

# Improving Treatment Adherence in Diabetes Mellitus



Diabetes mellitus is common in dogs and cats. Its management involves veterinary care and a daily routine at home that includes insulin administration, consistent diet, regular exercise and monitoring. Helping clients come to terms with this diagnosis and adhere to treatment can be optimised by empathy, knowledge of perceptions and barriers, clear and transparent communication, tailoring established standards of care to suit the client and teamwork.

Diabetes mellitus is a common endocrine disorder that is diagnosed in around three to five per 1000 dogs and cats.<sup>1,2</sup> It has a fair to good prognosis, with the median survival time after diagnosis reported to be around 18 months in both species.<sup>3,4</sup> It is predominantly a disease of middle-aged and older animals, with insurance claims reported in dogs from around nine years of age and risk increasing from the age of six years in cats.<sup>1,2</sup> The diagnosis is based on confirmation of clinical signs along with measurement of persistently elevated blood glucose and glucosuria.<sup>5</sup> Diabetes management in dogs and cats involves veterinary care and a daily routine at home that includes insulin administration, consistent diet, regular exercise and monitoring. Intermediate and long-acting insulin products have to be administered twice daily at 12-hour intervals to most diabetic dogs and all diabetic cats to provide adequate glycaemic control.<sup>5</sup> Home monitoring can include a number of parameters that indirectly or directly reflect blood glucose concentrations, such as measuring water intake, assessing urine output (e.g. weighing the cat's litter box, frequency of nocturia in dogs) or blood glucose measurement. It is important that the pet owner keeps a record of significant findings at home and that this record, whether it be a diary, calendar, spreadsheet or app, such as Pet Diabetes Tracker, is made available to the veterinary team for review.

There are a number of simple guidelines that can help the veterinary team work with clients as they come to terms with this diagnosis. Standard of care guidelines, that include the various stages of care from diagnosis and initial care through to long-term management, can be developed and implemented for the practice.<sup>5,6</sup> These guidelines should be shared with the whole veterinary team so that everyone in the team knows and understands their role and responsibilities. Time with the client can then be spent focusing on customising the practice's standard of care plan to address their concerns and meet their and their pet's needs. Client education and commitment are essential to ensuring a successful outcome in diabetic pets. Diabetes management needs to be explained in detail to the client and any questions they may have must be answered. By listening to the client's needs and working closely with them, a management plan can be developed that not only addresses their pet's needs but is also appropriate for them.

The veterinary team should be an advocate for

the pet patient by listening to the client's concerns, expressing empathy and working within their constraints. Communication channels need to be open. The veterinary team should understand the different possible personality types of clients and how to respond to these. If the client is looking for a structured plan, give them written instructions and flow charts. If the client is looking for educational information, provide background information on diabetes mellitus, such as brochures, video tutorials and live demonstrations, and share the types of diagnostic and other tests that are going to be conducted, as well as the management options available. Online support groups are a possible solution for clients who feel social pressure. It is important that the veterinary team does not make any assumptions about the role of cost as a driver or the level of health literacy of the client.<sup>7</sup> Non-verbal cues (body language) are a key part of human communication. The client's body language may provide clues that further clarification is required, that they are anxious or emotional. These clues may be apparent from facial expression, a shift in eye contact or nervous gestures. Non-verbal cues from the veterinary team may also enhance or inhibit the interaction with the client.

Client training is also central to effective diabetes management. Not only does a client need to learn how to administer insulin injections, but also about the importance of a daily routine, including consistent timing of insulin injections in relation to feeding, regular exercise and a consistent and appropriate diet and monitoring. The client needs to be aware of hypoglycaemia (lower than normal blood glucose), which is the main risk and side-effect associated with insulin treatment that occurs following the administration of too high an insulin dose for the animal's requirements. This can potentially be life-threatening. Not only should the client be trained to recognise the signs of hypoglycaemia and prepared to administer emergency treatment at home, but they should also be able to contact the veterinary team easily. There is a lot of information involved and this may seem very complex to the client. It is therefore essential that training is delivered using clear, simple language and at an appropriate pace to allow the client time to absorb the information provided. Specific, written instructions that include information on insulin dosage and other aspects of managing a diabetic pet at home can help provide an aide memoire, since it has been estimated that less than half of the information clients are given during each visit is retained.<sup>7</sup>

Knowledge of perceptions and barriers to care may also aid veterinarians in educating pet owners and addressing concerns. However, there appear to be marked differences between veterinarians' perceptions of how well clients adhere to agreed treatment plans, including the administration of treatment as prescribed, which includes the correct dose and

timing of treatment as well as filling and refilling prescriptions, and reality. In one survey, the majority of veterinarians believed that client adherence was as high as 75 per cent, when in reality the average rate was found to be 50 per cent.<sup>8</sup> The quality of interaction between the client and their veterinarian significantly impacts adherence to treatment. The use of more positive and less negative language by healthcare professionals has been linked to better adherence.<sup>7</sup> By remaining encouraging, the veterinary team can help the client to understand that successful diabetes management is achieved through adherence to the diabetic pet's daily routine including treatment. To help encourage adherence, provide specific verbal and written instructions, make sure that the client understands how and when to administer the insulin correctly, has instructions on how to manage their pet's diabetes at home and knows how important it is to schedule appropriate follow-up visits.<sup>7</sup>

One of the potential barriers to treatment is the fear of giving injections. In one survey, more than 50 per cent of clients reported that they were fearful of giving injections at the beginning of insulin treatment.<sup>9</sup> Although this number decreased with time, eight per cent remained fearful of giving injections.<sup>9</sup> Insulin pens were developed to reduce the physical, cognitive, and emotional burden of diabetes management.<sup>10</sup> Insulin pens are considered easier and more discreet to use and dose insulin more accurately, compared to vials and syringes. They are also associated with improved user confidence, treatment satisfaction, and quality of life and have been shown to improve health economics and adherence to insulin therapy.<sup>10</sup> Insulin pens are also associated with less needle fear and less discomfort. Improving adherence to insulin treatment to achieve better glycaemic control remains one of the challenges in the management of diabetes mellitus in dogs and cats. The development of an insulin pen by MSD Animal Health for use with a veterinary approved insulin product represents a technological advance.<sup>11</sup>

Three out of four clients are concerned about the rising cost of pet healthcare and, as a result, their ability to properly care for their pets.<sup>12</sup> However, 73 per cent of pet owners stated that they would consider spending any amount of money to keep their pet healthy.<sup>12</sup> A clear fee structure, including follow-up visits, laboratory tests and insulin, should help to mitigate cost concerns for clients who have pets with diabetes mellitus. This should help to provide clients with well-defined expectations of cost from the outset, and allows them to plan for the care of their pet. For those clients who are concerned about cost, breaking up the treatment plan into the cost per day should help. Moreover, cost is not perhaps as large a factor in poor adherence as one might think. Poor adherence is not usually due to the actual costs, but tends to result from the veterinary team's failure to communicate the actual value and importance of a recommended treatment.<sup>13</sup> Regular contact and communication with the client are also very important. A follow-up plan can include telephone follow-up by the veterinary team, in addition to appointments at the veterinary practice. If the animal has to be hospitalised at any time, it is

important that the client is provided with details on why this is and understands how long their pet may have to stay in the hospital. Any and all changes to the management of the animal, including changes in insulin dose, should be communicated immediately throughout the management of the case. The veterinary team needs to be readily accessible to the client so that urgent questions can be addressed without delay, including out of regular working hours.

November is Pet Diabetes Month™ - to learn more about diabetes mellitus and helping clients™ who have, or think they may have, a pet with diabetes go to <http://www.petdiabetesmonth.com/>.

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