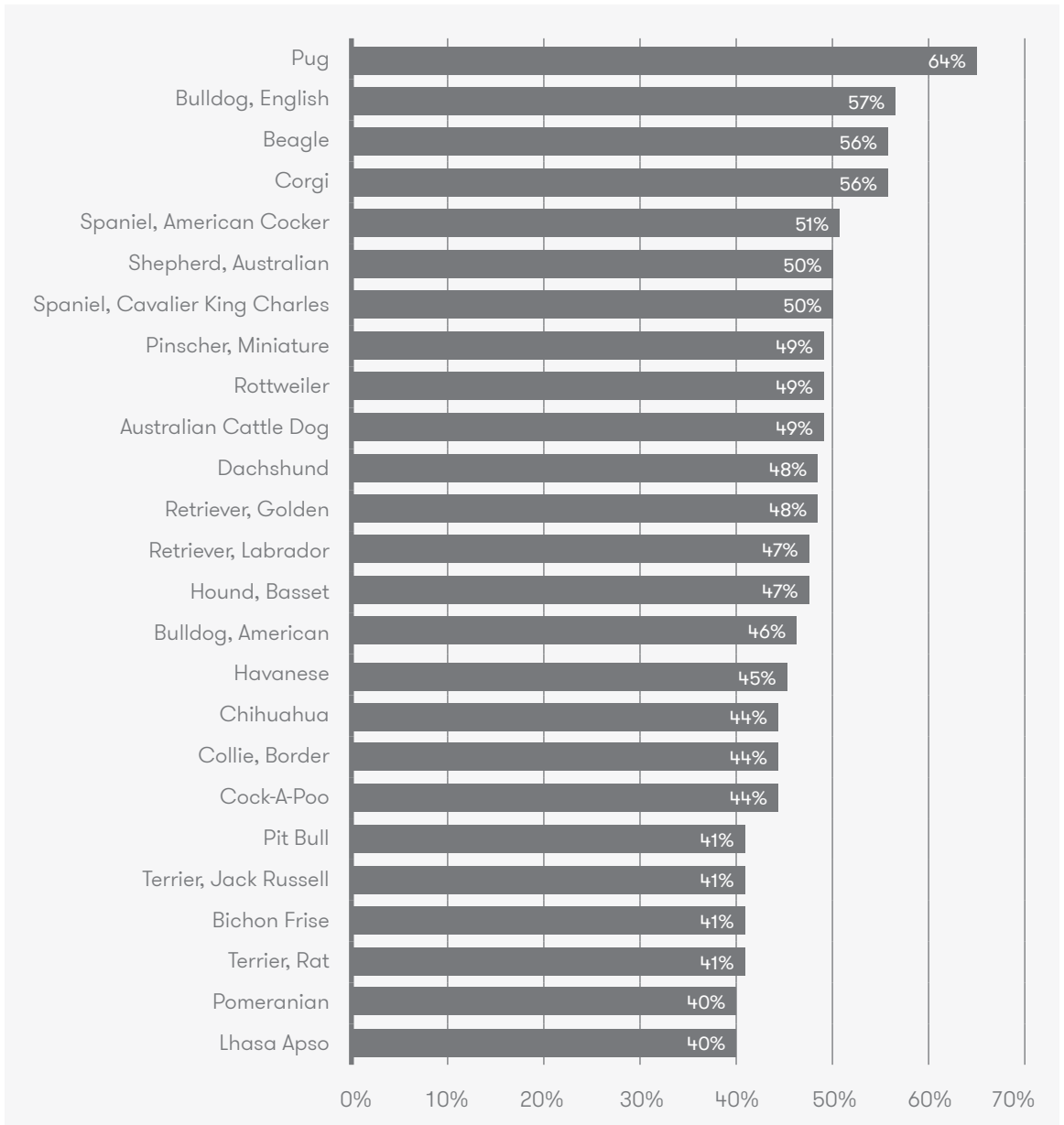


- With increasing breed size, overweight prevalence increased (table 1). Despite this, the most affected breeds were smaller breeds (figure 2). Pugs top the list with 64% identified as overweight.

Table 1. Prevalence of overweight condition in pets by breed size.

Breed size	Prevalence
Toy	40%
Small	42%
Medium	46%
Large	47%

Figure 2. Top 25 breeds of overweight dogs seen at Banfield Pet Hospital.



- Smaller dogs were more successful at losing at least 10% of their body weight in the 3 to 6 months after initial identification as being overweight (table 2). However, within each size category, there was much variation by breed (figure 3). This suggests that tendency to gain weight is not equal to tendency to lose weight.

Table 2. Percentage of dogs that lost at least 10% of their body weight in the 3 to 6 months after identification as overweight.

Breed size	% with successful weight loss
Toy	12.5%
Small	11.0%
Medium	8.4%
Large	6.8%

Figure 3. The top 25 breeds with successful weight loss (lost at least 10% of their body weight in the 3 to 6 months after initial identification as overweight)

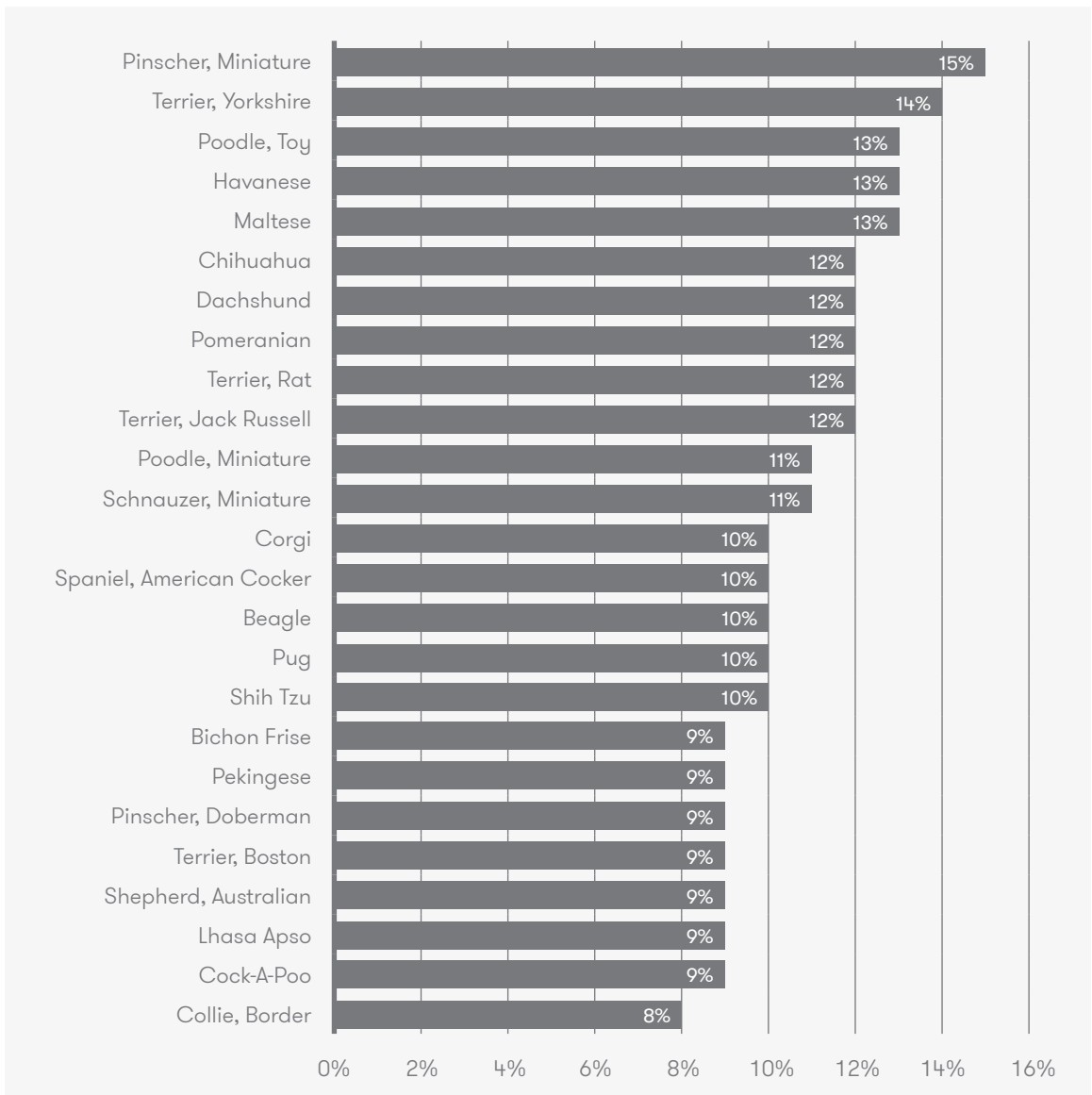
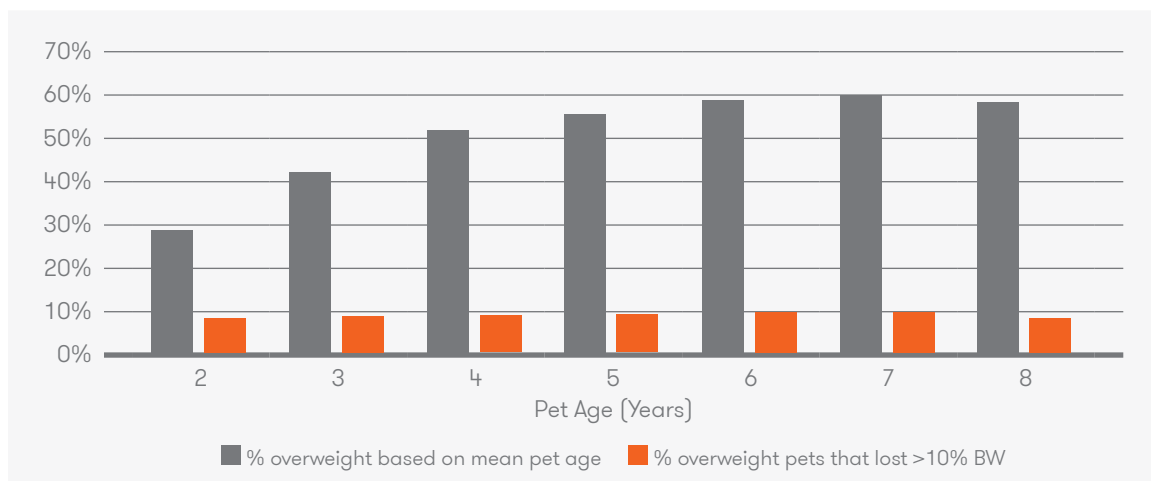


Figure 4. A distribution of ages of overweight pets that successfully lost at least 10% of their body weight (BW) in the 3- to 6-month period after being recorded as overweight. The data for pets older than 8 years of age is not presented due to the potential bias associated with this group having a greater potential for co-morbid conditions that could result in weight loss and greater loss to follow-up or possibly death.



- Less than 10% of dogs were successful in losing 10% of their body weight in the 3 to 6 months after initial overweight designation. This did not vary by age (figure 4). The flat rate observed across the ages was surprising, as one would have expected that younger pets would have an easier time losing weight and, therefore, exhibit higher success rates than the older dogs.
- Of the overweight dogs that initially lost at least 10% of their body weight and were then classified as healthy weight, approximately 40% regained weight and were reclassified as overweight 6 to 12 months later.

These findings demonstrate the complexity of weight loss and indicates that other factors, such as increased risk for certain conditions (e.g., hip dysplasia), physical breed characteristics (e.g., brachycephaly) and pet owner habits (e.g., keeping pet active), are likely influencing pet weight and their ability to maintain and/or return to a healthier weight.

Survey of Clients: Weight Management Consultations

Methods

From the same adult canine population used in the previous section, the Mars Petcare Kinship data science team identified two populations of overweight dogs: 1.) those that successfully lost weight and 2.) those that had not, based on initial designation as overweight in 2016 and the weight trends in subsequent visits through 2018. The groups were limited to those dogs that were less than 7 years of age. For this analysis, successful dogs were those that, on average, lost at least 10% of their body weight in the 3 to 6 months after initial identification as being overweight and maintained that weight (i.e., no weight regain) for 12 to 18 months (until July 2018). Dogs were considered

unsuccessful if they gained at least 5% of their body weight in the 3 to 6 months after initial overweight diagnosis and showed no improvement in body weight in the subsequent 12 to 18 months. This identified approximately 4,000 successful dogs and 7,400 unsuccessful dogs. From these, 2,000 successful and 4,000 unsuccessful dogs were randomly selected.

Pets were removed from the study population if one of the following was met:

1. The pet was deceased or records otherwise indicated the pet was no longer an active patient of Banfield, as of May 2019;
2. An owner email address was not available; or
3. The pet owner had opted out of receiving communications from Banfield.

Pet owners of the selected dogs were invited to participate in an online survey*, which contained questions relating to diet and activity recommendations they received by their veterinary team and their ability to follow-through on those recommendations. No language in the invitation or the survey indicated the reason they were invited to participate.

Comparison of responses by the two groups was analyzed by comparison of two proportions, using $\alpha = 0.05$.

Findings

Upon removal of pets that were no longer active with Banfield, owners without email contact information, and owners who opted out of communications, 5,065 dogs (84.4%) remained in the study population. This included 1,708 (85.4%) of those that had successfully lost weight (hereafter referred to as the “successful” group) and 3,357 (83.9%) of those that had not (“unsuccessful” group). Responses were received from 407 of the pet owners (8.0% response rate), with a 7.4% (127) response rate from the successful group and 8.3% (280) from the unsuccessful group. This response rate is comparable to other Banfield client surveys.

Key findings (table 3):

- Successful owners were more likely to report their pet as ideal weight. This is not surprising, since these pets lost at least 10% of their body weight (and did not regain the weight). There are some potential explanations for disparities in BCS designation by other owners:
 - > For successful pets that their owners consider their pet overweight, the measure of 10% to define successful weight loss may not reflect the degree of weight loss needed for these dogs to attain an ideal body weight.
 - > Owners in the unsuccessful group who felt their pets were ideal weight may have never believed their pet was overweight. Or, because final designation of successful weight loss was based on the pet’s weight in 2018, it is possible that the pet has subsequently lost weight in 2019. A comparison of these owner assessments with a veterinarian assessment in 2019 was not performed for this study.

*Qualtrics, Qualtrics Research Suite, Provo UT and Seattle WA

Table 3. Client survey responses and comparison of Successful vs Unsuccessful Pets, using the two-tailed test for comparing two proportions, alpha=0.05.

		Total	Successful	Not Successful	p-value
# Respondents (response rate)		407 (8.0%)	127 (7.4%)	280 (8.3%)	
Owner perception: dog's current body condition					
Pet is Ideal weight		59.0%	80.7%	49.3%	<0.0001
Pet is Overweight		40.8%	18.6%	50.7%	<0.0001
Home Environment:					
# dogs in house >1		50.8%	62.9%	45.3%	0.0011
# cats in house = 0		81.5%	78.2%	83.0%	0.2594
# people in house feeding dog >1		66.2%	72.1%	63.4%	0.0913
Feeder can consistently measure amount pet eats		76.8%	83.6%	73.7%	0.0317
Pet receives treats between meals		64.1%	61.5%	65.3%	0.4705
Opportunity to be in a yard unsupervised		63.7%	63.1%	64.0%	0.8739
Amount of time family plays with pet (each day)	<10 min	3.4%	6.6%	1.9%	0.0209
	10-30 min	28.2%	27.1%	28.7%	0.7419
	31-60 min	33.4%	32.8%	33.7%	0.8578
	>60 min	31.3%	31.2%	31.4%	0.9609
	Don't know	3.7%	2.5%	4.3%	0.3850
Activity pet participates in at least once a month	Walk	82.2%	80.3%	83.1%	0.5162
	Running	31.4%	35.3%	29.5%	0.2638
	Play with other dogs	54.5%	53.3%	55.1%	0.7376
	Fetching ball or other toy	56.7%	51.6%	59.1%	0.1746
	Swimming	6.7%	7.4%	6.3%	0.6943
	Hiking	31.4%	35.3%	29.5%	0.6233
	Other activities	8.5%	9.0%	8.3%	0.8075
	None	2.1%	1.6%	2.4%	0.6509
Other pet care services use	Dog day care	10.1%	10.7%	9.8%	0.8052
	Pet walker	9.6%	13.9%	7.5%	0.0469
	Other	9.8%	16.4%	6.7%	0.0031
	None	72.9%	63.9%	77.2%	0.0069
Recommendations made by veterinarian					
Diet/Feeding recommendation made		60.3%	54.8%	62.7%	0.1389
Recommended diet for weight reduction		44.5%	45.6%	44.1%	0.8297
Recommended diet for other medical condition		17.8%	23.5%	15.5%	0.144
Currently following the recommendation		88.6%	92.7%	86.9%	0.2098
If not receive recommendation, interested in one		27.9%	27.3%	28.1%	0.9067
Activity recommendations made		40.7%	28.7%	46.4%	0.0011
Currently following the recommendation		80.8%	82.9%	80.2%	0.5321

- Successful owners were more likely to have multiple dogs in the house.
- Having multiple persons in the household feeding the dog was not statistically different between the two groups.
- Successful owners were more likely to report consistently measuring daily food portions.
- The proportion of pets receiving treats between meals was not found to be different between the two groups.
- Owners report similar amounts of time of activity and the kinds of activities their pets are involved in, although more successful owners report less than 10 minutes a day of activity. Due to the survey format, we are unable to speculate the reason for this finding.
 - > This survey did not elicit enough information relating to duration and intensity of each activity, so we are unable to conclude whether activity does or does not contribute to weight loss success.
 - > Successful pet owners were more likely to utilize pet care services, such as pet walkers (but not dog day care).
- There was no difference in the receipt of diet recommendations between the 2 groups.
 - > Most of the owners who received a diet recommendation are currently following the recommendation.
 - > Of those who are not, 47.4% report that they never followed the recommendation, while another 31.6% report following the recommendation for less than a month.
 - Reasons provided for not following the diet recommendation include: cost of diet (31.6%), pet's food preference (26.3%), comorbidity (5.3%), multi-pet household (5.3%), ineffectiveness of the diet (5.3%), and owner habit (5.3%).
- Successful owners were less likely to report receiving activity recommendations for their dog. This may be due to recall bias — pets that lost weight are less likely to have received activity recommendations in the more recent history, and owners may not remember receiving them when their pet was overweight.
 - > Of those owners who received activity recommendations, there is no difference between the two groups as to whether they are currently following the recommendations.
 - > Of those who report not currently following them, approximately one third report they never followed the recommendations, while another one third indicate following the recommendation for less than 6 months.
 - Reasons given for not following activity recommendations include: time or schedule (40.7%), owner health or other physical limitations (33.3%), change in weather or season (18.5%), change in living situation (3.7%), and “pet is lazy” (3.7%).

Survey of Veterinary Team Members: Weight Management Recommendations

Methods

An online survey* was conducted to better understand Banfield veterinary team practices and recommendations for weight management, including pet activity, and the perceived factors affecting success. Survey invitations were sent to 116 practicing veterinarians and 57 credentialed veterinary technicians who were recognized as Veterinary Opinion Leaders (VOLs) in Banfield hospitals.

Findings

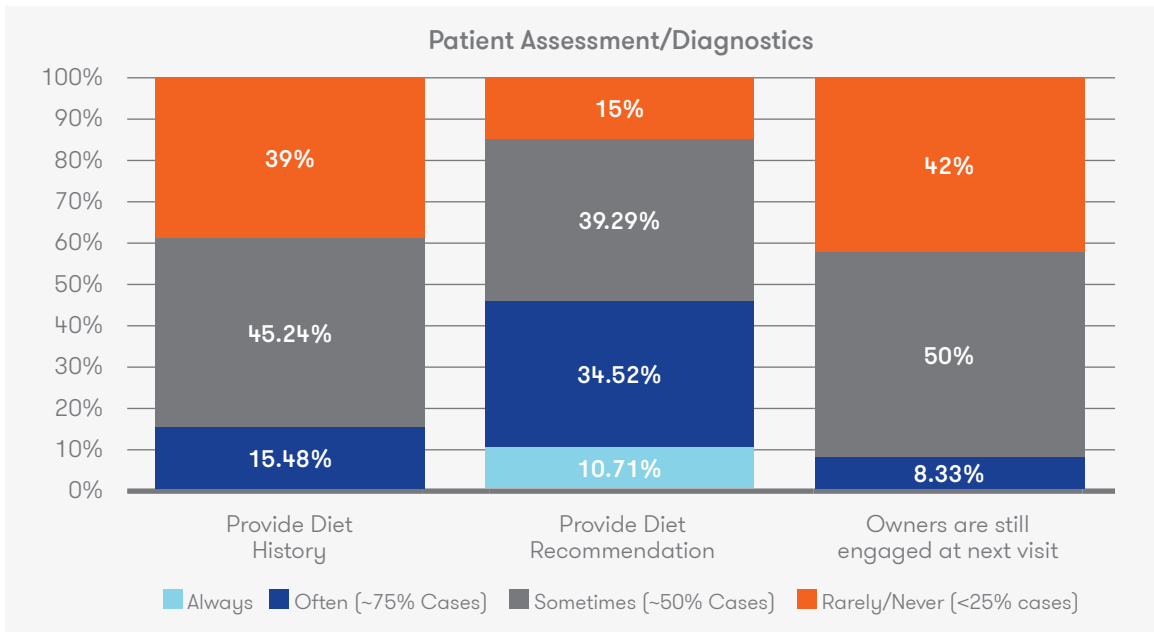
The online VOL survey had a 45.7% response rate, with 36.8% of credentialed veterinary technicians and 50% of veterinarians responding. This response rate is comparable to other 2019 VOL surveys (average = 48.7%). When comparing rates by group, response to this survey was on par for the average veterinarian participation (50.7%) and lower for veterinary technicians (50.9%).

Key findings based on survey responses:

- Most clients were unable to provide a complete diet history, including food name, feeding amount and frequency, and types and quantity of treats (figure 5). When a diet history could be obtained, many respondents (53.6%) reported that, on average, this information can be collected from pet owners in less than 5 minutes.
- Approximately one third of the respondents reported that, on average, less than 5 minutes is needed to calculate daily caloric needs. Another one third responded that they do not perform this calculation for clients.
- Most respondents reported making a dietary recommendation (either an over the counter diet or veterinary/specialized diet) when counseling the owner about the pet's weight (figure 5). Approximately one third of the respondents reported needing less than 5 minutes to determine the daily feeding amount for a specific diet, while another 45% reported needing up to 10 minutes.
- Recommendations for increasing activity levels included:
 - > Increasing the amount of time of exercise (71.4% for cats, 96.4% for dogs),
 - > Increasing frequency of exercise (68.9% for cats, 90.5% for dogs), and
 - > Use of interactive bowls and feeders (59.5% for cats, 42.9% for dogs).
- 84.5% of the respondents do not incorporate pet activity monitors as part of a weight loss program.
- 70.3% of respondents report recommending check-ins for weight counseling to occur at least once a month.
- Only 8.3% felt that most (>75%) of the owners are still engaged in their pet's weight loss journey by their next visit (figure 5).
- The key factor influencing success in weight loss plans is the same as that for failure: owner compliance. Related factors (table 4) include: owner recognition of

*Qualtrics, Qualtrics Research Suite, Provo UT and Seattle WA

Figure 5. Survey responses by Banfield Veterinary Opinion Leaders (VOLs) relating to weight management recommendations for overweight pets and owner engagement at next visits.



the importance of weight loss and commitment to the plan, as well as the impact of seeing progress and maintaining enthusiasm for weight loss were reported as other successful weight loss influences.

- Key talking points to engage owners (table 5) in the pet’s weight loss plan generally include: focusing on the impacts of obesity, keeping owners and their pets engaged and enthusiastic throughout the weight loss journey, and understanding the owner relationship with their pet, so the plan is tailored to what the owner is willing to commit to completing.
- Approximately 55% of respondents indicated that most (>75%) clients whose pets do successfully lose weight are successful in maintaining the pet’s weight at the healthier weight.
 - Perceived factors that influenced weight regain after attaining their goal weight include falling back into old habits, as well as financial and environmental constraints.
- 74.7% of respondents indicated that if available, they would utilize credentialed veterinary technicians for weight counseling (as opposed to utilizing veterinarian appointment slots for follow-up sessions).

Table 4. Perceived factors influencing ability of pets to successfully meet goal weight, as reported through the VOL survey.

Factors Negatively Impacting Weight Loss Program Success:

- Client noncompliance, unwillingness to change habits
- Owner giving in to pet's begging or perceived unhappiness
- Owner is not concerned that pet is overweight, does not want weight counseling or does not make weight loss a priority
- Not making time to exercise pet
- No improvement seen, so owner does not feel program is working
- Other family members not committed
- Multiple pets in household
- Insufficient time at hospital to discuss weight loss needs and plan
 - > Operational tension in scheduling weight loss re-checks in veterinarian appointment slots
- Cost of the veterinary diets
- Weather/season

Factors Contributing to Successful Weight Loss:

- Owner compliance with increased exercise (even if not necessarily decreasing calorie consumption)
- Owner is engaged to do more for their pet
 - > Recognizes pet is overweight
 - > Is concerned about pet's welfare
 - > Understands health risks of pet being overweight
 - > Already sees the detrimental effects of excess weight (e.g., OA) and wishes to improve pet's quality of life
- Owner commitment to their own health
- Commitment and diligence of everyone in household – everyone is accountable
- Encouragement/praise by hospital team for any weight change in the right direction
- Strong relationship of hospital team with client
- Owner can afford recommended diets

Table 5. Key talking points to influence owners for successful weight loss, as reported through the VOL survey.

Talking Points to Starting and Engaging in the Weight Loss Journey:

- Effect of obesity
 - > OA and other medical conditions associated with obesity
 - > Expense
 - > Lifespan
 - > Quality of Life
- Owner’s role in the pet’s weight
- Food is not happiness
- Techniques to change diet and feeding habits
- Making exercise FUN for the pet and owner – once it is a habit, the pet will expect it
- Showing the pet’s weight graph to the owner
- Celebrating successes with owners – incentivize owners to continue to engage and show that the hospital team supports the client
- Creating small changes to routines based on achievable goals
- Get to know clients and what will work and what they will commit to
- Provide personal story or experience

After Successfully Losing Weight, Why Aren’t Some Pets Able to Maintain the Healthier Weight?

- Owner engagement drops once goal weight is achieved, e.g. resuming old habits
- Owner changes to cheaper diet
- Change in environment, household or life situation
- Weather/season

Bringing it all together: veterinary medical quality

By utilizing non-structured data and making reasonable inferences using structured data, the percentage of overweight pets in the Banfield adult canine population has increased to 51%. This new estimate is more in line with the estimated prevalence of overweight pets in the U.S. pet population reported elsewhere.³ The discrepancy between previously reported 32% in Banfield dogs and this report is likely a result of not only the exclusion of puppies; it is also likely a previously published circumstance: under-reporting of overweight condition in pet medical records.^{8,9}

Pets being overweight is primarily considered to be a preventable condition, and if realized, one that can be resolved. While it is difficult to emphasize the importance of prevention, particularly when the pet is younger or otherwise healthy, there are some key points that might motivate owners before or in the early stages of weight gain. Studies have shown that dogs on restricted diets (compared to those fed ad libitum) over their lifetime¹⁰⁻¹³ had:

- Lower body weights and BCS,
- Decreased incidence of hip dysplasia as young adults,
- Decreased frequency and severity of osteoarthritis in the coxofemoral joints as mature adults,
- Lower incidence of radiographic evidence of osteoarthritis in senior dogs, and
- Increased median time to onset of treatment of osteoarthritis.

A more recent study in client-owned middle-aged dogs also found that being overweight at that life stage negatively impacted lifespan when compared to healthy-weight middle-aged dogs.¹⁴

In situations where excess weight has begun to accumulate, superficially, it seems as if there is a relatively easy solution (reduce calorie consumption). However, this is a more complex problem to address. Whether addressing it in preventive fashion or in response to excess weight gain, it requires client acknowledgement that excess weight is a medical problem – even if their pet otherwise appears healthy – and weight management requires commitment from them and their entire household.

This can be a challenge, as reported by the VOLs. The strengthening of the human-animal bond has very likely contributed to the overweight pet problem. Previous studies have indicated the following contributors to excess weight in pets: food is used as means to interact, communicate and bond with their pet; owners tend to interpret their dog's every need as request for food; and pets serve as a substitute for human companionship.¹⁵⁻¹⁷ Conversely, another published study reported that owner attachment does not correlate with the body condition score (BCS) or a pet being heavy or obese.¹⁸ This contradiction merely reflects the need for further research to better elucidate the factors that contribute to excess weight gain in pets.

The challenges facing the veterinary and larger petcare industry in slowing, if not reversing, the growing trend of overweight pets are further reflected in the results of a 2018 Mars Petcare global survey, that included 1,071 U.S. pet owners (Mars Petcare, unpublished data). The survey found that 70%, 61% and 58% of the U.S. pet owners recognize that overfeeding, lack of exercise and excessive treats (respectively) contribute to pet obesity. However, approximately 82% of them enjoy feeding their pet, and 40% report that they feel rewarded when they feed their pet. On top of that, 52% of them recognize that they give treats to get more affection from their pet, and 45% always or often give their pet food when they beg for it. Approximately 20% of the owners report sometimes overfeeding their pet to keep them happy.

Owner recognition that their pet is overweight is a challenge, particularly as the overweight pet has slowly become the new “normal”.¹⁰ According to the Mars Petcare survey, only 27% of the U.S. pet owners feel their pet is overweight, but 64% report their pet has at least one sign of being overweight (e.g., can’t see defined waist, can’t easily feel ribs, needed to loosen the pet’s collar recently).

The good news, according to the Mars Petcare survey, is that 73% of the U.S. owners say they would like to receive healthy weight guidelines for their pet and advice on keeping them fit and healthy, and 47% would like their veterinarian to more actively advise them on their pet’s weight. Approximately 27% report having tried to reduce their pet’s weight, and approximately 52% of this group indicated successfully doing so. Reported reasons for failure to lose weight are similar to those reported by Banfield veterinary professionals and pet owners in this report: 32% could not play or walk with their pet as much as they wanted to, 19% reported their pets became desperate for food such that the owner gave in, 18% reported their pets refused to eat the recommended food, and 8% were unable to afford the recommended product or diet.

Weight counseling takes time. According to the VOIs, while the individual tasks of obtaining a nutritional history, calculating caloric requirement, and determining serving portions for specific diets are reported to not be overly time-consuming, they add up.



Together with learning about the family-pet relationship, individualizing the weight loss plan specifically for the pet and home environment and supporting each client along their pet's weight loss journey can accrue into a significant time commitment. When weighed against the other priorities a veterinary team needs to address during limited appointment time, this is a topic that can easily be overlooked as a priority. Pet owners can get the impression that excess weight is not significant or medically important, thereby reducing their acceptance of their pet's weight problem, deprioritizing their pet's weight loss, and resulting in noncompliance with a recommended weight loss plan.

Strategic use of hospital team members, such as credentialed veterinary technicians, may help address this issue. The VOL survey suggests that hospital team members would be in favor of using credentialed technicians for weight counseling.

Patient Outcome Improvement

For overweight pets, focusing on improved patient outcomes should be the goal, perhaps more so than the achievement of a target weight. Provision of services and products, such as weight loss counseling, sale of veterinary diets and other ancillary services or products, may benefit the overweight pet, and some may want to measure quality of medical care based on how many overweight pets received such services or products. However, these are process measures and alone are insufficient to assess the quality of care. True patient improvement is measured in outcomes. Process measures do not indicate whether hospital teams are having the intended impact — in the case of overweight pets, this would be not only weight loss, but also improved quality of life, vitality, mobility, activity and comfort. Without these outcome measures, it can become difficult to assess whether the management plan is effective and whether modifications to the plan may be necessary due to suboptimal response to treatment.

Several studies have shown that quality of life improves with weight loss. While overweight and obese dogs showed decreased energy or enthusiasm and decreased activity or comfort, weight loss increased vitality, decreased emotional disturbance and decreased pain scores.^{19,20} In fact, a detectable change in quality of life was found with improved BCS levels, which can be useful for owners to see that even modest changes in weight can affect their pet.²⁰ In dogs with coxofemoral osteoarthritis, loss of 11 to 18% of body weight led to a decrease in clinical lameness.²¹ In obese dogs with osteoarthritis, a noticeable improvement in lameness may be seen after a loss of as little as 6.1 to 8.5% of the body weight.²² Seeing improved quality of life, decreased lameness and discomfort, and/or increased mobility in their pet as they lose weight can keep owners motivated to stay with a plan, consistently reminding them of the impact of excess weight on their pet.

In summary, opportunities for the veterinary industry exist to manage overweight pets with the end goal of improving patient outcomes. For overweight pets, the desired outcomes include: reducing a pet's weight to a healthier weight that leads to improved quality of life and decreased risk of serious diseases or decreased impact of concurrent disease (e.g., pain and mobility issues relating to osteoarthritis).

The 2017 and 2019 VET Reports¹ introduced the concepts of the Plan-Do-Study-Act (PDSA) cycle and 5 domains of quality (figure 6). For each opportunity below, the

domains of quality (DQ) that the opportunity may fit has been provided. As you read the opportunities, reflect on how you and your hospital team can seize them, incorporating the 5 domains and the PDSA cycle to provide quality care to overweight pets and their owners.

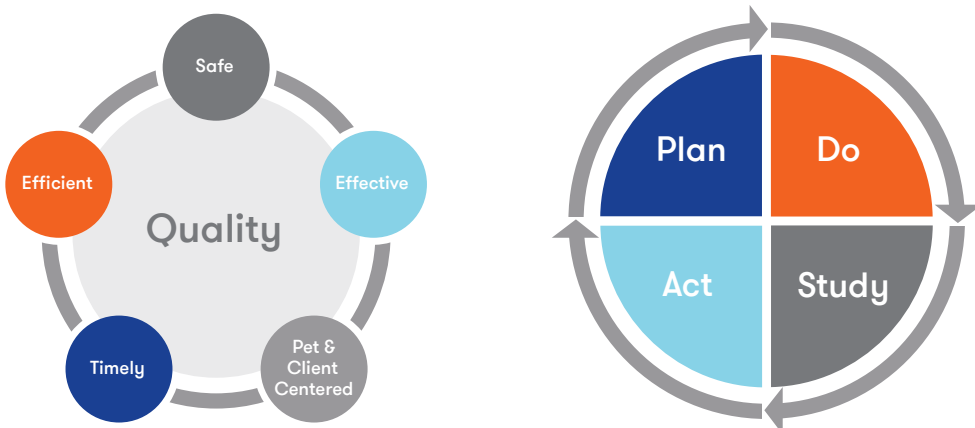
Opportunity #1: Incorporate a Complete Nutritional Assessment Into the Veterinary Visit

[DQ: Safe, Pet-and Client-Centered, Timely]

Discussing nutrition and dietary recommendations early (before excess weight gain or at the first sign of weight gain) is often an overlooked opportunity. The assessment encompasses a full evaluation of the pet’s nutritional condition, from the physical examination to the food being offered and eaten, the home environment, the feeding schedule and strategy, and possibly diagnostic testing (e.g., minimum database). This can help build your relationship with the owner, better understand their relationship with their pet, and emphasize the importance of monitoring the pet’s weight as part of their overall health. It can also make collection of diet history routine, which may help overcome the reported challenge of owner inability to provide a diet history if weight loss counseling becomes necessary.

Doing a thorough assessment requires time, which necessitates adequate hospital staffing and training, appropriate appointment scheduling and consult room availability if done in-hospital. Operationally, this can significantly impact hospital flow of patients, especially with inadequate planning. There is no one solution to addressing this challenge, as it depends on the operational flow of each hospital. While overwhelming at first, it can be worked through by the hospital team where there is alignment on nutritional counseling as a priority. As with any change in hospital work flow or prioritization, be prepared for situations where things don’t go to plan and learn from them as part of a continuous improvement process (e.g., the PDSA cycle, figure 6).

Figure 6. The 5 Domains of Quality and the PDSA cycle.



Opportunity #2: Pet Weight Loss Program as a Team Effort

[DQ: Effective, Pet- and Client-Centered, Efficient]

In many veterinary clinics, nutritional and weight counseling has been mostly the responsibility of the veterinarian, but this does not need to be the case. Each team member has the opportunity to impact pet owner understanding and commitment to weight loss. Team member roles need to be defined, such that each member recognizes their importance in providing consistent messaging in the importance of nutrition and pet weight on pet health.

While our survey of veterinary team members indicated support of credentialed veterinary technician involvement in weight counseling, it is not as simple as having these team members receive nutrition training and using credentialed technician appointments for weight counseling. It still requires all team members to be engaged and aligned with the commitment to make nutrition and weight management a key component of pet care. This will ensure that the entire team is ready to answer basic questions with consistent messaging throughout the weight loss journey. Client engagement will increase knowing they have the full support of the entire hospital team.

Opportunity #3: Develop Individualized Weight Loss Plans

[DQ: Effective, Pet- and Client-Centered, Efficient, Safe]

No single approach will lead to successful weight loss for all pets. To increase the likelihood of success, plans need to be developed individually for each pet and their owner. Utilize guidelines and tools freely available to veterinary professionals.^{2,23,24} The aforementioned nutritional assessment is critical in developing an acceptable weight loss plan with realistic, attainable goals, which requires going beyond finding out what and how the pet is eating but also understanding the owner, family, and home as well as other environmental factors that may affect compliance. By providing owners the tools they need—such as measuring cups or kitchen scales—you can ensure consistent measuring of meals, which was found to be significantly higher in our successful weight loss group. Setting realistic expectations for owners, and celebrating any success, no matter how small, is also important. Most importantly, let the owner know that “failure” or relapse is also permissible, so that they do not get discouraged and discontinue the program. Brainstorm with owners to discuss what they see as potential challenges to a successful weight loss plan and be sure to ask about these during check-ins. Being flexible and willing to compromise with the weight loss plan to meet both the pet and client needs may help some owners remain committed and engaged.

Clearly identify and set goals beyond just a target weight. What else would the owner like to see as an outcome? Example outcomes include: increased energy or enthusiasm, increased activity levels, and decreased impact of concurrent disease. The veterinary team should align with the pet owner on how progress will be assessed. What routine check-ins can more objectively assess the pet progress? Think beyond “how is your pet doing?” More objective assessments can be provided with use of available tools, such as pet activity trackers and validated pain score or quality of life instruments, or measures developed by your hospital team to meet individual pet needs.

Conclusion

Overweight condition is a growing pet health concern in the U.S., and the veterinary profession at large has a responsibility to evaluate and modify our approaches to truly address the problem. The complexity of this situation means that a “cookie-cutter” plan will not work for many pets. Owner recognition of the pet’s weight status, motivation and continued engagement, along with the hospital team’s engagement and commitment to support owners, are keys to successful pet weight loss and maintenance plans. All hospital team members need to build better relationships with clients and must align on the importance of diet and pet weight to pet health. Setting reasonable expectations, celebrating successes, acknowledging failures and relapses and learning from them, and adjusting the weight loss plan when appropriate are some of the basic concepts for pet weight loss programs identified throughout this report. Ultimately, the goal of the veterinary team and the client for the overweight pet should be shared: attaining and maintaining healthier weight to improve the pet’s outcome. That outcome may be quality of life, mobility, comfort, activity, the impact of comorbid conditions, or another factor that has been identified by the owner and hospital team as an important outcome for that pet.



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Notes

