

**Exploring and Evaluating Veterinary Team Effectiveness  
in Companion Animal Practice**

**by**

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## **ABSTRACT**

### **EXPLORING AND EVALUATING VETERINARY TEAM EFFECTIVENESS IN COMPANION ANIMAL PRACTICE**

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The veterinary healthcare team concept was explored using an inductive approach involving four veterinarians (N=23) and four Registered Veterinary Technician focus groups (N=26). Themes revealed included Communication, Toxic Attitude and Environment, Leadership, Coordination, and Work Engagement. Each was subsequently explored in a study of team effectiveness and its associations with job satisfaction and burnout. A random sample of 274 participants from 48 companion-animal veterinary teams was recruited. Mixed linear regression found job satisfaction increased with increased individual engagement and tenure at the practice, and decreased with increased years in veterinary medicine, full-time employment status, or within a toxic clinic environment. Higher scores for exhaustion and cynicism were associated with the presence of a toxic environment, reduced individual engagement, and full-time employment status. A coordinated team environment contributed to decreased cynicism and increased professional efficacy scores. These results suggest team effectiveness significantly influences job satisfaction and burnout among veterinary healthcare teams.

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Ačiū už viską!! Aš Jus myliu!

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## **Chapter 1**

### **Introduction, Objectives and Literature Review**

## Introduction

While the use of teams to deliver services is well-established and researched in a number of work environments including human medicine,<sup>1,2,3,4,5,6,7,8</sup> to date there is a paucity of empirical research in veterinary medicine. In other health care fields, research has shown the use of successfully functioning teams provides benefits such as flexibility and adaptability for an organization.<sup>1</sup> Organizational level benefits of health care teams include reduced costs, better co-ordination of care, and improved patient outcomes.<sup>2,3,4,5</sup> Furthermore, individual members of effectively functioning teams benefit through enhanced job satisfaction, well-being, and better role clarity.<sup>5</sup>

Conversely, health care teams with poor communication and a lack of coordination have been associated with increased patient readmissions, increased hospitalization time and costs, and higher patient mortality.<sup>6,7,8</sup> On an individual level, work dissatisfaction and stress among healthcare workers have been associated with substance abuse, burnout, turnover, and reduced psychological well-being in numerous health care professions, including veterinarians.<sup>9,10,11,12</sup>

The intent of this thesis was to employ mixed-method research to explore veterinary team effectiveness. The first phase was a qualitative study using focus groups to gain insight into how Registered Veterinary Technicians (RVTs) and veterinarians regard veterinary team effectiveness. Findings from the qualitative phase were then used to inform development of a survey instrument to assess team effectiveness. In order to explore the impact of team effectiveness within companion-animal veterinary practice, the relationship between veterinary team effectiveness and the outcomes of job satisfaction and burnout were assessed in the quantitative phase of the study.

## **Objectives**

The primary objectives were:

- 1) To explore RVTs' and veterinarians' perceptions of the health care team  
(Chapters 2 & 3)
  - a. To identify characteristics of effective teams
  - b. To identify factors which may enhance or detract from optimal team function
- 2) To develop an instrument to measure veterinary team effectiveness (Chapter 4; Appendix C.1)
  - a. To provide a reliable, validated measure of team effectiveness for outcome-based studies of veterinary team function
- 3) To explore outcomes of veterinary team effectiveness (Chapter 4)
  - a. To measure job satisfaction of team members, and to identify factors of team effectiveness which increase or decrease it
  - b. To measure aspects of burnout in veterinary personnel, and to identify factors of team effectiveness which contribute to it

## **Literature Review**

### **Defining Team Effectiveness**

#### ***What is a team?***

In organizational research, a team has been defined as “a small number of people with complementary skills who are committed to a common purpose, performance goals, and

approach for which they hold themselves mutually accountable”.<sup>13</sup> It differs from a work group, in which people may share the same work environment, but undertake independent tasks not requiring collaboration.<sup>14</sup> Clearly, given the interdependent relationships that exist within a veterinary practice, veterinary clinics require teams rather than work groups to provide patient care and customer service.

Teams have been used in human healthcare since the early 1900’s.<sup>15</sup> Since this time, healthcare continues to be reorganized and restructured as a response to increased financial pressures, as well as expectations to continually improve quality.<sup>4,5,15,16,17</sup> Thus, team performance and effectiveness are being increasingly studied.<sup>4,5,15,16,17</sup> Despite extensive research, reliable strategies for developing effective teams have not been well established within health care.<sup>5,15,17</sup>

In veterinary medicine, although the term “veterinary health care team” is commonly used,<sup>14,18,19</sup> there have not been any empirical studies to explore the construct of team effectiveness in veterinary clinics. It is also unclear whether all members of the veterinary team share the same perceptions about the benefits and challenges of working as a team. Furthermore, there is a dearth of research on potential outcomes of team effectiveness in veterinary medicine.

### ***What is team effectiveness?***

To date, a consistent, accepted definition of team effectiveness does not appear to exist. Several models have been developed to identify dimensions and criteria of team effectiveness. The unidimensional model focuses on objective measures of team performance<sup>20</sup> and productivity.<sup>21</sup> The multidimensional models include other factors such as employee satisfaction and commitment.<sup>22,23,24</sup> Cohen and Bailey<sup>25</sup> further developed the multidimensional model into three broad categories. These include performance effectiveness (e.g. productivity, efficiency),

attitudinal outcomes (e.g. satisfaction, commitment, trust in management), and behavioral outcomes (e.g. absenteeism, turnover, safety). In veterinary medicine, while business management consultants and publications focusing on economic outcomes often provide recommendations about staffing levels, appointment length, and pricing (i.e., Veterinary Economics, DVM Newsmagazine) few publications or studies in veterinary medicine have focussed on attitudinal or behavioral outcomes.

Characteristics of effective teams are sometimes grouped into organizational, individual, and team level factors.<sup>4,5,23,26</sup> Commonly cited organizational factors include a clear vision,<sup>26</sup> shared values,<sup>27</sup> and measurable team goals.<sup>28</sup> Other important organizational factors include suitable leadership,<sup>29,30</sup> team members with an appropriate mix of skills, interests, and backgrounds,<sup>31</sup> distinct but flexible roles,<sup>2,3,32</sup> and tasks perceived to be important and relevant.<sup>24</sup>

Individual factors also have an impact on team effectiveness. Individual characteristics influencing the team's ability to function productively include the ability to trust each other's skills and expertise,<sup>28,33,34</sup> commitment to the team goals and values,<sup>5,35</sup> and flexibility.<sup>5</sup>

Team factors can also be thought of as team processes.<sup>4</sup> Characteristics of team processes include coordination, communication, cohesion, decision making, conflict management, social relationships and performance feedback.<sup>4,15,16,17</sup> The systems model of teamwork involves the utilization of resources (input), team processes (throughput) and the production of products/delivery of services (output).<sup>4</sup> In this thesis, team effectiveness will focus on factors involved in team processes.

In veterinary medicine, several reports and studies have recommended veterinarians develop skills in communication, leadership, and business management in order to meet societal and

professional needs.<sup>36,37,38,39,40,41,42</sup> To address this, communication and effective interpersonal skills are now recognized as core clinical skills, and are being taught in veterinary schools internationally.<sup>41,42,43,44,45,46,47,48</sup> Outcomes of enhanced communication skills include higher veterinarian satisfaction with companion animal visits<sup>49</sup> and increased adherence to veterinarian recommendations.<sup>50</sup> Other beneficial outcomes of leadership skills, financial acumen, and employee development are increased practice income and reduced turnover.<sup>43</sup> However, few studies have surveyed veterinary teams to explore their role in the outcomes of veterinary care. A recent UK study on employee engagement suggests practice owners and veterinary teams may have different perceptions regarding the effectiveness of management and leadership in their practices.<sup>51,52</sup>

### ***Potential Outcomes of Team Effectiveness:***

While outcomes of veterinary team effectiveness could include a broad list of organizational, team or individual outcomes, this literature review will focus on two important outcomes at the individual level: job satisfaction and burnout.

### **Job Satisfaction**

Organizational behavior research has studied job satisfaction since the 1950's.<sup>53,54</sup> Spector<sup>55</sup> stated it is the most studied variable in organizational behavior. While some early researchers considered job satisfaction to be a need fulfillment (in that workers were satisfied if the job could meet their basic needs for food and shelter), it is now considered to have a cognitive component.<sup>55</sup> Most researchers indicate job satisfaction encompasses the positive attitude of a worker towards the job.<sup>55,56,57</sup> Two of the early researchers of job satisfaction<sup>53</sup> postulated satisfaction and dissatisfaction were separate phenomena. Job satisfaction included both intrinsic

factors (motivators) and extrinsic factors (hygiene). Motivators included achievement, recognition, and responsibility, as well as the job itself. Hygiene included salary, job security, status, and working conditions. They found job dissatisfaction was related to company policy, administration, supervisors, salary, interpersonal relationships, and working conditions. Another early researcher<sup>58</sup> described job satisfaction and job dissatisfaction as emotional states which are “a function of the perceived relationship between what one wants from one’s job and what one perceives it as offering or entailing.” Building on this, more recently, Spector<sup>55</sup> noted job satisfaction was related to communication, appreciation, coworkers, fringe benefits, job conditions, nature of the work itself, nature of the organization, organizational policies and procedures, pay, personal growth, recognition, security and supervision. Interestingly, many of these factors have been identified as contributors to team effectiveness.<sup>4,15,16,17</sup>

Within human health care, similar determinants of job satisfaction have been identified for physicians and nurses. A literature search of job satisfaction in physicians in general practice<sup>59</sup> found commonly cited factors associated with increased job satisfaction included diversity in work, rewarding relationships and interactions with colleagues, and teaching medical students. Conversely, factors associated with lower job satisfaction included suboptimal income, lack of recognition, inadequate time, and perceived excessive workload.<sup>59</sup> Job satisfaction has been frequently researched in the human nursing literature. In two meta-analyses, job satisfaction was negatively correlated with stress, and positively correlated with autonomy.<sup>60,61</sup> Other positively correlated variables included organizational commitment, communication with supervisors and peers,<sup>60</sup> and nurse physician-collaboration.<sup>61</sup> Notably, for both physicians and nurses, many factors impacting job satisfaction are related to team effectiveness, particularly in terms of interactions with coworkers and colleagues.

In veterinary medicine, factors influencing job satisfaction in veterinarians are analogous to those in human health care. For example, Hesketh and Shouksmith<sup>62</sup> found higher job satisfaction among veterinarians was linked to good interpersonal relationships, status and self-respect, ability to fully use their skills, and social support within the workplace. Similarly, a study of Ontario veterinarians found the six primary determinants of veterinarian career/job satisfaction included financial stability, relationships with colleagues, professional development, workload, lack of problem with clients, and veterinary skills.<sup>63</sup> These factors explained 66% of the variance in job satisfaction, with financial stability and relationships with colleagues (both veterinarians and non-veterinarians) being the strongest determinants of satisfaction.<sup>63</sup>

Part of the reason job satisfaction is so widely researched is the potential impact it has on organizational functioning. For instance, job satisfaction has been positively related to performance<sup>64,65,66</sup> and outcome quality measures;<sup>67</sup> however, the relationship is likely not straight forward. A meta-analysis by Bowling,<sup>68</sup> found the satisfaction-performance relationship to be spurious, as it can be reduced after controlling for general personality traits, work locus of control, and organization-based self-esteem. Studies in veterinary medicine have not specifically looked at the job satisfaction-performance relationship; however, the potential role of job satisfaction in performance will be important to any veterinary practice. In addition to performance, job satisfaction has also been positively associated with organizational commitment<sup>69,70,71</sup> as well as intent to stay,<sup>72</sup> while negatively related to employee turnover.<sup>60,70,71,72,73,74</sup> A literature review of job satisfaction of nurses in human medicine found job satisfaction significantly predicted turnover, burnout, absenteeism, and intention to quit.<sup>54</sup> In companion-animal practice, studies have not specifically investigated the relationship between job satisfaction and organizational commitment. However, a study of food animal veterinarians

found job satisfaction and enthusiastic pride in the profession as two of the strongest predictors of intention to stay in the job.<sup>75</sup>

Studies have found job satisfaction has an important role in health and wellbeing outcomes for healthcare practitioners. Extensively investigated among physicians, job satisfaction has been found to be negatively associated with mental health and burnout among this population.<sup>76,77,78</sup>

Several studies found job satisfaction explained approximately 10% of the variance in physician mental health and well-being.<sup>76,77,78</sup> Similarly, a study of job activities, job satisfaction, and mental health in veterinarians found job satisfaction explained 8.2% of the unique variance in mental health.<sup>62</sup> These studies further emphasize the need to identify factors contributing to job satisfaction for all team members. While most studies on job satisfaction in human healthcare have centered on teams in hospital settings, a few have focused on teams in primary care. In a recent study,<sup>79</sup> both general physicians and practice staff were generally satisfied with their jobs, with physicians slightly less satisfied than other staff (mean 5.56 on a 7 point scale, SD 1.12 for G.P.'s; mean 5.95 on a 7 point scale, SD 1.05 for non-physicians). For physicians, the opportunity to use their abilities was the most significant variable, explaining 40.2% of the variance in job satisfaction. For non-physicians, recognition for work was the most significant variable, explaining 47.7% of the variance. Factors such as gender, location, and mode of practice were not significant. Comparable studies have not yet been performed in veterinary teams to assess whether veterinarians and other team members have similar or different factors contributing to job satisfaction.

Given the impact of job satisfaction on individual and organizational outcomes, there is a need to measure job satisfaction in veterinary teams, and to explore whether team effectiveness influences the level of job satisfaction in veterinary personnel.

## **Burnout**

The concept of burnout was first described by Freudenberger in 1974 as physical signs and behavioral indicators that occurred in healthcare workers as a result of stressful work conditions such as prolonged work hours and intense interpersonal relationships with patients.<sup>80</sup>

Subsequently, burnout has been conceptualized as having three dimensions: emotional exhaustion, cynicism, and professional efficacy,<sup>81,82,83,84</sup> and thus can be understood as a syndrome. Emotional exhaustion is considered the key component of burnout syndrome, and is characterized by symptoms such as irritability, emotional instability, difficulties with coworkers, eating problems, tiredness, sleep disturbances, and substance abuse.<sup>82,84,85,86</sup> Another component, cynicism or depersonalization, describes an individual's distancing or negative attitudes towards patients, coworkers, or the job.<sup>87,88</sup> Professional efficacy is considered the third component of burnout. When workers are unhappy about themselves and their accomplishments in the workplace, they develop a reduced sense of personal accomplishment.<sup>84</sup> Burnout syndrome is thus characterized by high levels of exhaustion and cynicism, and a low level of professional efficacy.

While initial studies on burnout were performed with healthcare professionals, burnout has now been studied in numerous professions and work settings internationally.<sup>81,82,83,84,85,87,89,90,91,92,93</sup>

Burnout is generally accepted to be a result of individual, occupational, and organizational factors.<sup>94,95</sup> Individual factors contributing to burnout include personality traits such as higher levels of neuroticism and lower levels of extraversion, conscientiousness, and agreeableness.<sup>96</sup> Other individual factors include age, job experience, and gender, with younger age, less job experience, and female gender as risk factors for burnout.<sup>85,91,97</sup>

Burnout tends to occur in occupations such as healthcare and education, often denoted as care professions.<sup>84,85</sup> Occupational factors thought to contribute to burnout include spending extensive amounts of time and effort working with people, particularly in stressful situations.<sup>84</sup> Given the nature of veterinary medicine, particularly in clinical practice where staff are in constant contact with people and emotionally charged, stressful situations are a regular occurrence, it is anticipated members of a veterinary team could be at potential risk for burnout.

Many researchers feel organizational factors have the most impact on the incidence of burnout.<sup>83,98,99</sup> Leiter and Malach<sup>99</sup> describe the relationship between organizational factors and burnout as a misfit between the person and their job in relation to six areas of work-life balance. These areas include workload, control, reward, community, fairness, and values.<sup>99</sup> Workload is the most frequently cited contributor to burnout.<sup>85,91,92,93,97,99,100</sup> Other organizational factors contributing to burnout include the quality of working relationships,<sup>85,97</sup> role conflict,<sup>101</sup> work stress,<sup>102,103</sup> and inadequate resources.<sup>99,104</sup> Since a number of these factors involve interactions among team members, there is a need for research in veterinary medicine to identify organizational factors that could be contributing to burnout.

Consequences of burnout include decreased organizational commitment, increased injuries, absenteeism, decreased job satisfaction, and employee turnover.<sup>105,106,107,108</sup> In human medicine, researchers have identified job dissatisfaction and burnout among physicians to increase the likelihood of medical errors<sup>109,110</sup> and decrease the likelihood of satisfactory patient care.<sup>110</sup> Overall, burnout in health care has been associated with poor patient outcomes, less patient safety, patient dissatisfaction, and decreased quality of care.<sup>106,107,108,109,110,111,112,113,114</sup> Since the same outcomes are important in veterinary medicine as in human medicine, understanding what contributes to burnout in a veterinary context is important. Since it is believed organizational and

management factors rather than individual characteristics have the greatest impact on the incidence of burnout<sup>83,98,99,111,115</sup> looking at the role of veterinary team effectiveness is important.

Numerous studies have examined burnout in healthcare professionals, including physicians,<sup>116,117</sup> nurses,<sup>89,91,92,93,107,108,118,119,120</sup> dentists,<sup>121</sup> and dental hygienists.<sup>122</sup> Several studies indicate burnout is an issue for veterinarians as well.<sup>10,123,124,125</sup> The first study to identify burnout in veterinarians was done by Elkin and Kearney in 1992.<sup>123</sup> They found 67% of female and 53% of male veterinarians in their sample of United States veterinarians were in the high-risk category of burnout. Subsequent studies have identified burnout in veterinarians from Finland,<sup>124</sup> Belgium,<sup>10</sup> and Australia.<sup>125</sup> These studies found between 18.9-41.7% of veterinarians were in the moderate to high-risk categories of burnout. Stress and burnout are thought to contribute to attrition from the profession, which has been estimated to be up to 30% .<sup>125</sup>

Thus, burnout appears to be a prevalent issue for veterinarians; however, studies have yet to assess burnout among other groups of veterinary personnel. Since burnout occurs as a result of individual, occupational, and organization factors, there is a need for research to assess the prevalence of burnout in veterinary team members, and to investigate the role of team effectiveness in burnout.

### **Employing mixed-method research to explore veterinary team effectiveness**

When exploring issues surrounding a topic previously not studied, a multi-methodological approach using both qualitative and quantitative techniques is often preferred, particularly when researching issues of health and health care.<sup>126,127</sup> A multi-methodological (mixed methods) approach in the current thesis involved focus groups to qualitatively explore the concept of team

effectiveness within veterinary practice, and a survey to quantitatively evaluate team effectiveness in veterinary practice.

### **Qualitative Research Methods:**

Qualitative research is an investigative process employed to understand a role, group, interaction, social situation, or event.<sup>128</sup> It usually uses an emergent design, in which theories and hypotheses are not constructed a priori.<sup>129,130</sup> Data analysis is performed inductively, with patterns, categories, and themes constructed from the bottom upwards.<sup>130</sup>

### ***Focus Groups***

While the research questions in the current thesis could have been explored using individual interviews, a focus group approach was chosen instead because it “can provide another level of data gathering or a perspective on the research problem not available through individual interviews”.<sup>131</sup> They are particularly useful in exploratory studies, and can be used to triangulate information from several sources.<sup>131</sup> According to Fontana and Frey,<sup>131</sup> focus groups are “inexpensive, data rich, flexible, stimulating to respondents, recall aiding, and are cumulative and elaborative, over and above individual responses”.

Focus groups were initially designed to test marketing strategies;<sup>132</sup> however, more recently focus groups have been increasingly used within various healthcare fields to obtain views and input from the providers and receivers of health care on a number of topics. For instance, focus groups have been used to explore physicians’ and nurses’ information needs and communication patterns<sup>133</sup> nurses’ perspectives on difficult communications,<sup>134</sup> physician’s views on pediatric health care,<sup>135</sup> and patient satisfaction with chronic pain management.<sup>136</sup> Focus groups have also

been used to develop health surveys using the words, items, and research questions from potential participants.<sup>137,138,139</sup> Focus group research is beneficial because it can inform researchers about people's attitudes and motivations about a topic.<sup>140,141</sup> Focus groups have also been used in veterinary medicine to explore a number of topics, including veterinarians' and clients' perceptions about monetary aspects of veterinary care,<sup>142</sup> veterinarian-client communication,<sup>143</sup> needs assessments for continuing education,<sup>144</sup> and methods to improve biosecurity.<sup>145</sup>

### ***Thematic Analysis***

Thematic analysis is a qualitative research technique used for “identifying, analysing, and reporting patterns (themes) within data”.<sup>146</sup> Thematic analysis begins with repeated reading of the transcript, with the researcher jotting down initial impressions about potential meanings behind various comments. Line-by-line coding is then performed, using words reflecting actions rather than descriptions (i.e., gerunds). This method, described by Glaser in 1978, helps researchers stay closer to the data, and prevents the tendency to begin analysis too quickly, with preconceived concepts.<sup>147</sup> A search for themes is then performed, using the six phases described by Braun and Clarke.<sup>146</sup> These phases include becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.<sup>146</sup> An interpretive inductive approach is used, linking the themes very closely to the data, rather than simply using the interview questions as the themes. Memos are also written, indicating why particular codes fit under a particular theme. As themes are developed, the initial codes are constantly compared with evolving ones. The themes are then reviewed a number of times, determining whether some themes could be collapsed or refined. Thematic maps are often constructed, examining possible interrelationships.

## **Quantitative Research Methods**

Quantitative research is a deductive process, in which data are collected from representative samples of populations, and subjected to statistical analysis to test a priori hypotheses.<sup>130</sup>

Statistical analysis of the data is used to examine associations among various factors, as well as developing models to help explain the relationships among variables.<sup>130</sup>

Quantitative research often involves the use of surveys. Surveys are an economical means of obtaining views from a large number of participants in a timely manner.<sup>130</sup> When participants are selected randomly, results are often generalizable to a larger population.<sup>130</sup> Survey instruments may be specifically designed for the particular research study, or may be pre-existing, with established validity and reliability.

### ***Measurement of team effectiveness***

Both objective and subjective methods have been used to measure team effectiveness. While an objective measurement of team effectiveness can be obtained by examining behavioural outcomes and performance measures,<sup>1</sup> only subjective measurement can be used for attitudinal outcomes such as job satisfaction. Objective measurement of team effectiveness may be limited by the availability of data, and comparisons are difficult as teams differ considerably in terms of composition and the type of work they perform.<sup>148</sup> More commonly, subjective measurements are used to study teams, primarily through the use of surveys.<sup>149</sup> Surveys can be used to gather data either at the individual level or the team level. In the former, survey items assess the individual's perceived ability to accomplish team goals. These items are then aggregated at the team level.<sup>150</sup> At the team level, the survey items look at the team as the referent, rather than the individual.<sup>151,152</sup> Asking about the team's ability to accomplish tasks is less likely to be

influenced by an individual's perceptions about their own capabilities.<sup>1</sup> By using a combination of questions from both an individual's standpoint, as well as from their perspective as a team member, information about attitudinal outcomes and behavioural outcomes of team effectiveness can be obtained.

Although several reliable, valid survey instruments have been developed to look at aspects of team function in human healthcare teams, none have been used in veterinary medicine.

Moreover, it is unclear whether factors affecting team effectiveness are the same as those in human health care. Developing a measure of team effectiveness would assist veterinary practice by providing a tool to determine potential areas of strength or areas in need of development specific to veterinary medicine. As a tool relevant to veterinary practice, it could then be used in outcome-based studies of veterinary team function.

### ***Measurement of Job Satisfaction***

A number of instruments have been developed to measure job satisfaction. While several of these are multi-item scales with good validity and reliability, there is evidence single item measures are well-correlated with scales measuring overall job satisfaction.<sup>3,153,154,155,156</sup>

Advantages of single item measures include less risk of survey fatigue, reduced administration costs, and reduced missing data.<sup>154,155,157,158</sup> Furthermore, in comparative studies examining job satisfaction of workers in different occupations, a single-item measure is preferable, as the specific job characteristics unique to the position differ.<sup>159</sup>

### ***Measurement of Burnout***

The Maslach Burnout Inventory (MBI) was first developed to assess burnout in health professionals,<sup>84</sup> with subsequent versions developed to assess workers in education and other occupations.<sup>105,111,160</sup> The MBI-GS-General Survey has now been used in numerous occupational groups with established reliability and validity.<sup>160</sup>

While other measures exist,<sup>125,161</sup> the MBI is considered the “gold standard” instrument for measuring burnout.<sup>90,93,105,125</sup> In addition to having well established psychometric properties, one considerable advantage of the MBI is the ability for researchers to make comparisons between different employment groups because of its extensive use in burnout research worldwide. Since the current thesis is exploring the impact of team effectiveness on burnout in team members with different roles, the MBI provides a valuable tool for assessing and researching burnout in veterinary medicine.

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## **Chapter 2**

# **Exploring the Perspectives of Veterinarians and Registered Veterinary Technicians on the Veterinary Health Care Team Concept: The Impact of Toxic Attitudes and a Toxic Environment**

Prepared in the style of the *Journal of the American Veterinary Medical Association*

## Abstract

**Design** - To explore veterinarians' and Registered Veterinary Technicians' (RVT's) perceptions of the veterinary health care team with respect to the impact of toxic attitudes and a toxic environment.

**Design** – Qualitative study based on focus group interviews.

**Participants** – 4 veterinarian focus groups (23 companion animal veterinarians) and 4 Registered Veterinary Technician focus groups (26 RVTs).

**Procedures** - Independent focus groups sessions were conducted using a semi-structured interview guide and follow up probes. Thematic analysis was performed on the focus group discussions.

**Results** – Both veterinarian and RVT participants indicated veterinary team members exhibiting toxic attitudes negatively impacted veterinary team function. These attitudes included people being disrespectful, being resistant to change, always wanting to be the “go to person”, avoiding conflict, and lacking motivation. Participants indicated when conflict was not properly addressed, or when people with toxic attitudes were not addressed, a toxic environment often resulted. A toxic environment was sometimes manifested when “broken communication and tension between staff members” occurred as a result of employees lacking confidence, skills, or knowledge not being managed properly. It also occurred when employees did not feel appreciated, when there was difficulty coping with turnover, and when there were conflicting demands.

**Conclusions** – The presence of people with a toxic attitude was a source of frustration for both veterinarian and RVT participants. Prompt and consistent attention to negative behaviors might reduce the development of a toxic environment.

## Introduction

The use of teams in human health care to coordinate work has been promoted since the beginning of 20<sup>th</sup> century, and the effectiveness of this model is being increasingly researched.<sup>1, 2</sup> Although the team approach to veterinary medicine has been advocated for decades,<sup>3, 4, 5</sup> empirical research on the topic is sparse. Teams are generally considered across disciplines to consist of individuals with interdependent tasks, sharing responsibilities for outcomes.<sup>2, 6</sup> Characteristics of cohesive teams include having clear, measurable goals, trained team members, division of labor, and effective communication.<sup>7</sup> Research in the human health field has shown that successfully functioning teams with effective communication lead to better quality of care resulting in enhanced patient outcomes (e.g., reduced post-operative pain, improved post-operative functioning, decreased hospital stay, improved patient ratings of care)<sup>8, 9, 10, 11 12</sup> and improved job satisfaction.<sup>13</sup> Conversely, research has shown that medical errors are often a result of miscommunication within malfunctioning human healthcare teams.<sup>14, 15</sup> Furthermore, in human hospitals, unfavorable nursing practice environments have been associated with job dissatisfaction, emotional exhaustion, intent to leave, and fair to poor quality patient care.<sup>16</sup>

The impact of employees with negative attitudes and a negative work environment has been described in the veterinary press for many years, yet veterinary practices continue to be plagued by the same recurring issues leading to these situations.<sup>17, 18, 19</sup> Although research into the function of veterinary healthcare teams and their impact on patient outcomes is limited, communication problems between veterinarians and with staff have been found to contribute to lower job satisfaction for veterinarians<sup>20, 21</sup> and is expected to affect the job satisfaction of other members of the veterinary healthcare team.

The objective of the current study was to compare veterinarians' and Registered Veterinary Technicians' (RVT's) perceptions of the veterinary health care team. Part of a study on team effectiveness, this paper focuses on the impact of toxic attitudes and a toxic environment on veterinary team function. Since limited research has been conducted in this area, an inductive research approach was utilized to explore this topic. Through the use of focus groups, participants were provided an opportunity to share their experiences working within health care teams, including identifying factors which may enhance or detract from optimal team function. The use of focus groups in qualitative research provides data in the words of the participants, which is then analyzed to look for patterns and trends.<sup>22</sup> Focus groups have been increasingly used in human and veterinary health care research.<sup>23, 24, 25, 26</sup>

By discussing ideas, experiences and perceptions in a small group setting, this study allowed participants to reflect on their own role in the veterinary team, as well as that of their coworkers. The findings of the current study are intended to enhance team function within private companion animal practice and to assist in the future development of best practice veterinary team guidelines.

## **Materials and Methods**

The study protocol was reviewed and cleared by the University of Guelph Research Ethics Board. Four independent veterinarian and 4 independent technician focus groups were conducted to explore each group's perceptions of the veterinary team.

## **Study Participants**

Using the publicly accessible College of Veterinarians of Ontario (CVO) database, the sampling frame consisted of all veterinarians designated as small animal practitioners from 8 counties (Brandt, Halton, Hamilton-Wentworth, Oxford, Peel, Perth, Waterloo, and Wellington) in the Province of Ontario. This area contains approximately 13% of all the veterinarians registered in the province and is within approximately 2 hours of the Ontario Veterinary College. A random number generator was utilized to identify potential participants from the sampling frame. For the veterinarian focus groups, initial contact was made by a mailed letter of introduction sent to each randomly selected veterinarian outlining the study and offering dinner along with a \$40.00 honorarium for participation. One to 2 weeks later, a follow up phone call was made by the author to address questions and obtain initial consent.

RVTs were recruited from the Ontario Association of Veterinary Technicians (OAVT) data base, utilizing postal codes from the same geographic area as the veterinarian groups, again using a random number generator. Since the RVT data base is not publicly accessible, the OAVT mailed a letter of invitation on the researchers' behalf. The mailing included a letter of introduction outlining the study and offering dinner along with a \$40.00 honorarium for participation.

Members who were interested in participating were then required to contact the author by phone or email. A reminder letter was sent via the OAVT two weeks after the additional mailing.

Letters were sent out to RVTs in the sampling frame until each focus group had a minimum of 4 participants.

Reminder emails and phone calls were made to both veterinarian and RVT participants 1-2 days prior to their scheduled focus group session. Two focus group meetings for each cohort (i.e.,

veterinarian and RVT) were held in a hotel conference room in Kitchener, Ontario, and similarly two for each group were held in Mississauga, Ontario. Each focus group lasted approximately 2 hours. The technician focus group meetings took place in June 2009, while the veterinarian meetings took place in September 2009.

### **Focus Group Interviews**

After signing informed consent forms, the focus group meetings were conducted by a professional moderator, with extensive experience conducting focus groups, and a veterinary student assistant. Semi-structured discussion guides developed by the author and a colleague familiar with conducting focus group research were used (Appendices A.4 and B.4). Participants were asked open-ended questions regarding their perspectives on the veterinary health care team, and how their role fit within the team. They were also asked about their responsibilities in that role, as well as about their interactions with other members of the team. Finally, participants were asked to describe the potential benefits and challenges encountered in working in a veterinary team environment. At the end of each of the focus groups, participants were asked to fill out a demographic questionnaire.

All sessions were digitally audio-recorded and subsequently transcribed verbatim by the moderator and confirmed for accuracy by the veterinary student assistant.

### **Data Analysis**

Using the verbatim transcripts, the focus group discussions were analyzed by the author using thematic analysis, a qualitative analytic method. Thematic analysis is “a method for identifying, analyzing and reporting patterns (themes) within data”.<sup>27</sup> Analysis was begun after all focus

groups were completed. The transcripts were reviewed a number of times both by listening to the verbal recordings as well as reading the written transcripts to become familiar with the data. An inductive approach was then used to develop themes,<sup>28</sup> looking for trends and patterns common to the various focus groups. A number of themes emerged, with the initial codes constantly compared with developing ones. Some themes were identified only in RVT groups, while others were identified only in veterinarian groups. Themes and subthemes were reviewed repeatedly, to determine whether some themes could be collapsed or refined. After construction of thematic maps, possible interrelationships amongst the themes were examined. A thematic map illustrating the themes highlighted in this paper is found in Figure 2.1. Intercoder reliability was assessed by having an RVT and a veterinarian not involved in the focus groups independently review and code the focus group transcripts for all of the themes and subthemes identified by the author.<sup>29</sup>

## **Results:**

### **Focus groups**

Four veterinarian focus groups were held with between 4 to 6 participants in each (n = 23). Based on information from the 22 participants who filled out the demographic questionnaire, participants ranged in age from 27 to 65 years (mean 44; median 45) and had worked as veterinarians between 1 and 40 years (mean 19; median 21 years). Fourteen were female (63%), while eight were male.

Similarly, four RVT focus groups were conducted with 4 to 8 participants per group (n = 26).

The 26 RVT participants ranged in age from 23 to 50 years (mean 32; median 31 years) and had

worked in the field from 2 to 30 years (mean 9.5; median 8 years). All RVT participants were female.

Intercoder reliability, using percent agreement, was 95% for subthemes when coding between the author and the secondary coders was compared.

### **Thematic Analysis**

A theme that was interwoven throughout all veterinarian and RVT groups was Communication—as expressed by one veterinarian, “if there’s not good communication, everything will just fall apart.” Four other themes also repeatedly emerged in all focus groups—Toxic Attitudes and Environment, Work Engagement, Coordination, and Leadership. A number of subthemes were found under each of the major themes. The Toxic Attitude and Environment theme was common in all veterinarian and RVT focus groups. The presence of people with a toxic attitude, or a work environment that was toxic, was thought by all veterinarian and RVT focus groups to have a pronounced impact on the success of the team, hence the focus of this chapter is on this theme.

**Toxic attitude.** A toxic attitude manifested in many forms. For instance, participants described toxic attitudes being expressed by a person being disrespectful, being resistant to change, or avoiding conflict. Several manifestations of toxic attitudes were frequently mentioned in both the veterinarian and RVT groups, including a lack of motivation, a chronically negative demeanor, always wanting to be the “go to person”, and incompatible personalities.

***“That’s not my job.”*** A very common frustration expressed within both the RVT and veterinarian focus groups was dealing with people having a “that’s not my job” attitude. Many comments

were related to people not wanting to answer phones, clean kennels, hold animals, or do laundry. These comments were sometimes directed at veterinarians, but often at receptionists or new staff. When people refused to perform certain tasks that would reasonably be considered part of their duties, others felt they were exhibiting a toxic attitude. For instance, RVTs in several focus groups were frustrated with veterinarians who refused to answer the phone or see clients during lunch breaks, as well as with receptionists who didn't want to talk to veterinarians directly. When people refused to assist with these duties or tasks, other staff members often considered this a control or ego issue. The underlying feeling of the participants seemed to be that people with this attitude were not contributing properly as team members.

In some cases, the “that’s not my job” sentiment was believed to be the result of the receiver of this message not appreciating or understanding what the other person was doing, often because this was not communicated properly. Many veterinarian and RVT groups cited examples where people appeared to be unwilling to help, but they were actually busy with other duties. For instance, communication breakdowns sometimes occurred between the “front” and “back” of the clinic, when people were unaware of what other employees were doing (e.g., employees are busy in the reception area, with the perception that employees performing treatments or assisting with diagnostic tests are idle). Communication breakdowns also occurred if individuals perceived jobs were left for them to do, not appreciating that others may have been too busy to complete the task.

A number of participants in both the veterinarian and RVT focus groups found that having written job descriptions and consistent training helped alleviate the “that’s not my job” sentiment. However, they indicated it was still important to have accountability and flexibility. As one RVT expressed it “you know there’s some structure to it, you know who’s responsible

for what... people are not willing to pull the 'that's not my job' phrase. Everybody is still willing to go that extra mile."

**"Mood polluters"** A toxic attitude might be a temporary situation. Some RVT groups mentioned that a negative interaction with a client or coworker can color the rest of the day: "You'll talk to one angry client and whether or not they are justifiably angry is a whole other issue, but they just get you riled up and they get your blood pressure up and they have you on the defensive and then someone says 'oh well there's an error on this'. And you're like, 'I don't care, it's not my problem right now'. It affects how you deal with everybody else that day. If it happens first thing at the beginning of your shift, it can color your whole shift and how you relate to everybody."

People who do this regularly were called "mood polluters" by one RVT. Other participants in the same group acknowledged when people felt comfortable enough with their teams to share these feelings, it brought the team closer together, as they knew other team members would empathize with their experiences.

Several RVT groups discussed the impact chronically negative coworkers can have on the team. A few RVTs mentioned that some of these people were "burned out", and that "just a couple of people can cause a team to be totally disrupted." Another RVT indicated these employees repeatedly, "are the ones that leave at 5:01 when the next car is coming in" rather than staying to help out at the end of the day to ensure everyone can get home relatively early.

In addition, participants felt having a mood polluter in the clinic helped the others unite as a team. For example, one RVT described the situation in her clinic where the veterinarian was described as being on an "emotional roller coaster" on a daily basis. The technician indicated it

“really built a strong team below her because we know that as a team, we have to function regardless of the day she’s having.”

The veterinarian groups also indicated that a negative person brings down the whole team. Interestingly, most veterinarian focus groups very quickly moved to talk about how important it was to get rid of mood polluters. Several veterinarian participants mentioned trying to change people’s behavior, but were unsuccessful; thus, they now primarily hire for attitude rather than for specific skills. Although the consensus seemed to be that negative people should be off the team, occasionally veterinarians were hesitant to dismiss them because they (the negative people) were in dire need of the job, or were long-term members of the community. Nonetheless, several veterinarians also indicated that once they had dismissed a negative person, the clinic atmosphere and efficiency improved.

***Wanting to be the “go to” person.*** This was a theme particularly prominent in the veterinarian groups, although it was brought up by several RVTs as well. While the individual exhibiting this behavior would be unlikely to consider it toxic, other team members often consider people with this trait frustrating. As one RVT put it, “I find there’s a bit of a breakdown in communication when one person wants to stay in charge, so they just don’t tell anybody what’s going on because then they’re the ‘go to’ person.” Some participants felt this was related to wanting to be in a position of power, in that knowledge is power. They indicated a particular problem occurs when the team member who wants to be the “go to” person does not have the appropriate skills or training. For instance, an RVT’s clinic manager had limited veterinary background which impeded her ability to communicate with suppliers. Her coworkers were frustrated because the manager “tells [suppliers] things on the phone and they don’t understand what she’s saying and she doesn’t know what they’re saying and instead of getting us to do it, she just does it herself.”

The participants felt it would have been more appropriate to delegate those duties to those with more knowledge.

Other veterinarian and RVT participants acknowledged that they wanted to or expected to be the “go to” person. Some people exhibiting this behavior simply felt that their experience and background qualified them as the best person to do the job. Other participants did not want to delegate because they were not confident the task would be done to their expectations.

An observed contrast between the veterinarian and the RVT focus groups was related to people wanting to be acknowledged when they were assigned to be the “go to person”. Many RVT participants expressed frustration that they were expected to perform managerial-type duties or be the “head technician,” but did not formally receive the title. They felt it led to resentment or irritation in the other team members, as their coworkers felt they were shirking their technician duties in order to perform managerial duties. Some also felt it was unfair that they were expected to perform managerial duties, but were not compensated for them. Several veterinarian groups, on the other hand, felt that “elevating” one of the team members to a different role led to resentment. As one veterinarian articulated, “So we’ve got four technicians, one technician who we kind of call ‘head’ technician, but we do it quietly so we don’t get the others upset.” Another stated, “We have four technicians, but no one is actually the head technician ‘cause we have had a problem with that.”

***Personality Issues.*** Many participants in the veterinarian focus groups extensively discussed the impact of people’s personalities on the team. Several veterinarians indicated they would hire primarily for personalities, as they felt they could teach the technical skills, but not change the personalities. They also described that the employee’s personality must fit with the rest of the

team. Many clinics had either working interviews or other means of allowing the rest of the staff to have input into hiring decisions. They felt this helped ensure people's personalities would be compatible with the rest of the team. As one veterinarian put it, "I'm going to make it really clear to you; I'm not firing eight people before I fire you. You have to fit in or it's not going to work."

**Toxic Environment** A toxic environment was described as resulting when "broken communication and tension between staff members" occurred. This was found to result from a number of underlying issues, including employees lacking the requisite confidence, skills, or knowledge; employees not feeling appreciated; difficulties when coping with turnover; and dealing with conflicting demands. It was also found to result when conflict was not handled properly, or when chronically negative or hostile people were not been held accountable for their behavior.

***Lacking confidence, skills, or knowledge.*** All of the veterinarian and RVT focus groups discussed the impact of people lacking confidence, skills, or knowledge on the rest of the team. When people felt that their coworkers lacked these attributes, this led to a lack of trust in their abilities. A number of RVTs indicated they sometimes felt it was necessary to be checking on their coworkers: this in turn led to frustration by both parties. A few RVTs mentioned they had a lack of confidence in new graduates' abilities (whether veterinarians or RVTs), which led the participants to question decisions and diagnostic results. In other cases, there was annoyance with new veterinarians when "they are [too] cautious and can't make a decision." The RVT groups also indicated that they found it vexing when coworkers did not have an understanding or appreciation of the skills and knowledge they have as RVTs. They cited several examples where on-the-job-trained individuals (OJTs) or people in management positions without veterinary backgrounds did not acknowledge the depth or breadth of skills RVTs possess. In most of the

veterinarian groups, there was not a clear differentiation made between the abilities of RVTs and other members of the veterinary team.

In all of the veterinarian and RVT focus groups, when employees were felt to be lacking in confidence, skills, or knowledge, negative repercussions for the team were believed to result. An outcome in some cases was employees being disrespectful to each other. This was believed to be more commonly observed between different team functions. A group of employees were more likely to be disrespectful to another group of employees (e.g., receptionists to RVTs; veterinarians to RVTs) rather than to members within their own group. For example, one RVT indicated that the receptionists “would never say to the veterinarian ‘look your appointment’s here, let’s get going.’ They sure as hell would say that to us.” In other cases, the toxicity was more subtle, where staff would avoid addressing the problem altogether, letting the problem continue. For instance, one veterinarian described the situation in his clinic where an employee repeatedly indicated there was a negative environment, but was reluctant to specifically identify the instigator. The underlying problem for both veterinarian and RVT participants was that a toxic attitude/environment appeared to be present, but there was reluctance to address it, which allowed the problem to continue.

***Not feeling appreciated.*** Another contributing factor to a toxic environment was not feeling appreciated, whether it was by clients, by veterinarians (in the case of RVTs) or by coworkers. This theme was much stronger in the RVT focus groups than the veterinarian ones. In some cases, there was a reluctance to express this need explicitly to others. For instance, one veterinarian mentioned it required a third party to identify the problem in his clinic. The consultant indicated that his veterinary team did not feel they were appreciated. The veterinarian was surprised at this finding, but realized he had to alter his perception: “you feel like you’re

supporting them a fair amount, but if they're not getting that impression then we need to do more." The basic problem described in both veterinarian and RVT focus groups seemed to be a lack of awareness of what other people do, although it was also tied in with respect or lack of respect for people's capabilities. All RVT groups expressed frustration that their education, knowledge, and skills were often not recognized. Specifically, at the clinic level they were resentful when OJTs received the same pay and performed the same duties that they did, potentially leading to a toxic work environment in these cases.

Both the veterinarian and RVT groups had participants that described ways of showing appreciation. These included providing small prizes for "catching people doing something right", reading thank you letters from clients during staff meetings, and encouraging people to provide positive feedback to other coworkers. Other participants mentioned their clinics had social events such as clinic parties and team excursions as appreciation events.

***Coping with turnover.*** Many of the veterinarian and RVT focus groups discussed the challenges to the team environment that are encountered when dealing with turnover. A negative environment sometimes resulted when a new member joined an already established team as a result of clinic expansion, or to replace people who were leaving or going on leave (e.g., maternity leave). Some RVT groups indicated that staff changes can be stressful for the permanent employees. In one RVT group, it appeared staff would prefer not to grow: "we don't want to get bigger but you have to get bigger because we have the demand for it." Veterinarian and RVT participants indicated challenges with turnover can be related to resistance to change. Resistance to change was commonly mentioned in both the veterinarian and RVT focus groups. One RVT who was initially hesitant to delegate to others said that she was set in her ways after

20 years, and admitted she was resistant to change; however, once she actually gave up responsibilities to others, it was beneficial for her and the team.

***Changing the rules.*** Several RVT groups indicated a toxic environment may occur when employees are following official procedures, but then aren't backed up by the veterinarian or by the administration. For example, a client may make a request that goes against a clinic policy. When the RVT communicated the policy to the client, and then the veterinarian subsequently ignored the policy and allowed the client their request, this led to frustration. As one RVT stated: "That undermines any credibility that you may have developed with the client. That's not teamwork." Several RVT participants indicated that this problem can be rectified if the veterinarian clearly lets the client know that an exception is being made, rather than giving the impression the employee is unaware of the policy.

***Lack of consequences.*** Both RVT and veterinarian focus groups cited examples of a particularly toxic attitude by one or several individuals leading to a toxic, hostile environment in the clinic, especially when there were no consequences to this behavior. For instance, an RVT spoke of her experience working in a clinic with "people fighting all the time" and "hating each other" with no repercussions from management. A recently graduated veterinarian gave the example of a technician who would cross out treatments that she did not agree with, with no consequences to this behavior—despite the fact that the technician was a relatively new graduate herself. This led to interpersonal tensions in the clinic. Another veterinarian from a large clinic described a situation in which a number of people complained about a technician with a very negative attitude, who was shuffled from one department to another, rather than being disciplined or dismissed. Participants indicated this lack of consequences for bad behavior decreased motivation in other staff at the clinic.

***Having unreasonable expectations.*** RVT and veterinarian participants indicated a toxic environment could occur if people were expected to perform tasks beyond their scope of practice, or tasks that were unrealistic given personnel or facility limitations. This tended to be more of an issue identified within the RVT groups. For instance, in one participant's practice technicians were expected to "police" the veterinarians in case they prescribed the wrong medication: "The [clinic] owner will come in and ask, 'why isn't this renal failure cat on potassium?' 'It's because the [other] doctor didn't call for it.' 'Well you guys should have caught that and asked why the doctor didn't call for potassium.'" In other cases, each veterinarian in a multiple veterinarian practice had preferred methods of doing things, which led one technician to lament: "Everybody does things differently and they expect you to remember that... some days I remember where I said, I can't work here anymore this place is driving me crazy because there was such a lack of communication and high expectations." While people in most veterinary clinics are expected to multi-task, participants felt if people were expected to take on too many tasks simultaneously, client service and potentially even animal safety may be compromised. An extreme example of this was exemplified by one RVT's experience: "...for about 3 months I was the only employee... I was monitoring surgery, setting up the surgery, answering the phone while cashing people out for [pet] food.... It's just not effective; it's not even cost effective." Feeling overloaded thus led to a toxic environment for some participants, as they felt they could not provide the level of client and patient service they wanted to or were expected to. Veterinarian participants described unreasonable expectations in terms of having conflicting demands. For instance, one veterinarian indicated, "it would be nice sometimes to be able to do my vet stuff and not have to focus on taking an x-ray because I don't want to be doing that, I need to be researching things...it's just not an option right now."

**Conflicting Demands.** Conflicting demands created a toxic environment according to most participants in both the veterinarian and RVT focus groups. For the RVTs, problems tended to occur when people received consistently conflicting messages from 2 or more different people, leaving them unsure as to what they should do. One RVT described the situation at her clinic: “You get the son telling you one thing and the father tells you something else. Or the office manager, who is the spouse, telling you something else then you have to precariously balance the beam.” Conflicting demands were identified as occurring when the clinic is very busy or understaffed, resulting in people not knowing which situations should be handled first. RVT and veterinarian participants mentioned the problem of conflicting demands was exacerbated when people are unaware of what others are doing. In the latter situation, they indicated resentment may build up when a group of people are extremely busy trying to manage conflicting demands and perceive others are not doing very much.

In the veterinarian groups, several mentioned the conflict they felt trying to juggle management duties with clinical duties. In some cases, it was also related to trying to having a work/life balance, which was sometimes difficult to achieve. As one veterinarian stated: “As owners you could be a good vet but not a good manager, that’s what I feel. It’s very difficult to combine those two together, there is a compromise. Either you could be a good vet and a good manager, but then you are not a good spouse or a family man.” Multiple competing demands sometimes created a toxic environment in the clinic, as it resulted in responsibilities not receiving the attention they deserved.

**Lack of Leadership.** Lack of leadership, whether due to absentee owners/managers, or ineffective leaders was a source of frustration leading to resentment or confusion in team members. Several RVT groups mentioned that the owners of their clinics came only for limited times each week, so

that “favorite clients” could see them. Another RVT complained that: “The owner is there in body sometimes and never there in mind so it’s the 2 managers that do everything from business to the bottom end.”

Occasionally people want to provide leadership, but are not effective at it, as was expressed by one technician: “We have two owners... One doesn’t want to be a manager but she has to do some of it. The other one wants to manage but isn’t great at it.”

The veterinarian groups did not specifically talk about absentee owners, although many did speak about wanting to achieve a work/life balance and managing expectations. Others spoke about potential problems with multiple owners or a lack of structure, which may result in frustration and confusion. As one associate indicated, “The leaders are not there, so that I’m lacking the leader and that doesn’t make for a good team ...I can’t step up and be the leader, I don’t make decisions for the practice ‘cause it’s not my practice.”

In a clinic with a toxic atmosphere, some veterinarian and RVT participants felt that having a more formal organizational structure might improve the situation. Others felt that the problem was “more to do with personality than actual job description-- and ego.”

## **Discussion**

Through the use of focus groups, participants were provided an opportunity to share their experiences of working in a veterinary health care team. To determine whether all members of the health care team share the same perceptions, separate focus groups were held with veterinarians and RVTs. By discussing ideas, experiences and perceptions in a small group setting, this study allowed participants to reflect on their own role in the veterinary team, as well

as those of their coworkers. A number of themes emerged from the focus group analysis. This chapter focuses on one of the themes revealed during qualitative analysis of the results: the toxic attitude and environment theme.

The impact people with a toxic attitude had on the overall functioning of the veterinary team was a very common theme in both the veterinarian and RVT groups. Participants indicated the presence of a toxic environment also had a negative effect on employees. This is congruent with research in human health care, as lack of collaboration among health care professionals, ineffective management, and work stress are associated with voluntary turnover intention and job dissatisfaction.<sup>16, 30, 31, 32</sup> Thus, it behooves veterinary owners and managers to assess whether or not a toxic environment is present, and to address factors contributing to it.

Research indicates toxic attitudes and a toxic environment can lead to both relationship conflicts (e.g., values and interpersonal style) and task conflicts (e.g., procedures, policies and distribution of resources).<sup>33</sup> A meta-analysis of associations between relationship conflict, task conflict, team performance, and team member satisfaction found relationship and task conflicts to be negatively associated with both team satisfaction and team performance.<sup>33</sup> The types of negative behaviors considered problematic in both the veterinarian and RVT groups are consistent with those identified in other working groups. These behaviors include leaving tasks for other people to complete, being persistently pessimistic, being excessively critical of others, and demeaning fellow team members. Both veterinarian and RVT groups cited frequent examples of individuals not completing their tasks. The “that’s not my job” subtheme exemplifies this type of toxic attitude and was found to cause distress for some of the participants. To alleviate problems with tasking being left undone, several participants in the current study felt clinics could provide

detailed job descriptions, but also clarify the necessity of assisting other team members when required.

The focus groups indicated frustration with chronically negative people exhibiting persistently pessimistic attitudes and behaviors. According to Furr and Funder,<sup>34</sup> these affectively negative people may also be more likely to express irritation, anxiety and insecurity. In the veterinary and RVT focus groups, these are the “mood polluters” that create negativity in the workplace, affecting the emotions, moods and attitudes of the rest of the team in a disproportionate manner. Research shows people give more credence to negative emotional information and dwell on negative events more often and for a longer period of time than they do on positive events.<sup>35, 36</sup> Some members of the focus groups found ways to encourage positivity in their practices through team-building activities and acknowledgement of positive team work.

When people violate important interpersonal norms, they may be referred to as “interpersonal deviants”.<sup>37, 38</sup> In the focus groups, the “deviant” behaviors most likely to appear would be making hurtful comments, behaving rudely, or embarrassing people in front of others. Research in other professions has shown that it is critical that these behaviors not be tolerated, as it results in distrust of the deviant team member by the rest of the team<sup>39</sup> and causes time to be wasted by team members distracted by the negative behaviors.<sup>40</sup> To alleviate problems created by instigators of incivility, veterinary owners and managers could improve orientation and training of new employees, set zero-tolerance expectations for incivility, document and address instances of these behaviors, and avoiding hiring anyone that has exhibited these behaviors in the past.<sup>40,</sup>

The type of behavior characterized by people wanting to be the “go to” person does not fit as well with the above categories of negative behaviors. Instead, they would more appropriately be described as “constructive deviants”.<sup>42</sup> While these people may be perceived to negatively impact the team, in some cases they may not disturb the group’s effectiveness. Instead, particularly if they do have the requisite skills and knowledge, they may be considered to help the team achieve its goals. Nonetheless, if the rest of the team is impacted by this behavior, it needs to be addressed by outlining expectations and showing the benefits of sharing responsibilities and tasks with coworkers.

The issue of personalities was discussed extensively particularly in the veterinarian groups. While there has been extensive research on the impact of personalities in the workplace, no generally accepted taxonomy of personality exists.<sup>43,44</sup> Furthermore, the relationship between personality testing and occupational performance is controversial.<sup>45</sup> While there seems to be general agreement that the underlying personality or temperaments are related to core needs and values, and do not change over time, people do have control over their behaviors. Thus, rather than selecting for certain personality traits, it might be more effective to capitalize on the positive attributes each personality type brings to the workplace. It would also be prudent to set out firm guidelines for appropriate workplace behavior. The working interviews described by some participants, as well as the use of behavioral interviews and careful screening of references for potential new hires, may ensure compatibility with the team. The selection process can also be designed to select for flexible and adaptable employees.

Participants indicated a toxic environment may occur when teammates lack confidence, skills, or knowledge, or because teammates are exhibiting interpersonal deviant behaviors. This can also be tied in with people not feeling appreciated. This can lead to distrust and a lack of respect.

Distrust can distract from task performance, which may impair team outcomes.<sup>39, 46, 47</sup> In addition, lack of respect frequently manifests as a lack of civility. Incivility often leads to distraction: people spend time worrying about the incident and discussing it with others.<sup>40</sup> It may also lead to turnover; in a study of individuals that experienced incivility in the workplace up to 50% considered leaving their positions, with 12% actually leaving.<sup>40</sup> Feeling respected and respecting others are keys to cooperation.<sup>48</sup> When people see themselves as individuals rather than part of a team, they may think and act more selfishly, rather than working together cooperatively.<sup>49</sup> Thus, by addressing incivility, veterinary clinics can potentially reduce unproductive time as well as reducing turnover. Reviewing hiring and training practices and diligent monitoring and recording of problems will help prevent and curtail workplace incivility.

In many cases, the presence of people with a negative attitude leads to a toxic environment, particularly if the negative behavior is not addressed. Responses to negative behavior may include attempting to change the person's behavior, removing the person from the workplace, or protecting oneself through defensive behaviors.<sup>39</sup> When motivating the employee or removing the person from the group is not possible, more severe manifestations of a toxic environment may result. In response to a negative person, other employees may become defensive in order to "protect and repair one's own sense of autonomy, status, self-esteem, or wellbeing".<sup>39 (p. 187)</sup> These defensive behaviors may include "lashing out, revenge, unrealistic appraisals, distraction, various attempts at mood maintenance, and withdrawal".<sup>39(p.187)</sup> The actively hostile environments described in some of the focus groups may have been defensive behaviors in response to negative behaviors which had not been addressed. According to the literature, dealing with these behaviors is a leadership responsibility. If leaders do not attend to the situation, the result is dissatisfaction with the team.<sup>50</sup> Thus, it behooves the veterinary profession

to not ignore negative behaviors in hope that they will just go away. Rather, the perpetrators should be confronted about their behavior, given the opportunity to correct the behavior, and given consequences if their behavior does not change.

Having an excessive workload may result in people feeling the environment is toxic, as they may feel there are unreasonable expectations of them. A number of articles describe the impact of this problem in the human health care field. Aiken, Clarke, and Sloane<sup>51</sup> found that job dissatisfaction, burnout, and perceived quality of care were significantly related to hospital staffing levels. Hospitals with Magnet certification are characterized by higher nurse staffing levels and empowerment of nursing staff. Studies have shown that in Magnet hospitals, patient satisfaction is higher and nurses report less burnout, less intention to leave, and more manageable workloads.<sup>52, 53, 54</sup>

A toxic environment was also described when people felt there were conflicting demands in the workplace. While potentially related to communication, conflicting demands were also a result of a clinic being extremely busy or understaffed. Many participants in the current study indicated they found it difficult to cope when the clinic was short-staffed. It may be prudent for veterinary clinics to look carefully at staffing ratios, and also to ensure employees are empowered to do as much as they are legally allowed to do. This may have financial advantages as well; according to an Ontario Veterinary Medical Association study, clinics with higher non-DVM to DVM ratios (from 2.9 to 4.2 per full time equivalent DVM) were shown to function more effectively through a higher net practice income than clinics with lower ratios.<sup>55</sup>

Focus group research is designed to explore participants' perspectives and attitudes about various topics.<sup>23, 24, 25, 26</sup> The participants were volunteers from a limited geographic area. Participants

only included veterinarians and RVTs, thus comments may not be reflective of other team members, including receptionists, veterinary assistants, and kennel attendants. In addition, participants may not be reflective of all RVTs or veterinarians, as they might have had a greater interest in and stronger opinions about veterinary health care teams than those choosing not to participate. Since there was an a priori number of focus groups for veterinarians and RVTs, theoretical saturation may not have been reached, although it appeared to have been.

Furthermore, qualitative research is not intended to be generalized to all individuals.

Nonetheless, veterinary teams can use the findings to reflect on whether the views are representative of their own situations and how they can maximize team effectiveness within their own veterinary practice environments.

In summary, the presence of veterinary team members with a toxic attitude was a source of frustration for both RVT and veterinarian participants. Similarly, focus group participants indicated a toxic environment resulted in dissatisfaction and potentially greater turnover. By addressing toxic situations promptly and consistently, it is believed team satisfaction and productivity is likely to be improved.

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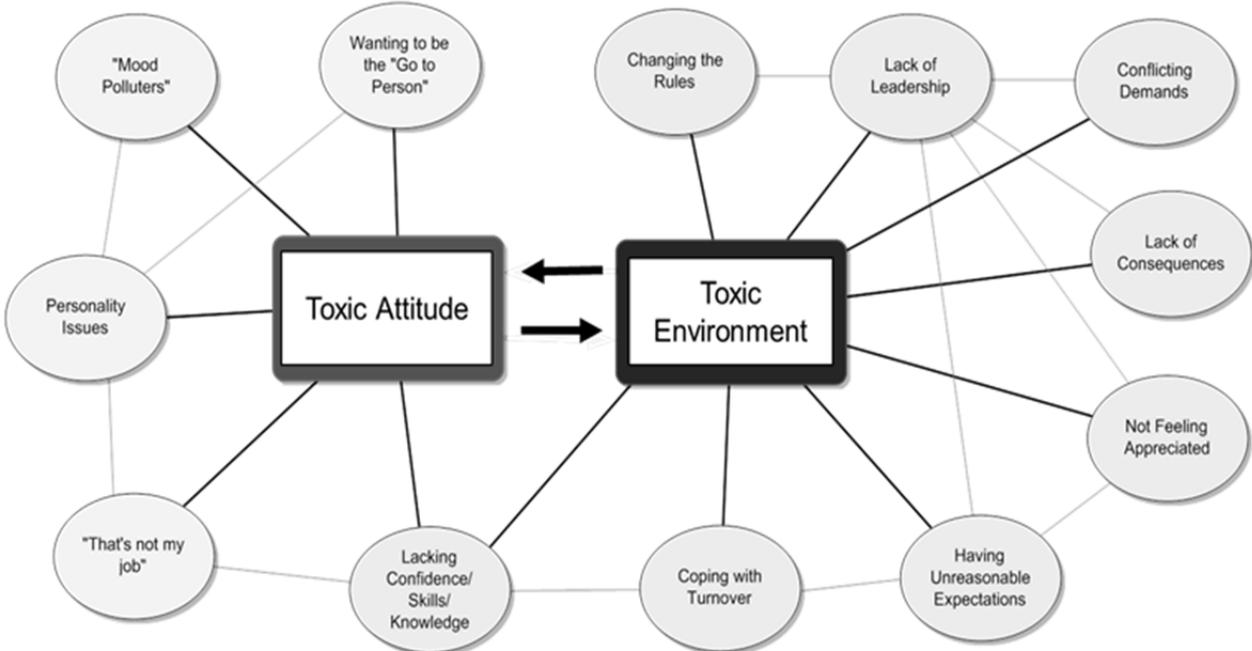
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**Figure 2.1 Thematic Map of the Interrelationships of Toxic Attitude and Toxic Environment**



## **Chapter 3**

### **Exploring the Perspectives of Veterinarians and Registered Veterinary Technicians on the Veterinary Health Care Team Concept: The Need for Communication, Leadership, and Coordination**

Prepared in the style of the *Journal of the American Veterinary Medical Association*

## Abstract

**Objectives** - To explore veterinarians' and Registered Veterinary Technicians' (RVT's) perceptions of the veterinary health care team with respect to the need for communication, leadership, and coordination.

**Design** - Qualitative study based on focus group interviews and thematic analysis.

**Participants** - 4 veterinarian focus groups (23 companion animal veterinarians) and 4 Registered Veterinary Technician focus groups (26 RVTs).

**Procedures** - Independent focus groups sessions were conducted using a semi-structured interview guide and follow up probes. Thematic analysis was performed on the focus group discussions.

**Results** – While communication was the theme intertwined throughout all focus group discussions, leadership and coordination were also very prominent themes. Effective leadership practices included being consistent, “walking the talk”, giving and accepting feedback, building the right team, effective delegation, managing expectations, and making final decisions. In order for teams to optimally function, both veterinarian and RVT participants indicated there was a need for coordination as well. Coordination involved both structured communication and organizational structure.

**Conclusions** – In order to optimize team effectiveness, veterinary clinics need leaders and team members with excellent communication skills. By providing strong consistent leadership and

strengthening coordination within the veterinary health care team, the current work environment of veterinary clinics can potentially be enhanced. Ultimately, by having teams that are committed to provide excellent client service and patient care may improve practice productivity, employee satisfaction, and outcomes for client's pets.

## Introduction

A successful career in veterinary medicine requires more than knowledge of diseases and their treatments. Career success depends on business acumen, effective communication skills, and leadership qualities.<sup>1,2,3,4</sup> Veterinary schools have recognized effective communication is a core clinical skill and have incorporated training into their curricula.<sup>4,5,6,7,8</sup> As a result, veterinarian-client communication is increasingly being studied<sup>9,10,11,12</sup>; however, research in veterinary team communication and essential skills for business success including leadership and business acumen have not received as much attention.

Extensive research has been performed in human health care teams. Several studies identify that domains of team effectiveness in health care teams include leadership, conflict management, communication, and coordination.<sup>13,14</sup> Effective communication and positive leadership behaviors have been associated with job satisfaction, productivity, and organizational commitment in nurses.<sup>15,16,17</sup> In contrast, lack of coordination among health care providers and poor team communication have been associated with prolonged days in hospital, increased readmissions, and increased mortality rates.<sup>18,19,20</sup> A study of medical residents showed a correlation between interprofessional conflicts and a higher incidence of medical errors and adverse patient outcomes.<sup>21</sup>

This study used focus groups to explore the perspectives of veterinarians and Registered Veterinary Technicians (RVTs). Objectives of the study included discovering whether veterinarians and RVTs shared common viewpoints, and identifying potential factors that either enhanced or impaired team effectiveness. An explicit definition was not provided for team effectiveness; rather, participants were asked to provide characteristics of effective teams. While

the theme that was interwoven throughout the focus groups was communication, other themes identified included leadership, coordination, toxic attitudes and environment, and work engagement. A previous paper<sup>22</sup> described the toxic attitudes and toxic environment themes revealed during qualitative analysis of the results. This paper focuses on leadership and coordination with communication as a consistent underlying theme.

## **Methods**

### **Study participants**

The study protocol was reviewed and cleared by the University of Guelph Research Ethics Board. A detailed description of the study is available in Chapter 2. In brief, 4 independent veterinarian and 4 independent RVT focus groups, each composed of 4-8 randomly selected participants from private companion animal practice, were used to explore each group's perceptions of the veterinary team. Using the publicly accessible College of Veterinarians of Ontario (CVO) database, the sampling frame consisted of all veterinarians designated as small animal practitioners from 8 counties (Brandt, Halton, Hamilton-Wentworth, Oxford, Peel, Perth, Waterloo, and Wellington) in Southern Ontario. The list of veterinarians was sorted using a random number generator, and veterinarians were sequentially contacted. Initial contact was made by a mailed letter of introduction outlining the study and offering dinner along with a \$40.00 honorarium for participation. Seven to 14 days later, a follow-up phone call was made by the author to address questions and obtain initial consent. Reminder emails and phone calls were made to all participants 1-2 days prior to the focus group sessions.

The RVT sampling frame consisted of members of the Ontario Association of Veterinary Technicians (OAVT) residing in the 8 counties from which the veterinarians were also recruited.

The OAVT database of RVTs in the province of Ontario is not publicly available; therefore, RVTs were recruited with the assistance of the OAVT, utilizing postal codes from the same counties as the veterinarian groups. A random number generator was used to sort potential participants. The OAVT mailed a letter of invitation to members identified to be residing in the aforementioned geographical area. The mailing included a letter of introduction outlining the study, and indicating that only RVTs working in small animal clinics were eligible to participate, and offering the same honorarium as provided to the veterinarian participants. Members interested in participating were required to contact the author by phone or email to ensure eligibility and obtain initial consent. Two weeks after the initial mailing, a reminder letter was sent via the OAVT. Additional letters were sent to other members in the sampling frame to ensure each focus group would have a minimum of 4 participants. Reminder emails or phone calls were made 1-2 days prior to the scheduled focus group. Written consent was obtained, and all focus groups were conducted by a professional moderator and a veterinary student assistant using a semi-structured discussion guide developed by the author and a colleague familiar with focus group research (Appendices A.4 and B.4).

### **Focus group interviews**

Participants were asked semi-structured questions regarding their perspectives of the veterinary health care team, including describing how their role fit within the veterinary health care team.<sup>22</sup> They were also asked about their work responsibilities and their interactions with other members of the practice team. Finally, participants were asked to describe the potential benefits and challenges encountered working in a team environment. At the end of each focus group, participants were asked to fill out a demographic questionnaire.

## **Data analysis**

All focus group discussions were digitally audio-recorded and subsequently transcribed verbatim by the moderator. Transcripts were reviewed by a veterinary student assistant to confirm accuracy.

After transcription of the recordings, focus group discussions were analyzed by the author using thematic analysis, a qualitative research method.<sup>23</sup> The transcripts were repeatedly reviewed both by listening to the recordings and reading the transcripts. An inductive approach was used to develop themes, looking for trends and patterns common to the various focus groups. Themes and subthemes were developed, ensuring all data were included. A thematic map specific to the paper's theme was created in order to visually sort the various codes into themes and subthemes, (Figure 3.1). The transcripts were also reviewed by an RVT and a veterinarian familiar to the author to assess intercoder reliability.

## **Results**

Twenty-six female participants took part in the RVT focus groups, ranging in age from 23 to 50 years of age (mean 32.3; median 31 years), employed in the field of veterinary medicine between 2 and 30 years (mean 9.5; median 8 years).

Twenty-two of the 23 veterinarians (14 female, 8 male) filled out the demographics form. Veterinarians ranged in age from 27 to 65 years of age (mean 44.4; median 45), and had worked as veterinarians from between 1 and 40 years (mean 18.6; median 21 years). Analysis of the focus group data revealed some themes unique to the RVT groups, others unique to the veterinarian groups, and several common to both groups. Communication was a theme echoed in

every veterinarian and RVT focus group, and was intertwined with all of the other themes. As the moderator summarized, “I clearly hear from everybody that communication is the really fundamental key ingredient in all the things that go on in the clinic and making it an effective team.” In addition, leadership, coordination, toxic attitudes and environment, and work engagement were very prominent themes in both RVT and veterinarian focus groups. This paper will focus on communication, leadership, and coordination as they were prevalent themes in all focus group discussions, and have also been associated with measures of team effectiveness in other health care teams.<sup>15,24,25,26</sup>

Intercoder reliability was assessed by comparing percent agreement of the author’s coding of subthemes with those of a veterinarian and RVT. The intercoder reliability with the secondary coders with the author was 95%, exceeding the 80% or greater acceptable in most situations.<sup>27</sup>

## **Leadership**

Leadership, as defined by participants in the focus groups, involved management of business aspects of veterinary practice, motivation, and inspiration of team members. Leadership was discussed in all of the veterinarian focus groups. The RVT groups focused on the outcomes of good leadership and the impact a lack of leadership had on the veterinary team. Both veterinarian and RVT focus groups indicated that effective leadership was necessary for optimal team function.

In both veterinarian and RVT focus groups, the owners/partners were considered to be the definitive leaders in most practices. Participants indicated veterinary practice was changing, leading to uncertainty about who the leader(s) are, and the role they should have in some practices. Changes included the plethora of satellite practices, the advent of corporate practices,

and growth in many practices, necessitating hiring more employees. A need for leaders of subunits (e.g. head technicians, client service managers, office managers) was recognized by both veterinarian and RVT participants to be beneficial, particularly in larger practices. Common characteristics of effective leaders and ideal structures to optimize team function were identified by both veterinarians and RVTs. These included “walking the talk”, having the same goals, building the right team, effective delegation, giving and accepting feedback, managing expectations, making final decisions, and being consistent.

***“Walking the talk”*** Both veterinarian and RVT participants felt it was important leaders “walk the talk,” rather than “do what I say not do what I do.” “Walking the talk” was about setting high standards, and either meeting or exceeding them individually. It was also related to wanting people to emulate good behaviors. There appeared to be a perception that owners/partners need to establish and communicate the rules and goals of the practice. However, participants agreed leaders must be good role models and follow the established rules. A common example cited in the veterinarian focus groups was related to answering the phone and cleaning kennels. Many clinics had policies indicating it was everyone’s job to ensure phones were quickly answered and animals were never left in soiled kennels. One veterinarian explained: “...If everyone’s busy I go for the phone, and they see me cleaning the occasional cage ... the last thing I ever want to hear from someone is ‘that’s not my job’”.

***Having the Same Goals*** The importance of communicating the goals of the clinic to the staff was mentioned in both the RVT groups and the veterinarian groups. The consequence of not expressing the goals of the clinic to team members was identified as a contributor to a less effective team in veterinary clinics by the RVT participants. As one RVT stated, “They haven’t expressed their goals to you, I think that’s a huge problem and that’s why there’s so much

turnover because they aren't communicating to their staff what they want out of us.”

Veterinarians acknowledged the importance of communicating goals, but indicated: “every practice has a different philosophy ...being able to convey that to the staff in a way that they would understand, remember it and live it during their working hours is a challenge. Again, it's a matter of being able to pass on what we as practice owners have in our minds to the staff and to the whole team.” Participants articulated when people do not share the same goals, they may be working at cross purposes, negatively impacting the team. As one veterinarian stated, “Making sure everyone has a common goal and shares the same philosophies as the practice owner... if you don't, if you have a team member that doesn't then ...that's probably dragging your team down.”

***Building the Right Team*** Building the Right Team was a prominent theme in the veterinarian focus groups, but was not as prevalent in the RVT groups. However, both veterinarian and RVT participants felt it was a leadership responsibility to ensure appropriate team members were recruited and hired. Specifically, participants indicated leaders should recruit team members with a variety of skills, complementary personalities, and a good attitude.

Having team members with a variety of skills was important to both veterinarians and RVT participants. As one RVT said, “not everyone is going to be good at everything.” The veterinarians indicated having employees with a variety of skills and strengths improved the functioning of the team, as it not only allowed people to excel at what they like or are best at, but also improved the synergy of the team. For instance, several veterinarians mentioned receptionists need to be “people persons.” In the RVT groups, several participants indicated a good leader is “someone who can choose a good team and people with complementing personalities.” Having complementary personalities was considered by many of the veterinarian

participants to be as important to a team as having the right skills. However, while some veterinarians considered similar personalities were important, others felt diverse ones were beneficial. For instance, one veterinarian said, “I’m looking to hire personalities that will fit in the team that we have and so I still want some variances...I need some decision makers and need some people who will step up and some people who will follow.” Veterinarian participants agreed everyone should have the same underlying beliefs and core values, regardless of their personalities.

Selecting and retaining team members with a good attitude was considered to be an important leadership role by both veterinarian and RVT participants. In the veterinarian groups, many participants indicated it was more important to have a good attitude rather than skills, as the “skills are something that can be trained”. RVTs and veterinarians described people with good attitudes as having a good work ethic and dedication to the job. They were also enthusiastic and willing to work with others. Both RVT and veterinarian participants indicated a good attitude contributed to a positive environment in the clinic, so that people enjoyed coming to work. A good attitude was also believed to decrease the likelihood of burnout, which some RVT groups believed was the result of working in a stressful fast-paced environment with someone who lacked dedication. The veterinarian participants frequently mentioned it was critical for the person being hired to get along with others on the team. They indicated that attitude and enthusiasm were extremely important while hiring, but were sometimes difficult to assess during an interview. A working interview, in which people spent a day or more in the clinic, was considered very important to ensure people had the appropriate skills as well as the proper fit with the rest of the team. Several veterinarians indicated they “have been fooled” by people in an interview, or felt they simply were not good interviewers.

The RVT participants did not specifically discuss hiring strategies. However, several groups mentioned their clinics used working interviews and solicited input from the rest of the team before hiring new people. RVT participants appreciated the opportunity to provide feedback regarding potential new team members.

***Effective delegation*** Both RVT and veterinarian groups extensively discussed the importance of effective delegation as a leadership responsibility. RVT and veterinarian participants ascribed the same meaning to delegation; employees were given tasks that did not need to be performed by the veterinarian. The RVT groups found delegation not only empowered them and allowed them to fully utilize their skills, but they also recognized having veterinarians concentrate on diagnosis, prognosis, prescription, and major surgery helped the practice run more efficiently. RVT participants indicated it helped them feel like important members of the team and also enabled them to more accurately and effectively communicate with clients about patients. Some veterinarians mentioned delegation “takes a tremendous burden off” them, and also reduces stress. Several mentioned delegation was initially very difficult, as they felt they had to do everything themselves. However, as time progressed some realized they could not or did not want to do everything, and thus began to delegate more. As one veterinarian said, “Nowadays, I don’t even give them any directives, they schedule everything between themselves. Scheduling, I don’t do that--they tell me when I have work to do. I just become one of the team and more of an employee ...and I like that. Again that’s a change, it’s a huge change, because there was a time when I would never have relinquished control, ‘cause that’s the way I would have felt, I was giving it up.”

RVT and veterinarian focus groups differed in how they wished delegation to be acknowledged. Several RVT groups indicated they felt it was important to be formally recognized in a

leadership role if they were performing managerial duties. In contrast, several veterinarian focus groups were hesitant to designate someone as a head technician or similar role as “they have had a problem with that.”

***Giving and accepting feedback*** A number of veterinarian focus groups highlighted the importance of leaders both giving and accepting feedback in an appropriate manner. For instance, one veterinarian recognized, “there’s also more than one way to do things, so if something’s not working, someone may have an idea that you need to try out that might be different and yet get there more effectively.” Another veterinarian said: “The people that I work with would want to know if they were making mistakes and doing something wrong.” He indicated his team members would feel comfortable telling or asking him to do something differently as well. Some veterinarians would actively solicit feedback, by asking employees to “write down issues, problems or concerns” anonymously, or by providing suggestion boxes. Although communicating feedback was not as strong a theme in the RVT groups, they also felt it was important for leaders to be open to others’ ideas, rather than having a dictatorship.

A number of veterinarian participants mentioned it was important for leaders to be attuned to others as well as to be self-aware as it allowed them to be cognizant how their actions may help or hinder their team. One veterinarian said he had been encouraged by his hospital manager to enhance his emotional intelligence and found it extremely helpful in dealing with interpersonal issues. Instead of being oblivious to what was happening in the practice, he indicated: “I understand it and I get it now, I actually see these things coming before they hit me in the head... you can remedy these things before they get rolling.” While the RVT groups did not speak specifically about the need for leaders to be attuned to others and self-aware, they did make comments about the negative consequences of leaders not recognizing problems.

Several veterinarians indicated they had proactively looked for ways to improve team dynamics within the practice. They solicited feedback by having practice consultants or coaches come to the practice to do personality testing, streamline efficiencies, and improve communication. Only one RVT mentioned a consultant had come to her practice to provide advice. She declared the consultant helped them work better as a team by improving communication.

***Managing expectations*** Managing expectations, a particularly strong subtheme in the veterinarian focus groups, was recognized as a leadership responsibility. Veterinarians found it was a “juggling act” to balance the expectations of associates, clients, staff, and their own expectations for a work/life balance.

Although looking after the financial health of the practice was considered a leadership responsibility by the veterinarians, several groups mentioned the difficulty of managing the business side of practice vs. the medicine side of practice. In particular, they found some associates and staff members avoided discussion of the financial aspects of veterinary medicine. As one veterinarian said, “they don’t want to acknowledge that it is a business.” A few had associates that specifically said, “I’m here to practice medicine, I don’t even want to think about the business aspect.” Similarly, some owner veterinarians found it difficult to explain the rationale of choosing certain products and companies to their associates and staff. They made these choices to benefit the clinic through continuing education opportunities, special pricing, and other incentives. The owners thus found they alone were often expected to manage the financial side of running the practice.

Other veterinarians in the focus groups indicated they preferred to delegate some of the business aspects of practice to managers so they can “play with the puppies.” Several veterinarians

mentioned the trend of larger Canadian and American veterinary groups buying smaller practices was largely driven by veterinarians wanting to get out of management. The previous owners were thus able to continue practicing veterinary medicine, while the corporate management groups managed the practices.

A number of veterinarian participants discussed the importance of a work/life balance, sometimes in terms of themselves, but also in terms of their associates and staff. Several mentioned new associates are no longer willing to work “40, 50, 60 hours a week” which many of them had done as new graduates. Some mentioned this was a positive change, as “life would have been far better for you in the end and you wouldn’t have that ulcer and so on.” There appeared to be acceptance from the veterinarian participants to accommodate fewer working hours per week, with several citing a 30- to 35-hour work week as typical. However, this was associated with increased numbers of part-time people. Both veterinarian and RVT groups indicated communicating with many part-time people was challenging.

***Final Decisions*** In the veterinarian groups, some participants felt final decisions, particularly fiscal ones, needed to be made by the owners. As one veterinarian owner expressed, “the buck stops with me.” The RVT groups also indicated some problems should be brought to the owners, but said: “Bringing frivolous problems to the owner is not exactly the way to go.” Most clinics seemed to have mechanisms in place to ensure owners needed to deal with only major problems. Some decisions about clients also need to be dealt with by the owner, because: “...no matter how skilled you are at training your people how to solve those problems, there’s some times when people just want to go right to the top and complain, so there has to be kind of some type of hierarchy in the place so ... clients feel they’re getting heard or whatever.”

***Being consistent*** Being consistent was related to coordination and communication as well as leadership, as it was considered crucial leaders received and gave the same message to employees, coworkers, and clients. Veterinarian and RVT participants indicated inconsistency led to a toxic attitude or environment, particularly when an employee followed procedure, but was not supported by the veterinarian or management. This sentiment was echoed in several RVT groups. One technician expressed this when she said: “Sometimes you are following procedure and you tell a client something... what [the veterinarians] told you to say or do, and they don’t back you up on it.”

Similarly, consistent consequences were important to both RVT and veterinarian participants when people did not meet expectations. As one RVT mentioned, “leadership is also taking charge if someone is not doing what they’re supposed to be doing and having consequences for that.” In another RVT focus group, it was recognized “some actions need their consequences ...having a standard helps with the team. If I screw up, this is what is going to happen.”

In the veterinarian focus groups, numerous comments were also made about the importance of having consistent consequences for people not meeting expectations. In most cases, this quickly moved to a discussion about dismissing employees. In some cases, veterinarians mentioned they repeatedly heard complaints about under-performing employees, but did not take action until some of their outstanding employees indicated they planned to leave the practice. As one veterinarian described: “They’ll say, ‘Oh so-and-so did this and this’ and I say oh well that’s not really all that bad, she did that, but get over it, just focus on patient-care, the client service, customer service, but then when I was going to lose my other excellent receptionist I said, whoa... I knew [so-and-so] wasn’t ideal.”

## **Coordination**

The need for coordination was a very strong theme in all focus groups. Many veterinarian and RVT participants defined coordination as a need for structure. However, many groups also stressed people must be flexible, helping out where required. A participant described the ideal situation as, “You know there’s some structure to it, you know who’s responsible for what and you know who’s responsible for whatever. Yet people are still willing to not pull the ‘that’s not my job’ phrase. Everybody is still willing to go that extra mile.” To achieve this type of environment, there appeared to be a requirement for structured communication and organizational structure.

**Structured communication** In the RVT groups most of the discussion centered on structured methods of communication including staff meetings, leaving notes for people and “mid-day scrums”. This was thought to be particularly important when dealing with part-time people, shift workers, or large numbers of employees. For example, “In our clinic we’ve got a lot of part time vets and there has to be good communication for when Dr. A is leaving at noon and Dr. B is coming in at 1. They need to be able to communicate and make sure that everything is kosher so that when a client calls, they know what’s going on.”

In the veterinarian groups, participants cited several examples of structured communication used in their respective clinics. In addition to the mid-day “scrums” for immediate patient management communication and regularly scheduled staff meetings mentioned by the RVT groups, these included sending staff meeting minutes via email, staff newsletters, and using suggestion boxes to share ideas and concerns. They also indicated larger practices with concomitantly more employees were more challenging to manage, and necessitated more

structured communication. As one veterinarian said, “The more people there are the more structure that is required ... it does take a lot more organization ....I look at it sometimes and think man it gets tougher the more people [you have].”

The RVT groups made a number of comments regarding breakdowns in the structure of communication. Communication breakdowns included information not being relayed to other staff members about clients, patients, and even the need for equipment repairs. This frustrated team members, as they felt it reflected negatively on them and on the clinic. As one RVT expressed, “A client will come in and say ‘Hi I’m here to pick up my insurance form that’s been filled out’ and I’m like ‘I don’t know who you are or where your form is’ and then I look like an idiot and the whole clinic as a whole looks like an idiot.” Congruent with the veterinarian participants, the RVT focus groups in general felt communication breakdowns were more common in busy clinics and those with large numbers of staff. They cited examples of requisitions being forgotten, wrong samples being taken, and omissions in billing.

The veterinarian groups also indicated communication breakdowns were related to changes in the clinic, particularly when expanding to a larger practice. Whereas in the past all team members were within sight and hearing of each other, now they are physically separated. As one veterinarian expressed: “there’s breakdown in communication ....just with the move [into a bigger facility]... now we’re a little more spread out... you forget that person hasn’t heard about this.” Another mentioned, “As you get larger, ESP doesn’t work anymore.”

Both veterinarian and RVT groups had numerous comments about the importance of communication and the negative impact of breakdowns in structured communication on

individuals as well as on the team. As one veterinarian put it, “communication is the real key to all that good medicine and competency and understanding [from] everybody’s point of view.”

**Organizational structure** Both veterinarians and RVTs indicated organizational structure helped ensure all members of the team were aware of the requirements for the job, their role within the team, and the benchmarks for their performance. Organizational structure included traditional management tools such as job descriptions, performance appraisals and staff meetings.

Participants in both RVT and veterinarian groups mentioned veterinarians may not have acquired management skills during their formal education, thus may have difficulty putting an organizational structure in place. As one veterinarian put it, “20% of it is medicine and surgery, the rest of it is managing people and they DO NOT teach that, well they didn’t when I was in school anyways.”

A number of the veterinarian groups mentioned the practices they worked in had a hierarchical structure. Veterinarians who subscribed to this model felt it was important to have a hierarchy, as it provided a framework for the team. As one veterinarian stated: “there’s a definite hierarchy that we have in our minds, but if we don’t convey that to the staff, then they seem to think they have to take on more than they should or don’t take on responsibility that they should.” A more rigid structure was thought by the veterinarian participants to be particularly helpful for training. They wished to ensure everyone is “on the same page” right from the beginning. This also fit with their desire to ensure everyone is aware of and committed to the same goals for the practice.

The RVT groups also felt organizational structure was important, so everyone has: “a sense of what their role is in the team and what their and everybody else’s duties are. So that people aren’t working at cross purposes or things aren’t getting left undone.” Several groups mentioned

they wished their clinics were more coordinated, particularly when other participants talked about their highly structured clinics. A number of groups also mentioned structure and coordination enabled better communication with clients, as everyone was aware of what was going on with certain clients.

Both the veterinarians and the RVTs acknowledged structure was even more important in larger clinics. Smaller practices generally required very fluid roles, as people tended to “wear many hats.” Cross-training was particularly important in smaller clinics, to ensure things flowed smoothly even when someone was absent, “as they don’t want the whole practice to fall apart for that day.” Veterinarian and RVT participants mentioned larger practices tended to have distinct roles with less overlap. One RVT from a large referral practice described her clinic like a mall, with “all your little stores but they are all connected.” Participants indicated larger practices often had more formal communication, with frequent, regular staff meetings, “mid-day scrums,” written job descriptions, and regular performance appraisals. They frequently had access to human resource professionals to help them.

An advantage of a more structured environment cited by both veterinarians and RVTs was that everyone knows who to go to with questions. This was considered particularly important in the RVT groups. Many of them felt as RVT’s they were often the “go to” people for the veterinary assistants, receptionists and kennel attendants, as the veterinarians were often busy with appointments. In other cases, a looser structure was described, in which: “We all know sort of who to go to and who to follow. If all else fails you go to [hospital manager] because she knows everything.”

Several of the veterinarian focus groups indicated providing job descriptions helped people know who they reported to, and who reported to them. They also felt it was essential people know “the extent of the duties” through the provision of a job description. Clear definition of roles alleviated confusion about who should be addressing certain responsibilities and allowed clinics to utilize the strengths of particular individuals. However, participants agreed some flexibility was necessary, particularly when team members were on vacation or ill.

Lack of accountability was identified as a potential disadvantage of flexible roles by both veterinarian and RVT groups. People may assume someone else has looked after a task or client, and no one has. Many veterinarian and RVT participants talked about needing to find the balance between having distinct roles and yet the flexibility to fill in when necessary. As one RVT described it, “I think in a way it kind of has to be well defined and yet you have to be able to step outside that.” One of the veterinarians found this was addressed by having a common goal, since if everyone is: “trying to provide the best service and the best care for our clients and our patients, then if the phone keeps ringing, someone will answer it.”

Veterinarians and RVT participants identified cross-training as one way to enhance the flexibility of a practice, with other advantages such as an appreciation of each other’s roles, and having things still run smoothly when others were ill or on vacation. As mentioned by one RVT, “Once you’re in that other person’s job position you really appreciate it and you’re not as likely to complain about that other person or their position because you understand they just really didn’t get a chance to do that.” Both veterinarian and RVT groups recognized that some people prefer to have their own niche, particularly if it’s a role they feel utilizes their strengths and they perform competently. In addition, both veterinarians and RVTs acknowledged that many people

resist change. As one veterinarian expressed, “Anything new that takes effort...having to learn something new, it’s intimidating for most people.”

## **Discussion**

Communication, leadership, and coordination were found to be the cornerstones of an effective veterinary practice, and were prominent themes identified by both RVT and veterinarian participants. Communication was interwoven throughout all of the other themes: without effective communication, leaders could not convey the appropriate messaging and team members could not coordinate their efforts. Veterinary clinics can use information gleaned from research in communication and leadership to enhance their team’s effectiveness.

Both veterinary and RVT participants considered strong, consistent leadership essential to an effective team. Overall, effective leaders were seen to “walk the talk,” modeling the behavior they wanted their teams to emulate. They conveyed their vision and goals to their teams. By hiring effectively, they were able to build the right team, and thus were able to delegate many responsibilities to others. Furthermore, they were attuned to team members and willing to accept feedback from them. Leaders were able to manage the expectations of diverse groups. They recognized differences and tailored their communication style to each team member as required. Often they were required to make final fiscal decisions. Effective leaders were consistent in their messaging and provided consequences when expectations were not met. Finally, exemplary leaders were self-aware and reflective, sometimes seeking additional resources from coaches or counselors.

Leadership was regarded differently by the RVT and veterinarian groups. While the RVT groups focused on lack of leadership in some clinics, the veterinarian participants extensively

discussed leadership characteristics they felt contributed to success in their clinics. The subthemes identified are congruent with several theories of transformational leadership<sup>28,29,30,31</sup> In particular, Kouzes' and Posners' five practices of exemplary leadership align well with the comments expressed within the veterinarian and RVT focus groups. These practices include “modeling the way”, “inspiring a shared vision”, “enabling others to act”, “encouraging the heart” and “challenging the process”.<sup>29,30,31</sup>

The first of these, “modeling the way” was exemplified by the “walk the talk” subtheme. It is important for leaders' words to harmonize with their actions. This finding is compatible with leadership research showing leader credibility is critically dependent on perceived integrity.<sup>32</sup> Meta-analysis has identified an association between improved job performance, job satisfaction, and organizational commitment with trust in one's supervisors.<sup>33</sup> In the focus groups, both veterinarians and RVTs indicated the importance of leaders not expecting team members to do anything they themselves were not willing to do. In order to build trust and respect, veterinary clinic owners and managers should thus reflect on whether or not they are modeling the behaviors and actions they wish their team members to emulate.

Both RVT and veterinarian participants indicated the importance of communicating the goals of the clinic to the rest of the team. This demonstrates the need for the second practice, “inspiring a shared vision”. This need overlaps both leadership and coordination themes. Ideally, transformational leaders are able to engage team members by inspiring passion and a sense of identification with their work.<sup>34,35</sup> They are able to “project a vision, to explain to the group the purpose, meaning, and significance of its key undertakings”.<sup>32</sup> Several veterinarian participants recognized the need to reflect on their clinic's core values and mission, but indicated it was difficult to engage the team to share the vision on a daily basis. This could be rectified by

ensuring core values are tied to observed behaviors and drawing attention to incidents in which core values are either exemplified or not aligned with actions.<sup>31,36</sup>

The third leadership practice, “enabling others to act”, involves developing cooperative relationships among people. Leaders exemplifying this practice allow people to make decisions that affect their work lives and share information that will help empower them to make decisions.<sup>31</sup> This leadership behavior has a significant impact on job satisfaction in nurses.<sup>15</sup> For instance, nurses felt empowered when leaders displayed confidence in employees and provided a work environment in which autonomy and participative decision making were encouraged.<sup>37</sup>

In the focus groups, “enabling others to act” involved both hiring the right people and delegating effectively to them. Although it was a stronger subtheme in the veterinarian focus groups, both veterinarians and RVTs discussed the importance of hiring effectively. Research indicates congruence between the practice’s work environment and the employee’s attitudes about work is essential.<sup>38,39</sup> This is facilitated by having a detailed written job description that includes other expectations regarding communication, flexibility and initiative.<sup>40</sup> The working interview cited by a number of participants has been found by others to assess whether the individual is a good fit with the team.<sup>40</sup> Not only does the working interview provide the individual with the opportunity to see what the clinic environment is like: it also allows team members to have input into how well the individual’s team and technical skills fit with the rest of the team.<sup>40</sup> Research in human health care illustrates how well-integrated multidisciplinary teams can provide improved patient care.<sup>20,41</sup> In the focus groups, the acknowledgement that team members should have a variety of skills aligns well with this research. However, it is important that members understand each other’s roles on the team and are willing to collaborate to achieve the team goals.<sup>42</sup>

Once the right team members are hired, it is possible to delegate effectively. Many RVT participants indicated they felt empowered when they were assigned tasks and were trusted to complete them without being micromanaged. Research in human nursing has found access to information, support, resources, and the opportunity to grow are associated with commitment to the organization.<sup>17,43</sup> Thus, by hiring people capable of performing a variety of tasks and delegating tasks to non-DVM paraprofessionals, veterinary clinics can benefit both by being more efficient and by improving the workplace environment.

The fourth leadership practice, “challenging the process”, entails continually re-evaluating processes in order to create positive changes. This involves looking outside the organization for ways to do things better, and encourages people to try new approaches to their work.<sup>29</sup> In addition, it involves setting goals, plans and milestones.<sup>29</sup> This support for innovation is also congruent with research in team climate and work group innovation.<sup>44,45,46,47</sup> This leadership practice did not explicitly emerge in the focus group discussions. While a few veterinarian participants indicated they encouraged their staff to look at new ways of doing things, very few of the RVT participants mentioned they had opportunities to make changes. It may be beneficial for veterinary clinics to actively engage their team members in re-evaluating current work practices and developing new, more efficient processes. This would have the added benefit of supporting and cultivating work engagement in team members, which has been associated with high levels of job performance.<sup>48,49,50</sup>

The fifth leadership practice, “encouraging the heart”, is associated with the concept of emotional intelligence. Several veterinarian participants discussed the importance of emotional intelligence to the functioning of the team. The concept of emotional intelligence has received attention in both the business world as well as human and veterinary health care. While there are

several competing models for emotional intelligence, Goleman's model focuses on work performance and appears to be the most widely accepted.<sup>51</sup> Emotional intelligence in this model encompasses self-awareness, self-management, social awareness and relationship management.<sup>51</sup> It is more than twice as important for leader effectiveness as other factors, such as cognitive skills, intellect or technical skills.<sup>52</sup> According to Timmins,<sup>51</sup> "emotional intelligence clearly plays a role in the effectiveness of veterinary health care provision and of the healthcare team through enhanced communication, improved conflict management, and early recognition and control of stress and burnout".<sup>51</sup> Since communication, conflict management, stress, and burnout were all issues identified in both the veterinarian and RVT focus groups, improving emotional intelligence in team leaders and team members may be beneficial. A number of medical and dental schools are incorporating emotional competencies into their curricula.<sup>53,54,55</sup> Since emotional competencies can be learned,<sup>52</sup> veterinary practices could consider incorporating emotional intelligence training for staff.

In the focus groups, although the hierarchical structure of most veterinary clinics resulted in veterinarians as owners and partners being considered the primary leaders, other team members were also recognized to play an important role. This was primarily identified in larger clinics. However, there sometimes seemed to be a disconnect, with RVT participants expressing frustration they were expected to perform managerial-type duties but were not recognized formally for doing so. A number of the veterinarian participants indicated they resisted identifying a particular employee as a "head technician," as they felt it caused resentment among other staff members. A similar problem has been encountered in human medicine with the charge nurse leadership role. Charge nurses were frustrated when they held responsibility without authority, did not have formal job descriptions, did not receive additional remuneration

for the additional work, and did not receive formal education for the role.<sup>56</sup> Conversely, providing training in leadership, communication, delegation and conflict resolution enhances leadership potential and improves nurse satisfaction.<sup>26</sup> Veterinary clinics may wish to use the information gleaned from nursing research, and consider formalizing job roles within the clinic, including providing training and recognition for leaders of subunits.

Both veterinarian and RVT focus groups discussed the impact the size of the team had on the overall team effectiveness. Several indicated the larger the team became, the more difficult it was to coordinate activities. This is in keeping with research with human health care teams, which found team effectiveness was negatively associated with the size of the team.<sup>57</sup> Larger teams were also more likely to have problems with coordination, conflict, and communication.<sup>58</sup> One study<sup>57</sup> found the optimal team size was 10-13, which allowed the benefit of ideas, skills and experience, but also minimized the negative effects of larger teams. Veterinary clinics with greater than 10-13 employees may benefit from establishing an executive committee with representative members from various employee groups. The members of the committee would be charged with obtaining input from their compatriots, and they in turn would communicate decisions and plans to their fellow team members. This approach has been recommended in human health care teams.<sup>47</sup>

In the focus groups, communication was thought to be a unifying factor in clinics working together as effective teams. This is congruent with literature in human medical teams, as team cohesion and team effectiveness have been positively associated with communication, coordination, conflict management leadership.<sup>14,57</sup> In addition, research with human medical teams has addressed the need for an appreciation of each team member's role, as well as the need for strong leadership and effective communication.<sup>59,60</sup> Studies in veterinary medicine also

suggest enhancing communication skills with clients and with the veterinary health care team may improve employee and client satisfaction, and even practice income.<sup>2</sup> Providing further evidence of the importance of communication training, participants in a recent study in veterinary medicine reported communication skills training within the veterinary clinic was associated with improved team work, professional satisfaction and a positive work environment.<sup>61</sup> Thus, veterinary clinic owners and managers should consider assessing the level of communication in their practices, and consider the need for additional training.

The present study identified that communication needed to be structured and coordinated for a veterinary team to be successful. This need aligns well with the concept of relational coordination espoused by Gittell.<sup>24,25</sup> Relational coordination describes team communication that is frequent, accurate, timely, and problem-solving.<sup>24,25</sup> In order to maximize coordination using this model, team members must also have shared goals, shared knowledge and mutual respect. Originally studied with airlines, research in relational coordination has been conducted with numerous human healthcare teams. Relational coordination has been associated with shorter hospital stays, improved quality of care, and decreased postoperative pain scores.<sup>24</sup> It has also been significantly associated with job satisfaction in nursing aides as well as in resident quality of life in a study of nursing homes.<sup>25</sup> To improve relational coordination in veterinary clinics, teams could concentrate on developing shared goals, shared knowledge and mutual respect. They could employ tactics some participants already use, such as regular staff meetings, midday scrums, developing standard operating procedures, and cross-training. Since lack of respect and not sharing knowledge were two strong contributors to a toxic work environment, according to another study of the same populations,<sup>22</sup> it behooves veterinary clinics to concentrate on improving relationships between staff members as well as enhancing means of communication.

Communication breakdowns were discussed in both the veterinarian and RVT focus groups. In human medicine, medical errors are frequently a result of miscommunication<sup>62</sup> and interprofessional conflict.<sup>21</sup> Other research in human medicine has shown that communication patterns and behaviors can lead to inefficiency, particularly in a hectic environment.<sup>63</sup> Problems with communication are exacerbated by perceived hierarchical differences, interpersonal power differentials, conflicting roles, role ambiguity, and conflict between individuals or groups.<sup>64</sup> Hierarchical differences can occur within an employment group (e.g., residents and attending physicians) or between groups (e.g., resident physicians and nurses).<sup>64</sup> These issues also were cited by veterinarians and RVTs involved in the current study, with communication breakdowns identified within as well as across employee groups. While studies attributing medical errors to problems with team communication have not yet been performed in veterinary medicine, a past Deputy Registrar of the CVO reported particularly detailed and grievous complaints have been brought against veterinarians by employees convinced they had been unfairly treated.<sup>65</sup> Improving communication within the veterinary health care team will potentially benefit patients and clients as well as interpersonal relationships among team members.

Communication of goals was a subtheme overlapping both coordination and leadership. Evidence from primary health care in human medicine illustrates how having shared objectives impacts measures of teamwork, organizational effectiveness, health care practice, patient-centered care and overall effectiveness.<sup>66</sup> Focusing on patient satisfaction has been positively associated with higher perceived team effectiveness in human health care studies.<sup>57,67</sup> Leadership literature indicates that while the mission or purpose is set by the team leaders, implementation and specifics are determined by the team members.<sup>68</sup> This approach has been recommended in

veterinary medicine because it “promotes buy-in and a sense of ownership among team members”.<sup>42</sup>

Focus group research is not intended to provide quantitative results. Rather, it is designed to develop a deeper understanding of an issue by exploring participants’ perspectives and attitudes about a topic of focus.<sup>10,11,69,70</sup> In this case, the focus group approach provided the opportunity to learn how RVTs and veterinarians view the health care team. This paper explored their perceptions of communication, leadership, and coordination. Since the focus groups included only veterinarians and RVTs, comments may not be reflective of other team members’ views. Furthermore, participants were volunteers drawn from a limited geographic area. In addition, participants may have more than average interest in team effectiveness, and may have had stronger feelings about factors impacting veterinary teams. Nonetheless, it is important to note qualitative research is not intended to be generalizable. Instead, readers are encouraged to reflect on the findings to determine whether their experiences align with those of the participants. By contemplating factors impacting communication, leadership, and coordination, veterinarians can make changes in their practices to maximize effectiveness of their own teams.

In summary, the current work environment of veterinary clinics can be enhanced if strong, consistent leadership is provided, and communication and coordination are strengthened. Having teams committed to providing excellent client service and patient care will improve practice productivity, employee satisfaction, and outcomes for client’s pets.

## **Footnotes**

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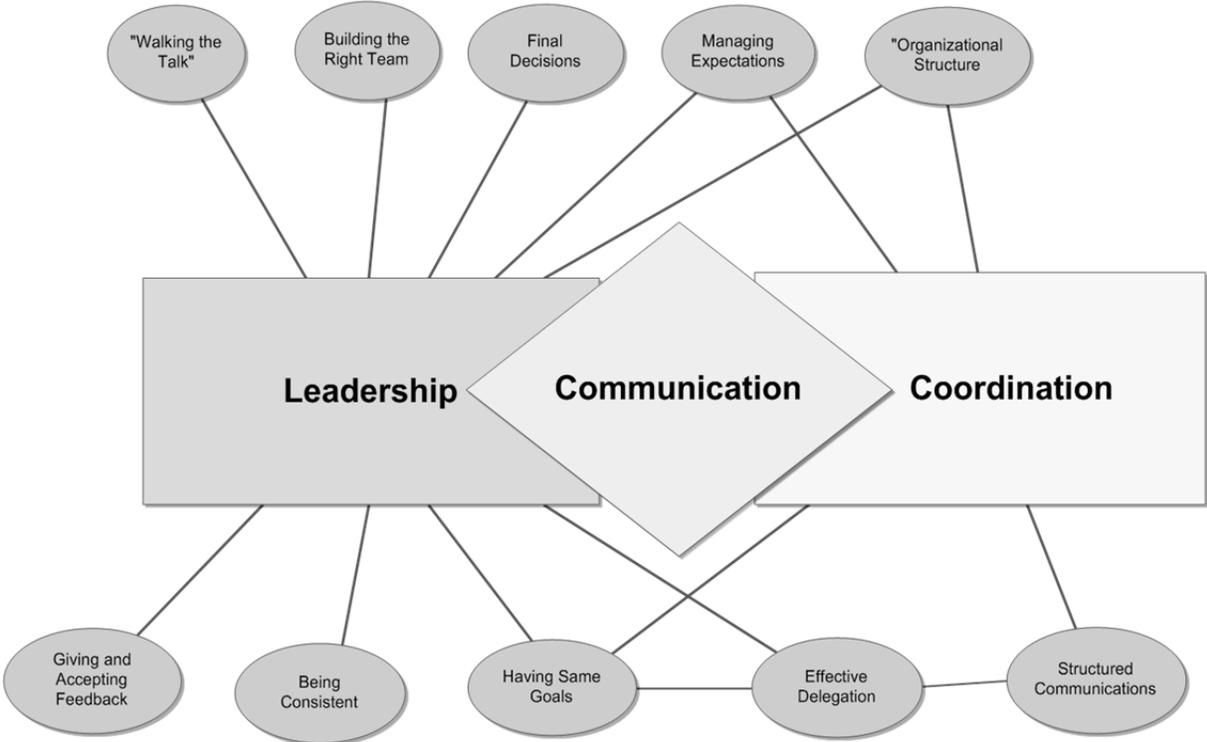
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**Figure 3.1 Thematic Map of Interrelationships of Leadership, Communication, and Coordination**



## **Chapter 4**

### **The Role of Veterinary Team Effectiveness in Job Satisfaction and Burnout within Companion Animal Veterinary Clinics**

Prepared in the style of the *Journal of the American Veterinary Medical Association*

## Abstract

**Objectives**—To explore the role of veterinary team effectiveness in the outcomes of job satisfaction and burnout within companion animal veterinary practice.

**Design**—Cross-sectional observational study.

**Sample Population**—A random sample of 48 companion animal veterinary health care teams from Southwestern Ontario.

**Procedures**—Two hundred and seventy four veterinary team members participated in an online survey. Overall job satisfaction was evaluated with a one item measure, while burnout was measured with the Maslach Burnout Inventory-General Survey. Team effectiveness was assessed using a Team Effectiveness Survey developed for this study. Mixed linear regression models were constructed to examine demographic and team effectiveness factors affecting job satisfaction and burnout.

**Results**—The overall job satisfaction was 5.47/7 (N=265; SD=1.36; median=6.00), with veterinary technicians and kennel attendants reporting the lowest scores. The overall mean for exhaustion was 2.06 (N=269; SD=1.39; median=1.80), for cynicism it was 1.30 (N=268; SD=1.33 median=0.800), and for professional efficacy, it was 5.20 (N=268; SD=0.75 median=5.42). When categorized into high, moderate, and low risk categories for burnout, 22.4% of participants (N=61) were in the high risk category for exhaustion, 23.2% (N=63) were in the

high risk category for cynicism, and 9.28% (N=25) in the high risk category for professional efficacy. Team effectiveness factors influencing job satisfaction, exhaustion, cynicism and professional efficacy included a coordinated team environment, a toxic environment, and individual engagement. A coordinated team environment was associated with increased professional efficacy ( $p=0.047$ ) and decreased cynicism ( $p=0.001$ ). A toxic environment was negatively associated with job satisfaction ( $p<0.001$ ), while positively associated with exhaustion ( $p<0.001$ ) and cynicism ( $p=0.019$ ). Individual engagement was positively associated with job satisfaction ( $p<0.001$ ) and professional efficacy ( $p=0.019$ ), while negatively associated with exhaustion ( $p=0.035$ ) and cynicism ( $p=0.016$ ).

**Conclusions**-Results suggest team effectiveness significantly influenced job satisfaction and burnout in veterinary team members. Future research should target interventions to improve team effectiveness in veterinary practices.

## Introduction

In human health care, advantages of teamwork include reduced hospitalisation time and costs, enhanced service provision, improved patient satisfaction, increased staff motivation, and greater team innovation.<sup>1</sup> Studies in human health care have also shown positive team environments enhance job satisfaction, improve well-being, and provide better role clarity for employees.<sup>2,3</sup> Conversely, negative team environments have been associated with team members becoming stressed, frustrated, and dissatisfied.<sup>4,5</sup> Research has identified dissatisfaction and stress at the individual level to be associated with substance abuse, burnout, turnover, and reduced psychological well-being in numerous health professions,<sup>6,7,8,9,10,11</sup> including veterinarians.<sup>6,7,12,13,14</sup> Studies have identified occupational and psychological stresses to be associated with suicide among veterinarians.<sup>6,7</sup> A recent study found veterinarians have a disproportionately high risk of suicide, at 4 times the proportional mortality ratio to the general population, and twice that of other health professions.<sup>6,7</sup> Since other members of the veterinary team face similar stressors, it is anticipated they too are at risk.

While several studies have explored job stress, job satisfaction, and burnout among veterinarians specifically,<sup>6,12,13,14,15</sup> to date empirical studies have not examined the impact of team effectiveness on the outcomes of job satisfaction and burnout within the entire veterinary team.

While a broadly accepted definition of team effectiveness has not been developed, it is generally thought to consist of inputs, processes, and outputs.<sup>2,3,16</sup> Inputs include organizational level factors such as specified tasks, distinct roles, and relevant members,<sup>2,17,18,19</sup> and individual level factors such as self-knowledge, commitment, and flexibility.<sup>2,17,18,20,21</sup> Team processes usually include leadership, communication, coordination, and conflict resolution,<sup>4,22,23,24</sup> while outcomes

include turnover, profitability, patient care, and client satisfaction.<sup>2,3,16</sup> In the current study, the role of team effectiveness in the outcomes of job satisfaction and burnout focussed on team processes.

Job satisfaction is one of the most researched variables in organizational behaviour.<sup>25</sup> It impacts not only on the organization in terms of performance<sup>26,27</sup> and outcome quality measures,<sup>28</sup> but also influences an individual's physical health (e.g. cardiovascular disease and musculoskeletal disorders)<sup>29</sup> and psychological wellbeing (e.g. anxiety and depression).<sup>25,29,30</sup> Furthermore, studies have found job satisfaction to be positively associated with organizational commitment,<sup>31,32,33,34,35</sup> while negatively related to job turnover.<sup>32,33,34,36,37</sup>

Burnout is defined as a syndrome of emotional exhaustion, cynicism, and decreased professional efficacy which has been shown to lead to decreased effectiveness at work.<sup>38</sup> Emotional exhaustion (hereafter referred to as exhaustion) is a key component of the burnout syndrome, characterized by decreased emotional energy as a result of excessive personal or work demands.<sup>38</sup> Cynicism represents a dysfunctional, self-protective coping mechanism to chronic work stress and exhaustion, with workers withdrawing from various aspects of the job including from coworkers and clients.<sup>38,39,40</sup> In contrast, professional efficacy describes feeling personally capable of completely fulfilling expectations of the job or occupation.<sup>38</sup> High exhaustion and cynicism scores and low professional efficacy scores have been associated with higher levels of negative physical and mental health outcomes in a number of professions.<sup>38</sup> Previous studies indicate exhaustion usually precedes cynicism,<sup>39,40</sup> and cynicism can result in decreased professional efficacy,<sup>41</sup> although burnout is said to be present with extreme scores in even one domain. The objective of the current study was to explore the role of veterinary team

effectiveness on the outcomes of job satisfaction and burnout within companion-animal veterinary practice.

## **Material and Methods**

This study received clearance from the University of Guelph Research Ethics Board.

### **Study Participants**

A list of all small animal clinics located within one hour of Guelph, Ontario or Ridgetown, Ontario was obtained from the publicly accessible College of Veterinarians of Ontario data base. A random number generator was used to determine which clinics would be contacted. Clinics were contacted sequentially based on this randomization, with a goal of obtaining at least 5 times the number of subjects multiplied by the number of items in the final team effectiveness (TE) survey. This was done in order to have sufficient respondent numbers to perform factor analysis on the TE survey.<sup>42</sup> Clinics were initially contacted via a letter of introduction, and were subsequently phoned to discuss the project and obtain clinic-level consent to invite staff participation. The author travelled to each consenting clinic to explain the purpose of the research project to the practice team and to distribute access codes to the online survey to potential participants.

As part of the survey, participants were asked to provide demographic information including age in years, male vs. female, full-time vs. part-time status, respondent function (including owner/partner veterinarian; associate veterinarian; office manager; veterinary technician; veterinary assistant; receptionist; kennel attendant; other), number of years in veterinary medicine, and tenure at the clinic in years. Full-time vs. part-time status was self-identified by

the participants. Tenure was defined as the number of years a participant had worked at the current clinic.

### **Team Effectiveness (TE) instrument**

Team effectiveness was assessed using a 41 item questionnaire specifically developed for use with veterinary teams (Appendix C.5). Questionnaire development was informed by a previous focus group study of veterinarians and Registered Veterinary Technicians (RVTs), working in companion animal practice.<sup>43,44</sup> In the jurisdiction in which the focus group study was conducted, RVTs are graduates of an accredited college program who have passed a credentialing examination, and are required to obtain regular continuing education to maintain their designation. Details regarding the development and validation of the survey are found in Appendix C.1.

In brief, Phase I involved 4 independent veterinarian and 4 independent RVT focus groups to explore participants' perceptions about characteristics of effective veterinary teams including the benefits and challenges to working as part of a veterinary team.<sup>43,44</sup>

Phase II used the themes and wording identified during thematic analysis of the focus group transcripts to develop an initial pool of 216 items for consideration in the development of the questionnaire. The items were then each assessed for face validity, relevance, and clarity by a veterinarian, a RVT, a receptionist, and a kennel attendant representing 4 employee groups within a veterinary practice. Next, the author and another veterinarian familiar with questionnaire development used this information to reduce the questionnaire to 51 items. A 7 point Likert-type scale was used for responses, ranging from 1 ("totally disagree") to 7 ("totally agree").

Phase III involved a pilot study of 22 employees from a convenience sample of 3 companion animal practices to pretest the questionnaire. Based on the results of the pilot study inter-item correlations of greater than 0.8 were reviewed, and items identified to be redundant based on this analysis were removed. After reverse coding negatively worded items, a total TE score was developed by summing the scores of all items. Items with correlations of less than 0.4 with total TE were also eliminated. The final TE instrument contained 41 items, producing a measure with possible total TE scores ranging from 41 to 287.

Phase IV included psychometric evaluation of the instrument using data from the current study. In addition to the Maslach Burnout Inventory (MBI-GS) and job satisfaction measures, a validated measure of Relational Coordination (RC)<sup>45,46</sup> and 2 global questions were included with the final online survey to further assess the construct validity of the TE Survey in measuring team effectiveness. Relational Coordination has been positively correlated with desirable team and patient outcomes,<sup>45,46</sup> providing a good comparison measure for evaluating the construct validity of the TE Survey (Appendix C.1). The global questions were “how likely are you to leave your job in the next year?” (1 = “extremely likely” to 7 “extremely unlikely”) and “overall, I feel we have an effective team” (1 = “totally disagree” to 7 = “totally agree”). Exploratory factor analysis was used to explore the underlying structure of the 41 item TE Survey. Four latent variables were identified and used as variables in the subsequent regression analysis. The variables were named to reflect the underlying construct expressed by the items in each factor. Cronbach alphas were calculated for the TE instrument, as well as each of the latent variables developed during factor analysis to evaluate the internal consistency of the instrument.

### **Measurement of Job Satisfaction**

A single item measure, “On the whole, how satisfied are you with your job?” assessed job satisfaction. The item was scored on a seven-point Likert scale ranging from 1 “not at all satisfied” to 7 “extremely satisfied”. Single-item, overall job satisfaction measures have been shown to be a valid and reliable means of assessing global job satisfaction.<sup>46,47,48,49,50</sup> Job satisfaction was also categorized into satisfied, neutral, and dissatisfied categories, with the satisfied category including participants who were somewhat to extremely satisfied, and the dissatisfied category including those somewhat to extremely dissatisfied.

### **Measurement of Burnout**

Burnout was assessed using the Maslach Burnout Inventory-General Survey (MBI-GS),<sup>38</sup> an instrument considered the gold standard for measuring the construct of burnout.<sup>51,52,53,54</sup> All three dimensions of burnout were measured using the MBI-GS. The MBI-GS consists of 16 items with response options ranging from zero (“never”) to six (“every day”). The exhaustion subscale was assessed with 5 items, cynicism with 5 items, and professional efficacy with 6 items. A mean score for each subscale was calculated by adding responses for each question, and dividing by the number of items.<sup>38</sup> To facilitate comparisons with other studies, in addition to calculating mean scores for each of the three subscales of the MBI-GS, data scores were also categorized to reflect high, medium, and low risk categories of burnout, based on established normative ranges developed for the instrument.<sup>38</sup> These were subsequently referred to as burnout risk categories. Burnout is said to be present if an individual is in the high risk category for any burnout dimension.<sup>38</sup>

## **Statistical analysis**

The influence of survey order on scores for the MBI-GS, RC, and Total TE Score was assessed by ANOVA and Kruskal-Wallis tests. There were 3 orders of presentation: TE/RC/MBI; RC/MBI/TE; MBI/TE/RC. For each survey, demographic questions were at the beginning, while the global questions and a comment section were at the end.

Descriptive statistics were performed on independent variables, using frequencies for categorical variables (gender, respondent function, full-time vs. part-time status), and using the mean, standard deviation, minimum, maximum, skewness, and kurtosis for continuous variables (age, years in veterinary medicine, tenure at clinic, and the 4 latent variables identified during exploratory factor analysis of the TE instrument). Quadratic terms for the continuous variables were also created to address potential non-normality in the data. Descriptive statistics were similarly performed on the mean scores for job satisfaction, the 3 domains of the MBI-GS, and the summary score for total TE. Means, standard deviations, and medians for job satisfaction and burnout were also assessed by respondent function.

All scales were tested for normal distribution using the Shapiro-Wilk test statistic and the Kolmogorov-Smirnov test statistic with Lilliefors significance correction. All independent variables considered for model building were explored, using both parametric and non-parametric techniques, for independence with the outcome measures of job satisfaction, exhaustion, cynicism and professional efficacy. Univariable linear regression was used to explore this relationship for continuous variables (age, years in veterinary medicine, tenure, and the four TE latent variables identified by factor analysis). Dichotomous variables (male vs. female; full-time vs. part-time status) were evaluated with t-tests and Mann-Whitney tests.

Categorical variables (respondent function and clinic) were tested with ANOVA and Kruskal-Wallis tests.

### **Linear Mixed Regression Models**

Since a non-parametric equivalent does not exist for regression models with random effects, linear mixed regression models were developed to investigate the associations between the TE latent variables with the outcomes of job satisfaction, exhaustion, cynicism and professional efficacy while controlling for other factors. Clinic was included as a random effect in each of the 4 constructed models to address potential clustering of responses within each clinic. The four TE latent variables were offered into all models as predictor variables. In addition, during construction of the multi-variable linear mixed regression models, male vs. female, respondent function, full-time vs. part-time status, age, years in veterinary medicine, tenure at clinic, and all two-way interactions were initially included. Quadratic terms for age, years in veterinary medicine and tenure were also tested in all models.

Model building was performed by manual backwards elimination of interaction terms using a significance level of 95%. Once all non-significant interaction terms were removed, manual sequential backwards removal of non-significant main effects was then performed, in order of the least significant. If interaction terms were significant, the main effects were left in the model. Once all remaining variables significant at the 5% level remained in the model, all main effect variables previously removed were independently re-introduced into the model one-by-one in the order they were initially removed to see if they were now significant.

The models were assessed for outliers and high leverage observations by graphical visualisation of standardised residuals using standard software (Footnote B and C). The effect on regression

parameters of re-running the model in the absence of outliers and high leverage values was evaluated. Outlier and high leverage observations were evaluated for common factors. The effect on regression parameters of re-running the model in the absence of outliers was evaluated. The residuals of the linear mixed models were evaluated for normality by the Kolmogorov-Smirnov and the Shapiro-Wilks tests. To illustrate the percentage of variation explained by each random effects model, the approximate  $R^2$  value was estimated by squaring the Pearson correlation coefficient between the dependent variable and the fitted values.

All analyses were performed with standard software. (Footnotes B and C)

## **Results**

### **Study Participants**

A total of 53 out of 77 (69%) clinics contacted initially agreed to participate in the current study; however, a suitable date could not be arranged for 2 of the clinics and three additional clinics did not contribute any data to the study. Thus, the overall clinic response was 62% (48/77).

Codes (one per potential respondent) were distributed to the participating clinics, based on reported number of employees. A total of 274 respondents (60.0%) from 48 clinics participated in the online surveys. Of the 273 participants contributing demographic information, 31 were owner/partner veterinarians (11.3%), 39 associate veterinarians (14.3%), 25 managers (9.1%), 90 veterinary technicians (33.0%), 15 veterinary assistants (5.5%), 55 receptionists (20.1%), and 11 kennel attendants (4.0%). An additional 7 participants (2.6%) considered themselves to have other employment responsibilities. The median age of participants was 35 years (mean =38 years; SD=11.87) and the median length of employment in veterinary medicine was 9 years

(mean=12; SD=9.57). The median length of tenure at their current practice of employment was 4 years (mean=7; SD=8.60). In the study population, 243 (89%) were female, while 30 (11%) were male. Additional demographic information broken down by employee group is found in Table 4.1.

### **Team effectiveness**

The overall mean for the Total TE scale was 191.92 (N=230; SD=39.27; median = 193.00), and the Cronbach Alpha was 0.964. Means, SD's and Cronbach Alphas for the TE subscales are found in Table 4.2. The tests of normality for the total TE scale and toxic environment latent variable (Subscale 2) differed. The coordinated environment (Subscale 1), team engagement (Subscale 3), and individual engagement (Subscale 4) latent variables were not normally distributed with either normality test. Both parametric and nonparametric tests were used to explore relationships among the independent variables and outcomes (Tables 4.3 and 4.4).

No difference was detected for the potential effect of survey order on scores for the MBI-GS, RC or TE surveys.

### **Job Satisfaction**

The overall mean for job satisfaction was 5.46 out of 7 (N=265; SD=1.36; median=6.00)(Footnote D). Since job satisfaction was not normally distributed ( $p < 0.001$  for both Kolmogorov-Smirnov and Shapiro-Wilks normality tests), both parametric and nonparametric tests were conducted to examine the relationship between job satisfaction and each independent variable (Table 4.3). The results were very similar for each independent variable using parametric and nonparametric approaches. Job satisfaction scores by respondent function are

summarized in Table 4.5. When job satisfaction was categorized into satisfied, neutral, and dissatisfied categories, the majority (83.1%) of participants were satisfied, while 13.5% were dissatisfied.

### **Burnout**

The overall mean for exhaustion was 2.06 (N=269; SD=1.39; median=1.80), for cynicism it was 1.30 (N=268; SD=1.33 median=0.800), and for professional efficacy, it was 5.20 (N=268; SD=0.75 median=5.42). Since none of the burnout domains were normally distributed ( $p < 0.001$  for both Kolmogorov-Smirnov and Shapiro-Wilks normality tests), both parametric and nonparametric tests were used to explore relationships among the independent variables and outcomes (Table 4.4). As with job satisfaction, results were very similar for the two approaches. Burnout scores by respondent function are summarized in Table 4.5.

When exhaustion was categorized into high, medium, and low risk categories, 22.4% of participants (N=61) were in the high risk category of burnout from exhaustion. When cynicism was similarly categorized, 23.2% (N=63) of participants were at high risk category. For professional efficacy, most participants (70.6%; N=192) were in the low risk category, with 9.28% (N=25) in the high risk category. Table 4.6 illustrates the percentage of participants in high, moderate, and low risk categories for each domain of burnout.

### **Linear mixed regression models**

Few differences were seen between parametric and nonparametric tests for independent variables and outcomes, supporting the decision to use linear mixed regression for model building.

After controlling for random effects, the final model for job satisfaction included years in veterinary medicine, tenure, full-time vs. part-time status, toxic environment and individual engagement (Table 4.7). The model's approximate  $R^2$  was 55.3%. The pattern of residuals plotted against the predicted values for each of the models approached normality, although both Shapiro-Wilk and Kolmogorov-Smirnov tests were significant. When the single identified outlier was excluded from the model, years in veterinary medicine became non-significant. However, since there did not appear to be any justifiable reason to exclude the observation upon evaluation, the outlier was left in the model.

Controlling for random effects, the final model for exhaustion included full-time vs. part-time status, toxic environment, and individual engagement, with an approximate  $R^2$  of 50.4% (Table 4.7). Both graphing the residuals and tests of normality indicated the model fit the data well. No outliers were identified.

After controlling for the random effect of clinic, the final model for cynicism included full-time vs. part-time status, respondent function, age, tenure, years in veterinary medicine, the interaction terms Tenure\*Age, Tenure\*YrsVetMed, and Tenure\*FullTime vs. part-time status, and the coordinated team environment, toxic environment, and individual engagement subscales. The approximate  $R^2$  for this model was 42.4% (Table 4.7). The scatterplots of residuals and predicted values approached normality, although both Shapiro-Wilk and Kolmogorov-Smirnov tests were significant. One high leverage observation was identified, but removal of this influential data point did not change the significance of variables in the model. Thus, it was left in the model.

Finally, when controlling for random effects the final model for professional efficacy included age, tenure, full-time vs. part-time status, Age\*Fulltime vs. part-time status, and Tenure\*FullTime vs. part-time status, and the coordinated team environment and individual engagement subscales. The approximate  $R^2$  for this model was 20.6% (Table 4.7). The scatterplots of residuals and predicted values approached normality, although both Shapiro-Wilk and Kolmogorov-Smirinov tests were significant. No outliers or high leverage observations were identified.

## **Discussion**

To the author's knowledge this study is the first to examine the influence of team effectiveness (TE) on the outcomes of job satisfaction and burnout within the entire veterinary team. Based on the findings of the current study as well previous focus group studies,<sup>43,44</sup> TE appears to be a multi-dimensional concept. Domains of TE previously identified in health care teams include leadership, conflict management, communication, and coordination<sup>4,22,23,24</sup> which are consistent with many of the findings of the current study.

Studies on improving job satisfaction and reducing burnout advocate a two-pronged approach; examining areas where there is a gap between job demands and key resources, and increasing work engagement.<sup>10,55,56,57</sup> Job demands include workload and personal conflict, while resources include control coping, social support, use of skills, autonomy, and the opportunity to participate in decision making.<sup>55</sup> Gaps can be identified through the use of surveys and consultations with staff.<sup>10,56</sup> Work engagement describes a "positive, fulfilling, affective-motivational state of work-related well-being", that is considered to be at the opposite spectrum of burnout.<sup>57</sup> Increasing

work engagement may be able to prevent and alleviate burnout by enhancing an individual employee's energy, vigor, and resilience.<sup>40,56</sup>

Of the four subscales identified through factor analysis of the TE survey, three had a significant impact on job satisfaction and burnout. A coordinated team environment (Subscale 1) was associated with decreased cynicism and increased professional efficacy. A toxic environment (Subscale 2) was associated with decreased job satisfaction, as well as increased cynicism and exhaustion. Individual engagement (Subscale 4) was found to be significantly associated with increased job satisfaction and professional efficacy and decreased exhaustion and cynicism. Team engagement (Subscale 3) was not found to be significant in any of the final models.

In the current study, a coordinated team environment was found to be inversely associated with cynicism. Since many of the items in Subscale 1 involve structured communication and recognition of input from the team, cynicism may result when clinics do not have effective communication strategies including effectively run staff meetings, internal newsletters, or opportunities for employees to participate in the development of standardized clinic policies and procedures. When these activities are not in place, employees may disengage from the work environment, as they do not feel they are being listened to. Research has shown improving communication strategies through changing the format in which information is shared, providing timely information, and involving staff in the dissemination of information has had positive effects on burnout and work engagement.<sup>10</sup> Veterinary practices should regularly evaluate their internal communications to ensure all team members are kept abreast of changes in the clinic, and are given the opportunity to provide suggestions to improve patient and client service.

In contrast, a coordinated team environment was positively associated with professional efficacy. Items related to professional efficacy within the TE survey included people working towards the same goals, a team effort working with clients, and recognition of individual contributions to the team. Research indicates professional efficacy may be reduced when there is a lack of social support within the work environment<sup>55,58</sup> or there is a lack of opportunity for staff to engage in professional development.<sup>55</sup> This then results in people feeling less competent, and inadequately prepared to help clients.<sup>55</sup> By actively encouraging professional development of all staff, and ensuring all team members are recognized for their contributions, veterinary clinics can enhance an individual's professional efficacy. In addition, colleagues and supervisors can be encouraged to provide guidance and social support to help team members develop coping skills and enhance self-efficacy,<sup>55,58</sup> as these interventions have had a buffering effect on burnout.<sup>58,40</sup>

The current study found a more toxic environment was associated with lower job satisfaction. Although the mean job satisfaction among participants in the current study (5.49 out of 7=7.8/10) is comparable to a recent United States study of 7905 team members in 216 human primary health care workgroups (3.75 out of 5=7.5/10),<sup>28</sup> it was slightly lower than a comparable study of 626 practice staff in 96 human primary health care teams in Australia.<sup>59</sup> In the Australian study, a good team climate, based on the level and quality of teamwork, was associated with higher job satisfaction. This suggests veterinary practices should address factors contributing to a toxic environment. Findings from other studies suggest veterinary practice should consider identifying and resolving conflicts, ensuring all employees are treated equally and fairly, and developing zero tolerance policies for incivility.<sup>56,60,61</sup>

Items from the TE survey making up the toxic environment subscale included frustrations with both co-worker relationships and the job itself. Since most items in this subscale were reversed,

job satisfaction was found to be higher when there were positive relationships among coworkers. These findings are congruent with results from other studies of other health professionals. A systematic literature review of physicians in general practice focussed on job satisfaction<sup>62</sup> found relationships and contact with colleagues to be associated with higher job satisfaction. Similarly, a literature review of job satisfaction in nurses found predictors of job satisfaction included relationships with fellow workers and managers, and recognition from managers.<sup>63</sup> A study of Ontario veterinarians found relationships with colleagues (both veterinarians and non-veterinarians) was the 2<sup>nd</sup> strongest of 6 primary determinants of veterinarian career/job satisfaction.<sup>15</sup> In this study, veterinarians that indicated their coworkers worked well together, were good at their jobs, and treated them with respect, had higher job and career satisfaction than other respondents.<sup>15</sup> Based on findings of the current study, taking steps to create and maintain a positive work environment will contribute to employee satisfaction. Considerations of steps that may be taken to ensure a positive work environment include not tolerating incivility,<sup>60,61</sup> facilitating information sharing to build respect and trust<sup>45,46,64</sup> and improving human resource management practices to recruit and retain qualified workers.<sup>65,66</sup> These studies suggest improving relationships in the clinic would improve job satisfaction for team members.

In the current study, the presence of a toxic environment was found to have a positive association with higher exhaustion and cynicism. The toxic environment measure included items related to conflict with coworkers. Conflict with coworkers and supervisors has been commonly associated with burnout.<sup>40,55,67,68</sup> Several studies with nurses and physicians in intensive care units have found positive co-worker relationships offer a protective effect against burnout syndrome.<sup>67,68,69</sup> Veterinary teams experiencing a toxic environment could consider interventions targeted at improving collegiality within the clinic as one approach to managing such an environment. For

instance, a study with health care workers found a structured intervention to improve civility and collegiality also reduced burnout and turnover intent, while improving respect, management trust, and job satisfaction.<sup>70</sup> The structured intervention involved facilitated sessions over a 6 month period to build community and provide focused training in conflict resolution, leadership, and improving relationships with colleagues.<sup>70</sup>

Items in the toxic environment subscale were also related to feeling overloaded and frustrated by the job. In the literature on burnout, workload has been identified as one of the main factors in creating stress, which in turn leads to burnout.<sup>40,55,71</sup> In human physicians, burnout is associated with excessive workload, chronic work-related stress, and reduced autonomy.<sup>9,72</sup> Similarly, studies have identified the strongest predictors of burnout for nurses in human medicine include workload,<sup>55,67,73</sup> lack of decision latitude, and social capital (defined as common values and perceived mutual trust in an organization).<sup>73</sup> These results suggest that controlling work hours, increasing decision making latitude, and improving relationships in the clinic may reduce burnout in team members. In veterinary clinics where a toxic environment exists, practices may need to consider their current staffing levels and individual workloads to ensure work overload is not the factor contributing to the current environmental state. Since a lack of autonomy has also been identified as a contributor to burnout, owners and managers could ensure all team members have clearly defined roles, and are given freedom to make decisions consistent within their scope of practice.

The current study identified that the more engaged an individual felt with their position, the higher their job satisfaction. In the individual engagement subscale, many items described acknowledgement for an individual's contributions to the functioning of the clinic such as feeling recognized, appreciated, and capable of performing as an integral team member.

Moreover, they felt they were encouraged to further develop their skills and knowledge. Previous studies have shown job engagement to positively impact job satisfaction.<sup>57,74</sup> Organizational literature has also found high work engagement may help individuals cope with stressful situations.<sup>75</sup> This suggests that enhancing individual engagement in the clinic not only improves job satisfaction, but also reduces the likelihood of stress and burnout.

This was consistent with the findings of the current study, in that individual engagement was also strongly inversely associated with exhaustion, and cynicism, and positively associated with professional efficacy. This individual engagement subscale reflects psychological empowerment, which a number of nursing studies have found to be associated with reduced burnout<sup>76,77,78</sup> and improved job satisfaction.<sup>76,79</sup> In order to minimize burnout, leaders in veterinary clinics should explore opportunities to ensure they empower the members of their team. This may include providing them with support and guidance, access to information about organizational activities and decisions, adequate resources to complete their jobs in a meaningful fashion, and opportunities to grow and develop.<sup>77,79,80,81</sup>

Other variables significant in some of the multivariate regression models included full-time vs. part-time status, tenure, years in veterinary medicine, age, and respondent function. The study found full-time workers were significantly less satisfied than part-time workers. This result is surprising, as a meta-analysis examining job attitudes of full-time and part-time employees found full-time and part-time employees had similar job satisfaction, organizational commitment, and intent to leave the position.<sup>82</sup> Results for exhaustion were congruent with the results of job satisfaction; full time workers were more likely to suffer from burnout. Several studies have linked increased hours worked per week with a higher likelihood of burnout.<sup>67,83</sup> Studies with veterinarians also linked increased work hours, particularly being on-call, with increased stress

and burnout.<sup>13,84,85</sup> These findings suggest that in clinics where job dissatisfaction and burnout are identified as problems, work hours and scheduling should be scrutinized to see if they can be optimized.

The current study found job satisfaction increased with tenure at the practice. This may indicate job satisfaction improves when a person feels comfortable and engaged in a practice. However, in this study, job satisfaction still decreased with years in veterinary medicine. In contrast, other studies have found job satisfaction to be higher in older veterinarians, and individuals who have been in the profession longer.<sup>86,87</sup> This is an interesting finding, and may need to be investigated further.

While the current study found years in veterinary medicine significantly influenced job satisfaction, a meta-analysis of nurse satisfaction found years of experience and age had very weak correlations with job satisfaction.<sup>33</sup> A more recent meta-analysis of job satisfaction in nurses<sup>88</sup> found job stress, autonomy, and nurse-physician collaboration were the variables most strongly correlated with job satisfaction. Autonomy and collaboration were reflected in the individual engagement subscale by individuals feeling they had the opportunity to contribute their knowledge and expertise into major changes at the clinic. Similarly, a recent United Kingdom study found veterinary team engagement was reduced when employees are not given the autonomy to address customer needs.<sup>89,90</sup> Thus, veterinary practices should consider encouraging an environment of autonomy to increase staff member's feelings of individual engagement.

In the multivariate model, age was associated with decreased cynicism and increased professional efficacy. Previous studies have also found the incidence of burnout to be higher in

people in earlier stages of their professions,<sup>54,83,85,91</sup> thus usually people that are younger. This may be attributed to healthy worker bias, as long term employees in veterinary medicine may have developed coping mechanisms to address stressors.<sup>84</sup> Some studies have suggested targeting interventions at employees during their education or in early stages of their careers may reduce the incidence of burnout.<sup>14,85</sup> For instance, Hatch and Winefield (2011) advised providing communication skills training, teaching coping skills, and improving cognitive skills may decrease depression, anxiety, stress, and burnout.<sup>85</sup>

In the current study respondent function was a predictor of cynicism. The study found the employment groups with the lowest cynicism scores were veterinary assistants and those considering themselves in the “other” employment category; these employees were also most likely to be working part-time. In contrast, veterinary technicians had significantly higher cynicism scores than others on the veterinary team. This could potentially explain why the turnover rate (Footnote E) for veterinary technicians is 35%, while the average for all jobs in the U.S. is 12%<sup>92</sup>. In contrast, the turnover rate for associate veterinarians in the same report was 20%, and for managers, 13%<sup>93</sup>. Further studies to determine potential antecedents of cynicism in various employee groups in veterinary clinics are warranted.

The percentage of veterinary team members at high risk of burnout in the current study is of concern: 22.4% of veterinary team members were classified at high risk of exhaustion, 23.2% were at high risk of cynicism, and 9.2% had low professional efficacy. Research with human health care teams has shown 15-45% of hospital nurses experience burnout<sup>73</sup>. Burnout is also common in physicians, affecting an estimated 25-75% in previous studies.<sup>94,95,96,97,98</sup> Several studies have also examined burnout in veterinarians.<sup>12,84,85,99</sup> A 1992 study reported 67% of female and 53% of male U.S. veterinarians were considered at high risk of burnout using a self-

diagnosis burnout scale,<sup>100</sup> although other veterinary studies have found burnout ranged between 15 and 40%.<sup>12,84,85</sup> The current study has identified that all veterinary team members, rather than only veterinarians, are at risk of burnout and that elements relating to team effectiveness have a role in contributing to or detracting from an individual's level of burnout. Given the serious organizational and individual repercussions of burnout, it behooves leaders of veterinary clinics to consider and address factors contributing to this state, including the function of the entire veterinary staff.

In summary, a lack of individual engagement (Subscale 4) significantly influenced outcomes of job satisfaction and burnout. Furthermore, the presence of a toxic environment (Subscale 2) was associated with decreased job satisfaction, and increased exhaustion and cynicism. These findings indicate team effectiveness has a strong impact on psychosocial health and work contentment. These results were consistent with a previous focus group study with veterinarians and RVTs,<sup>43</sup> in which a toxic environment and work engagement were two of the strongest themes identified. Coordination, leadership, and communication were also strong themes in the focus groups;<sup>44</sup> the presence of a coordinated team environment as a predictor of cynicism and improved professional efficacy in the current study aligns with these findings.

In the current study a potential response bias may have been introduced by having clinics and team members choose whether or not they wished to participate. Thus, participants at the clinic level as well as the individual level may be more or less interested in team effectiveness than other veterinary teams, which could bias the results in either direction. Secondly, at the clinic level, several clinics indicated they did not want to participate because they felt their teams were in a stressful period. This may have skewed the results, as job satisfaction may have been higher and burnout lower in the study population than in non-respondents. Thirdly, although

participants were assured their responses were confidential, people may have still have been hesitant to provide negative information about their clinic. A fourth limitation is the use of cross-sectional data. Causal relationships between TE and outcomes of job satisfaction and burnout thus cannot be assessed. The use of longitudinal studies would more fully explore these relationships, and could assess the impact of various interventions. Finally, since the study was performed with companion animal hospitals from a specific geographical area, it may not be possible to extrapolate the results to other types of veterinary practice in other areas.

This study demonstrated the important role of team effectiveness on the outcomes of job satisfaction and burnout in veterinary teams. Overall job satisfaction was generally good in the study population; however, the high number of individuals at high risk of exhaustion and cynicism is of concern. There is a need for further research in this area to determine whether clinic level and individual factors can be modified to improve team effectiveness, which in turn should positively influence job satisfaction and reduce the risk of burnout in veterinary practice. Future studies could compare the results of TE scores with other parameters of team function, including client satisfaction and patient outcomes. Furthermore, knowing what contributes to or detracts from effective teams can help decision-making when establishing teams, or when developing interventions to improve team function.

**Footnote A:**

LimeSurvey Project Team / Carsten Schmitz (2012). / LimeSurvey: An Open Source survey tool /LimeSurvey Project Hamburg, Germany. URL <http://www.limesurvey.org>

**Footnote B:**

PASW SPSS 19.0 (SPSS Inc., Chicago, IL, USA).

**Footnote C:**

SAS, version 9.2, (SAS Institute Inc, Cary, NC, USA).

**Footnote D:**

The number of participants varied for each outcome, as they were based on the number of respondents which provided information for each question.

**Footnote E:**

Turnover rate is expressed as a percentage calculated by dividing the number of employees that have left employment divided by the total number of employees, and multiplying by 100. It usually refers to an annual turnover rate, although it can be for different time periods.

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**Table 4.1: Demographics for participants by respondent function from from 48 companion animal practices in Ontario, Canada, 2011**

Employee Group	Number	Gender	Mean Age in Years (SD)	Mean Years in Vet. Med. (SD)	Mean Tenure at Clinic in Years (SD)	Full-Time vs. Part-Time Status*
Owners/Partners	31	13 Female (41.9%) 18 Male	49 (9.15)	23 (6-38)	17 (0-36)	25 F/T 6 P/T
Associate Veterinarians	39	25 Female (82.0%) 7 Male	39 (11.02)	13 (11.24)	6 (6.63)	25 F/T 14 P/T
Managers	25	21 Female (84%) 4 Male	43 (8.74)	17 (9.18)	12 (9.67)	21 F/T 4 P/T
Veterinary Technicians	90	100% Female	31 (7.13)	9 (6.21)	5 (4.97)	78 F/T 4 P/T
Veterinary Assistants	15	100% Female	33 (14.06)	8 (9.57)	5 (6.84)	4 F/T 11 P/T
Receptionists	55	100% Female	41 (12.13)	10 (8.09)	8 (7.99)	35 F/T 19 P/T
Kennel Attendant	11	100% Female	32 (16.94)	5 (3.91)	5 (4.00)	2 F/T 9 P/T
Other	7	6 Female (85.7%) 1 Male	37 (15.74)	11.5 (12.88)	7 (8.60)	2 F/T 5 P/T

\*-participants self-reported part-time and full-time status.

**Table 4.2: Scores of TE and TE Subscales, Including Cronbach Alphas and normality tests from 48 companion animal practices in Ontario, Canada, 2011**

Descriptive Statistics									
	N	Min	Max	Mean	SD	Median	Cronbach Alpha	Kolmogorov-Smirnov	Shapiro-Wilks
Subscale 1- Coordinated Team Environment	260	9.00	63.00	43.52	11.42	46.00	0.920	<0.001	<0.001
Subscale 2- Toxic Environment	251	16.00	84.00	48.36	15.38	48.00	0.916	0.082	0.012
Subscale 3- Team Engagement	254	17.00	77.00	60.44	9.99	61.00	0.890	0.006	<0.001
Subscale 4- Individual Engagement	261	9.00	63.00	45.82	10.37	48.00	0.896	<0.001	<0.001
Total TE Score	230	65.00	269.00	191.92	39.27	193.00	0.964	0.200	0.026
Valid N (listwise)	230								

**Table 4.3: Parametric and nonparametric tests for individual-level variables and the outcome of job satisfaction from 48 companion animal practices in Ontario, Canada, 2011**

Variable	Predictor variable format	Median	Mean	SD	Job Satisfaction	
					(P value in parametric test)	(P value in non-parametric test)
Age	Continuous	35	37.58	11.87	0.016a	n/a
Yrs in Vet Med	Continuous	9	12.02	9.63	0.224a	n/a
Tenure at Clinic	Continuous	4	7.55	8.37	0.035a	n/a
Gender (Male is 0)	Dichotomous 0=male (11.3%) 1=female (88.7%)				0.116b	0.180c
Full-time vs. Part time Status	Dichotomous 0=full-time 71.2% 1=part-time 28.8% *		F/T=39.2 hrs/week	F/T=5.76	0.132b	0.195c
Respondent Function	categorical 8 different employee groups		P/T=20.9 hrs/week	P/T=8.92	0.003d	<0.001e
Clinic	48 clinics				<0.001d	<0.001e
Coordinated Team Environment	Continuous	46	43.52	11.42	<0.001a	n/a
Toxic Environment	Continuous	48	48.36	15.39	<0.001a	n/a
Team Engagement	Continuous	61	60.44	10.00	<0.001a	n/a
Individual Engagement	Continuous	48	45.82	10.37	<0.001a	n/a

\*-participants self-reported part-time and full-time status.

a-univariable linear regression

b-T test

c-MannWhitney test

d-ANOVA

e-Kruskall Wallis

**Table 4.4: Parametric and nonparametric tests for individual-level variables and the outcomes of exhaustion, cynicism, and professional efficacy from 48 companion animal practices in Ontario, Canada, 2011**

Variable	Predictor variable format	Exhaustion		Cynicism		Professional Efficacy	
		(P value in parametric test)	(P value in non-parametric test)	(P value in parametric test)	(P value in non-parametric test)	(P value in parametric test)	(P value in non-parametric test)
Age	Continuous	0.117a	n/a	0.139a	n/a	0.066a	n/a
Yrs in Vet Med	Continuous	0.139a	n/a	0.696a	n/a	0.342a	n/a
Tenure at Clinic	Continuous	0.443a	n/a	0.742a	n/a	0.098a	n/a
Gender (Male is 0)	Dichotomous 0=male (11.3%) 1=female (88.7%)	0.915b	0.675c	0.848b	0.937c	0.039b	0.053c
Full-time vs. Part time Status	Dichotomous 0=full-time 71.2% 1=part-time 28.8% *	<0.001b	<0.001c	0.007b	0.015c	0.825b	0.857c
Respondent Function	categorical 8 different employee groups	<0.001d	<0.001e	<0.001d	<0.001e	0.044d	0.066e
Clinic	48 clinics	0.008d	0.014e	0.002d	0.007e	0.050d	0.090e
Coordinated Team Environment	Continuous	<0.001a	n/a	<0.001a	n/a	<0.001a	n/a
Toxic Environment	Continuous	<0.001a	n/a	<0.001a	n/a	<0.001a	n/a
Team Engagement	Continuous	<0.001a	n/a	<0.001a	n/a	<0.001a	n/a
Individual Engagement	Continuous	<0.001a	n/a	<0.001a	n/a	<0.001a	n/a

\*-participants self-reported part-time and full-time status.

a-univariable linear regression

b-t- test

c-Mann-Whitney test

d-ANOVA

e-Kruskall Wallis

**Table 4.5: Descriptive statistics for job satisfaction, exhaustion, cynicism, and professional efficacy by respondent function from 48 companion animal practices in Ontario, Canada, 2011**

		<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Median</b>
<b>Job Satisfaction</b>	Owner/Partner	29	6.14	0.69	6.00
	Associate Vet	39	5.44	1.25	6.00
	Manager	24	5.58	1.38	6.00
	Vet Tech	89	5.06	1.48	5.00
	Vet Assistant	13	5.62	1.56	6.00
	Receptionist	54	5.74	1.25	6.00
	Kennel Attendant	10	4.80	1.48	5.00
	Other	7	6.00	1.41	6.00
	Total	265	5.46	1.36	6.00
<b>Exhaustion</b>	Owner/Partner	31	2.00	1.17	2.00
	Associate Vet	39	2.33	1.22	2.40
	Manager	24	2.20	1.41	2.00
	Vet Tech	89	2.44	1.46	2.40
	Vet Assistant	15	1.25	1.43	0.80
	Receptionist	54	1.56	1.30	1.20
	Kennel Attendant	10	1.96	1.35	1.80
	Other	7	1.14	1.04	0.80
	Total	269	2.06	1.39	1.80
<b>Cynicism</b>	Owner/Partner	31	1.35	1.27	1.00
	Associate Vet	39	1.39	1.04	1.00
	Manager	24	1.21	1.09	0.90
	Vet Tech	89	1.77	1.61	1.20
	Vet Assistant	15	0.51	0.70	0.20
	Receptionist	53	0.75	1.02	0.40
	Kennel Attendant	10	1.20	1.10	0.80
	Other	7	0.94	1.11	0.20
	Total	268	1.30	1.33	0.80
<b>Professional Efficacy</b>	Owner/Partner	31	5.50	0.41	5.67
	Associate Vet	39	5.21	0.70	5.50
	Manager	24	5.24	0.80	5.50
	Vet Tech	89	5.06	0.76	5.33
	Vet Assistant	15	5.31	0.82	5.67
	Receptionist	53	5.27	0.79	5.50
	Kennel Attendant	10	4.72	1.05	4.67
	Other	7	5.48	0.39	5.33
	Total	268	5.20	0.75	5.42

**Table 4.6: High, moderate, and low risk categories of burnout from 48 companion animal practices in Ontario, Canada, 2011**

	<b>Emotional Exhaustion</b>	<b>Cynicism</b>	<b>Professional Efficacy</b>
High Burnout	22.4% (N=61)	23.2% (N=63)	9.2% (N=25)
Moderate Burnout	22.4% (N=61)	19.9% (N=54)	20.2% (N=55)
Low Burnout	55.1% (N=150)	57.0% (N=155)	70.6% (N=192)

**Table 4.7: Comparing unstandardized parameter estimates and standard errors for variables in linear mixed regression models from 48 companion animal practices in Ontario, Canada, 2011**

Variable	JobSat		Exhaustion		Cynicism		Professional Efficacy	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
YrsVetMed	-0.018*	0.009			0.008	0.015		
Tenure	0.032**	0.011			0.054	0.049	-0.007	0.008
Full Time Status	-0.340*	0.137	0.597***	0.151	-0.289	0.242	-0.804*	0.332
Respondent Function(8 groups)					DF=204.74*	F=2.065		
Coordinated Team Environment					-0.024*	0.010	0.011*	0.006
Toxic Environment	0.026***	0.005	-0.047***	0.006	-0.024**	0.007		
Individual Engagement	0.068***	0.008	-0.184*	0.008	-0.027*	0.011	0.015*	0.006
Age					-0.022*	0.011	0.016*	0.007
Age*Tenure					0.004*	0.001		
Age*FullTimeStatus							-0.024*	0.009
Tenure*YrsVetMed					-0.004*	0.002		
Tenure*Full TimeStatus					-0.081**	0.024	0.028*	0.014
Intercept	1.277***	0.310	5.828***	0.339	6.502***	0.646	5.236***	0.321
Residual	0.789***	0.083	1.054***	0.104	0.976***	0.105	0.466***	0.047
Clinic variance	0.121	0.072	0.094	0.059	0.085	0.069	0.007	0.022
Approx. R <sup>2</sup>	0.553		0.504		0.424		0.206	

\*p<=0.05

\*\*p<=0.01

\*\*\*p<=0.001

## **Chapter 5**

### **CONCLUSIONS**

While it is well recognized that human health care is most effectively delivered through a team approach,<sup>1,2,3,4,5</sup> there is a lack of empirical research on teams in veterinary medicine.

Advantages of team delivery of human health care include financial efficiencies and improved quality of service.<sup>1,2,3,4,5</sup> Individual team members also benefit through higher job satisfaction, enhanced role clarity, and improved well-being.<sup>4</sup> Since the provision of veterinary care also requires coordination and collaboration,<sup>6</sup> similar benefits are anticipated by using veterinary teams to provide superior patient care and exemplary customer service.

Despite these advantages, human healthcare teams with poor communication and a lack of coordination have been associated with negative outcomes including increased patient readmissions, higher patient mortality, and increased hospitalization time and costs.<sup>7,8,9</sup> On an individual level, dysfunctional work teams can result in job dissatisfaction and stress, leading to burnout, turnover, and reduced psychological well-being.<sup>1,10,11,12,13</sup> Studies in veterinarians have identified the same outcomes;<sup>14,15,16,17</sup> however, similar studies have not been performed with other veterinary team members.

The current thesis is the first to explore how veterinary team members regard team effectiveness, including identification of perceived advantages and barriers to working within a veterinary team. Furthermore, this thesis provides empirical evidence for two outcomes of team effectiveness: job satisfaction and burnout. While these outcomes have been researched in veterinarians, the present thesis builds upon the current research to identify the role of veterinary team effectiveness. In particular, this thesis provides evidence for the significant impact team effectiveness has on job satisfaction and burnout among veterinary team members.

Understanding the function and role of team effectiveness within veterinary medicine will help

further identify what detracts or contributes to optimal team function, ultimately benefiting patients and clients.

## **Summary of findings**

Using qualitative and quantitative research methods, this thesis explored the concept of team effectiveness within companion animal veterinary health care teams. The first part of the research was qualitative, and used focus groups of veterinarians and RVTs to explore their perceptions of the veterinary health care team. In the second part of the research, a quantitative survey instrument, using the themes and words arising from the focus group discussions, was developed to assess team effectiveness in a sample of companion animal veterinary health care teams. The impact of team effectiveness on job satisfaction and burnout was then investigated.

The qualitative research phase involved focus groups with veterinarians and RVTs, two important branches of any veterinary health care team. Participants were provided with the opportunity to share their experiences and perceptions of working in veterinary teams, allowing similarities and discrepancies to be identified and explored. In addition, participants were asked to identify factors which may enhance or detract from optimal team function. Through thematic analysis, five themes emerged from the focus group discussions including communication, toxic attitude and environment, leadership, coordination, and work engagement. Communication was found to be interwoven throughout all of the other themes. The current thesis reported on 4 of the 5 themes revealed during the focus group study: toxic attitude and environment, communication, coordination, and leadership themes.

These themes were chosen as they were extensively discussed in all of the veterinarian and RVT focus groups. Moreover, in many cases veterinarians and RVTs expressed differing perspectives

in how these topics were approached in the veterinary team environment. Finally, it was anticipated that understanding and addressing these themes would have a pronounced impact on veterinary team effectiveness.

Exploration of the toxic attitude and environment theme revealed both veterinarians and RVTs felt veterinary team members with a toxic attitude created disharmony and tension within a veterinary team. A toxic attitude could be manifest by people lacking accountability and flexibility (e.g. “that’s not my job”), or by chronically negative people. Both veterinarians and RVTs also focused on the impact of personalities on the team. There appeared to be consensus that new team members not only had to have requisite skills, but also have personalities that meshed well with the rest of the team.

In addition, the focus group study identified potential causes of a toxic environment in the clinic. Both veterinarians and RVTs found conflicting demands and unreasonable expectations often resulted in frustration leading to a toxic clinic environment. These stresses often occurred when clinics were very busy, or when there had been many changes in the clinic. A toxic environment was also felt to exist when people felt unappreciated for doing a good job, or when coworkers performing negative behaviours were not addressed. In addition, both veterinarian and RVT participants found when team members lacked confidence, skills, or knowledge it had profound negative repercussions on the team, often leading to distrust, lack of respect, and incivility.

The focus group study also provided insights into communication, leadership, and coordination in veterinary clinics. Communication was the strongest theme identified throughout the focus groups, intertwined among all other themes. Numerous participants stressed that communication was the key to team effectiveness, allowing leaders to motivate and inspire team members, as

well as manage the business aspects of veterinary practice. Participants also expressed that effective communication allowed team members to coordinate their efforts in order to provide optimal patient and client care.

While both veterinarians and RVTs recognized the importance of leadership, the RVTs focused on the consequences caused by poor leadership, and the outcomes of effective leadership, whereas the veterinarians focussed on selecting, retaining, and managing team members.

According to both veterinarians and RVTs, characteristics of effective leaders included modeling appropriate behaviours, developing goals and sharing them with team members, hiring the right team members, and delegating effectively. Effective leaders were able to provide appropriate feedback as well as receive it, manage expectations of both staff and clients, and make final decisions for the practice. Veterinarians and RVTs also felt it was crucial leaders were consistent in their messages to team members and clients.

The focus group study found coordination was a key attribute of a veterinary team, to ensure team members knew their roles and responsibilities. However, participants identified flexibility was also imperative, to address the fluid, unpredictable nature of veterinary practice. Both veterinarians and RVTs indicated coordination involved structured communication as well as organizational structure. Structured coordination, including staff meetings, midday scrums, notes about patients, and staff newsletters was particularly important when staff numbers increased as a practice grows. Organizational structure involved traditional management tools such as job descriptions and performance appraisals. Many veterinarian participants mentioned they did not feel they had adequate training in management during their formal education, and struggled with this aspect of practice.

In the second part of the research, a quantitative survey instrument using the themes and wording of the focus group participants was developed to assess team effectiveness within a random sample of companion animal veterinary health care teams. The Maslach Burnout Inventory-General Survey (MBI-GS), and a job satisfaction measure were simultaneously administered to explore the role of team effectiveness in the outcomes of job satisfaction and burnout.

Job satisfaction has been positively related to performance,<sup>18,19</sup> underlining the importance of creating and maintaining work conditions which enhance job satisfaction. Moreover, job dissatisfaction in human health care teams has been associated with increased staff turnover, reduced clinical outcomes, and suboptimal healthcare delivery.<sup>20</sup> Furthermore, since job satisfaction has been found to explain approximately 8.2 % of the variance in mental health,<sup>21</sup> it is important to address factors which may negatively affect contentment with the work environment.

Consequences of burnout in physicians include reduced workplace efficiency and productivity,<sup>12</sup> reduced patient satisfaction, and increased medical errors.<sup>22,23</sup> In human nursing, consequences of burnout include increased turnover, negative mental health outcomes, and decreased quality of care.<sup>13,24,25</sup> In veterinary medicine, while consequences of burnout have not been fully explored, a number of international studies have identified burnout as a problem for veterinarians.<sup>15,26,27,28</sup> Burnout syndrome has the potential to have a profound impact on individuals, organizations, and patients; therefore, veterinary medicine needs to develop strategies to identify and address factors contributing to burnout.

A total of 274 respondents from 48 practices participated in the cross-sectional study. The 41 item TE instrument exhibited good face, content, and construct validity. Factor analysis of the

TE instrument identified 4 latent variables representing subscales of team effectiveness: coordinated team environment; toxic environment; team engagement; and individual engagement. Along with a number of demographic variables and interaction terms, these factors were subsequently used as a construct of team effectiveness in mixed linear regression models to explore their role in job satisfaction and burnout. Clinic was included as a random effect to account for the multi-structured nature of the dataset.

While overall job satisfaction was good, veterinary technician and kennel attendant scores were lower than other team members. When controlling for random effects and significant demographic variables, mixed linear regression indicated individual engagement increased job satisfaction, while the presence of a toxic environment decreased it. Full-time workers were less satisfied than part-time workers, and that while job satisfaction increased with tenure at the practice, it decreased with years in veterinary medicine overall. Previous research suggests high stress levels can be allayed by high job satisfaction and high authority.<sup>29,30</sup> These findings suggest that if the team environment is positive, workers are more satisfied and are more likely to stay with the practice, even if they find some aspects of the job stressful. Thus, practice managers and owners could solicit feedback about the work environment from team members, and address potential problem areas. If workload has been identified as an issue, they could also consider offering more opportunities for workers to work part-time, or to increase staffing levels during busy times.

A large proportion of veterinary personnel were considered at high risk of burnout as assessed by two of the three dimensions of the MBI-GS. Almost a quarter of participants were in the high risk category for exhaustion and cynicism. In contrast, the risk of burnout associated with the third dimension, professional efficacy was found to be quite low, with over 70% of veterinary

personnel scoring in the low risk category. Given the pronounced impact burnout has on individuals and organizations, it behooves veterinary medicine to scrutinize factors contributing to exhaustion, cynicism, and decreased professional efficacy.

In the current study, mixed linear regression models indicated a toxic environment and individual engagement were the team effectiveness factors influencing exhaustion. In addition to a toxic environment and individual engagement, a coordinated team environment also influenced cynicism scores. For the professional efficacy model, a coordinated team environment and individual engagement were the significant team effectiveness factors. Other variables in the exhaustion model suggested full-time vs. part-time status also influenced burnout scores. For cynicism, other variables controlled for in the model were interactions of age\*tenure, tenure\*years in veterinary medicine, and tenure\*full-time vs. part-time status. In addition to the team effectiveness factors, the professional efficacy model included age, tenure, age\*full-time vs. part-time status, and tenure\*full-time vs. part-time status, tenure.

The findings from the quantitative study support the importance of creating and maintaining a positive clinic environment to enhance individual engagement, thus addressing factors contributing to a toxic environment. Ensuring a coordinated team environment is present may help reduce the likelihood of cynicism and improve professional efficacy.

One of the strengths of this thesis is the congruence of information from the focus groups, surveys, and research findings from other health care teams. Since triangulation of information from several sources is the best way to establish validity<sup>31</sup>, this thesis illustrates that team effectiveness has a pronounced influence on job satisfaction and burnout.

## **Limitations**

As with all research methodologies, there are limitations to the methods used in the current thesis. As with all qualitative research the intention is not to extrapolate the findings to a broader population. Rather, the focus group study included in the current study provided an opportunity for participants to share their perspectives and attitudes about team effectiveness, and was particularly useful to explore a topic not previously researched. Participants were volunteers from a limited geographic area, and represented only two of the employee groups that exist within a veterinary team. Therefore, readers should be careful in extrapolating the findings from this research to other populations. Results should only be applied to other populations after a comparison of the context in which the data was obtained, and the context in which the findings are to be applied is done to ensure the populations are similar enough to warrant extrapolation.

The quantitative study involved only companion animal practices; future research should examine mixed and food animal practices to further establish the reliability and validity of the instruments used in other types of veterinary teams. As with the focus group study, the quantitative study population was drawn from a restricted geographical area in South-Western Ontario, which may not be reflective of other areas of the province or other countries. Future studies should assess team effectiveness, job satisfaction, and burnout from a broader population of teams in veterinary medicine.

## **Key recommendations**

A number of key recommendations can be drawn from the findings of this thesis:

- Veterinary clinic owners and managers should consider evaluating the level of communication and conflict resolution skills in their clinics, and explore the need for additional training for themselves and their staff.
- Veterinary clinic owners should reflect on their vision and goals for their practices, and review strategies to share these with their veterinary teams.
- Veterinary clinic owners and managers should consider assessing their practice management skills, particularly in terms of human resource management, to determine whether additional training is required.
- Veterinary clinic owners and managers should regularly solicit input from their team members to explore their perspectives on ways the team could more effectively deliver exemplary patient care and outstanding customer service to their clients.
- Veterinary clinic owners and managers should evaluate the level of team effectiveness in their practices, and address areas requiring improvement.
- Veterinary clinic owners and managers should investigate levels of job satisfaction and burnout in team members, and explore factors contributing to dissatisfaction and burnout.
- Given the high proportion of veterinary team members at high risk of burnout, educational institutions as well as professional associations should investigate strategies to teach students and graduates coping and self-efficacy skills.
- The veterinary profession should continue to research veterinary teams, to enhance the existing empirical research in this area.

## **Future directions for research**

Since the current study was limited to small animal practices, additional studies investigating the performance of the TE survey in other veterinary practices (i.e. food animal, mixed, specialty practices, etc.) would provide additional insights into factors affecting veterinary teams.

Expanding the sample population nationally or internationally would further elucidate our understanding of effective veterinary teams.

In the development of the TE instrument, TE was positively correlated with relational coordination. Several studies have looked at primary care transformations to improve relational coordination in health care teams;<sup>32,33,34</sup> additional research extrapolating these innovations into veterinary teams would help bolster the importance of mutual respect, shared goals, and knowledge of each other's work. Longitudinal studies to determine the effect of interventions on both relational coordination and team effectiveness would also add to the current knowledge base.

While the current thesis investigated job satisfaction and burnout, future research efforts could focus on the impact of team effectiveness on other outcomes at the clinic level, including turnover, profitability, compassion fatigue, client satisfaction, client adherence, and medical errors. While these outcomes have been investigated in human health care teams, to date veterinary medicine lacks empirical research in these areas. These outcomes have profound implications for practices including financial outcomes, which should provide additional incentive for the management of veterinary practices to develop the team environment in their clinics.

To the author's knowledge, the present thesis is the first to explore the veterinary health care team concept through a combination of qualitative and quantitative research methods. The results of this study will serve as a baseline for further research on veterinary team function.

Furthermore, this study examines the relationship between team effectiveness and two important individual and organizational outcomes: job satisfaction and burnout. Given the high proportion of individuals at high risk of burnout in veterinary practice, attention should be paid to factors contributing to burnout and dissatisfaction. In particular, the TE instrument may be used in pre- and post-intervention studies to see if overall team measures of team effectiveness can be improved through education and training, resulting in improved outcomes for veterinary teams, patients, and clients.

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## **Appendix A**

### **Registered Veterinary Technician (RVT) focus groups**

- A.1 Recruitment letter sent through OAVT**
- A.2 OAVT Recruitment follow up letter**
- A.3 Consent to participate in research-RVT focus group consent form**
- A.4 RVT focus groups discussion guide**
- A.5 RVT participant demographic questionnaire**
- A.6 RVT participant thank you letter**



ONTARIO VETERINARY COLLEGE

**Department of Population Medicine**

April 27, 2009

Dear O.A.V.T. Member:

This letter is to invite you to be part of a research project conducted by Drs. Jason Coe and Irene Moore from the Ontario Veterinary College. As part of a larger research study looking at the impact of veterinary team communication on patient outcomes, a series of focus groups have been designed to explore Registered Veterinary Technicians' perspectives of the veterinary team concept. These focus groups will provide an opportunity to discuss ideas, experiences and perceptions in a small group setting. We would greatly appreciate your involvement in this important aspect of the study. A series of focus groups involving veterinarians will also be conducted.

More specifically, we are hoping you would be willing to commit one evening to a group discussion with five to ten other Registered Veterinary Technicians about your perceptions of the health care team, including identifying factors which may enhance or detract from optimal team function. In order to try to accommodate your schedule, separate group discussions are being held at the Holiday Inn Mississauga Toronto West on Thursday May 14<sup>th</sup> or Wednesday, May 21<sup>st</sup>, or the Holiday Inn Kitchener Waterloo on Tuesday, May 12<sup>th</sup>, or Thursday, May 21<sup>st</sup> beginning at 6:00 pm. Again, we are only asking you to commit to one of these evenings. The discussion will run for approximately two hours with a complimentary meal provided. As a token of our appreciation and to help cover some of the costs you may have incurred to participate, each participant will receive a \$40 honorarium at the end of the evening.

This research project has been reviewed and received clearance by the University of Guelph Research Ethics Board. Any information pertaining to you or comments you make during the group discussion will be kept strictly confidential, although verbatim quotes may be used for publications or presentations. If you agree to participate in this study you have the option of withdrawing at any point without consequence.

We recognize that you are very busy, thus we hope that by asking for a commitment of only one evening we can minimize the disruptions, burden, or inconvenience your participation may cause to your life. We believe that this research will make an important contribution to our understanding of veterinary team communication and a valuable contribution to our overall research project. We hope that you, as a Registered Veterinary Technician, will also be able to take something away from this experience.

If you are willing to participate in the focus groups, we would like you to contact Dr. Moore at (519) 674-1666 or [imoore@ridgetownc.uoguelph.ca](mailto:imoore@ridgetownc.uoguelph.ca). She will then follow up within a few weeks with a phone call in order to arrange a convenient time to discuss the project in more detail and answer any questions you may have.

Thank you for taking the time to consider this request. We are looking forward to the prospect of working with you in the near future.

Sincerely,

Jason B Coe, DVM, PhD

Assistant Professor

Department of Population Medicine

Irene Moore, DVM, B.Sc.(Agr.)

MSc Candidate

Department of Population Medicine

## PLEASE NOTE CHANGE IN FOCUS GROUP DATES

May 20, 2009

Dear O.A.V.T. Member:

Several weeks ago, you received a letter from the OAVT office, as well as one from Dr. Jason Coe and me. We are conducting a research project looking at veterinary team communication. As indicated earlier, we will be conducting a number of focus groups with R.V.T.'s, and other focus groups with veterinarians. The OAVT agreed to collaborate with us to recruit O.A.V.T. members for the focus groups. We are following up with a reminder to let you know we are still looking for participants for the focus groups. The focus groups are designed to explore the perspectives of veterinary technicians on their perceived roles within the companion animal veterinary team. In order to try to accommodate your schedule, separate group discussions are being held at the Holiday Inn Mississauga Toronto West on Tuesday, June 9<sup>th</sup> or Thursday, June 18<sup>th</sup>, or the Holiday Inn Kitchener Waterloo on Wednesday, June 10<sup>th</sup> or Tuesday, June 16<sup>th</sup> beginning at 6:00 pm. **(NOTE THE DATE CHANGES FROM THE INITIAL REQUEST.)** Again, we are only asking you to commit to one of these evenings. The discussion will run for approximately two hours with a complimentary meal provided. As a token of our appreciation and to help cover some of the costs you may have incurred to participate, each participant will receive a \$40 honorarium at the end of the evening.

If you are interested in participating, please contact me as soon as possible. You may reach me directly by email ([imoore@ridgetownc.uoguelph.ca](mailto:imoore@ridgetownc.uoguelph.ca)) or phone (519-674-1666). We feel the findings of this study will be beneficial to OAVT members to help identify characteristics of effective teams as well as potential challenges to team function. We hope that you will consider being involved in this very important research study.

Sincerely,

Dr. Irene Moore

M.Sc. Candidate



ONTARIO VETERINARY COLLEGE

Department of Population Medicine

### **CONSENT TO PARTICIPATE IN RESEARCH**

#### **Veterinary Team Communication: Exploring Veterinarians' and Veterinary Technicians' Perceptions of the Companion Animal Veterinary Team**

##### **Registered Veterinary Technician Focus Group Participant**

You are asked to participate in a research study conducted by Dr. Jason Coe, DVM, PhD from the Department of Population Medicine at the University of Guelph and Dr. Irene Moore, DVM from the Ridgetown Campus, University of Guelph. The results of this study will contribute to Dr Moore's MSc thesis. If you have any questions or concerns, please feel free to contact Dr. Jason Coe at 519-824-4120 Ext. 54010 or Dr. Irene Moore at 519-674-1666.

#### **PURPOSE OF THE STUDY**

1. To explore the veterinarian and veterinary technician perspective on the veterinary team concept.
2. To hear from veterinarians and veterinary technicians about their perceived roles in the veterinary health care team, as well as that of other team members.
3. To identify factors which may enhance or detract from optimal veterinary team function.

Information gathered during this study may be used for publication as well as to develop best practice veterinary team guidelines. It may also be used in directing future research projects.

#### **PROCEDURES**

Focus group participants will participate in a group discussion with 5-10 other veterinarians to investigate their perspectives of the veterinary team concept, including identifying factors which may enhance or detract from optimal team function. They will also explore their perception of the veterinarian's and veterinary technicians's role within the veterinary team. The discussion will take about two hours and will be audio recorded so that the researchers will have a record of the discussion to refer to in the future.

#### **POTENTIAL RISKS**

There is a potential risk of self-consciousness or embarrassment associated with participating in this form of discussion with your peers. Every effort will be made to ensure the confidentiality of participants in connection with this study.

#### **HONORARIUM FOR PARTICIPATION**

Participants will receive a \$40 honorarium and dinner for completing the session.

## **CONFIDENTIALITY**

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study. During the discussion group, you will be asked to share your first name only. When the audio recording is transcribed all participant identifiers will be removed in order to maintain confidentiality. The audio recording of the session will be stored in a secure location at the University of Guelph for seven years. A transcriber, bound by a confidentiality agreement, will be hired and have access to the audio recordings collected in conjunction with this study in order to produce verbatim transcripts of the interviews. Otherwise, access to the audio recordings will be limited to our research team at the University of Guelph.

In signing this consent form you agree to keep everything pertaining to this group strictly confidential, including the identity and comments of other members participating in the group. Any findings released from the outcome of this study will not be directly linked to any of the project participants. In signing this consent you are aware and agreeable to the use of non-identifying verbatim quotes in published materials and presentations.

## **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

## **RIGHTS OF RESEARCH PARTICIPANTS**

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Officer	Telephone: (519) 824-4120, ext. 56606
University of Guelph	E-mail: <a href="mailto:sauld@uoguelph.ca">sauld@uoguelph.ca</a>
Reynolds Building, Room 203	Fax: (519) 821-5236
Guelph, ON N1G 2W1	

**SIGNATURE OF RESEARCH PARTICIPANT**

I have read the information provided for the study “Veterinary Team Communication: Exploring Veterinarians’ and Veterinary Technicians’ Perceptions of the Companion Animal Veterinary Team – Veterinarian Focus Groups Participant” described herein. My questions have been answered to my satisfaction, I understand the discussion will be audio recorded and I agree to participate in this study with the assurance that my identity on written materials and audio recordings will remain completely confidential. However, I agree to the use of verbatim quotes in any published materials and presentations as long as my identity remains protected. I have been given a copy of this form.

\_\_\_\_\_  
Name of Participant (Please print)

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

**SIGNATURE OF WITNESS**

\_\_\_\_\_  
Name of Witness (Please print)

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Date

## REGISTERED VETERINARY TECHNICIAN FOCUS GROUP - DISCUSSION GUIDE

(Turn on the recorder)

**Introduction** (5 minutes; begins 6:00; Moderator)

- Hello and welcome.
- Thank you for taking the time to join our discussion exploring Registered Veterinary Technician's perspectives of the veterinary health care team concept.
- My name is TBA
  - I am a professional moderator with experience running a number of focus groups
  - I am currently working on my PhD in Psychology
- This is Student TBA
  - He/she is a \_\_\_\_ year veterinary student that will be helping with the session this evening
  - During the discussion today, our role here is to:
    - ask questions,
    - listen,
    - keep the conversation moving,
    - and get everyone involved.
- The discussion that we will have today is part of a larger research project looking at veterinary team communication. This phase of the project has been funded by TBA.
  - We want to hear:
    - what your thoughts are on the concept of the veterinary health care team
    - factors which you feel enhance team function
    - and some of the challenges that can be faced as a Registered Veterinary Technician while interacting with coworkers and employees
  - This information will be used
    - to develop a greater understanding of the common interactions taking place amongst different members of the veterinary healthcare team
    - to develop best practice team guidelines, as well as to set the stage for future quantitative research examining the impact of team communication on patient care and employee satisfaction.
  - Everyone here is a Registered Veterinary Technician and has experience interacting within a veterinary health care team.
    - so we are particularly interested in hearing your thoughts pertaining to your perceived role in the veterinary team, as well as your thoughts on the role of other members of the veterinary team
    - including some of the challenges you've faced during interactions with other team members.
- As you can see, there is a microphone set up to record our conversation.
  - So while we are talking, please speak up so that we can catch all of your valuable comments.
  - But it is important for you to know that your names will not be attached to any comments in our report
    - so you are assured confidentiality.
- In keeping with respect for confidentiality,
  - Please protect the identity of clients, veterinarians, veterinary technicians or veterinary clinics in this discussion by not using their names during our discussion.
  - Also, please do not repeat what people have said here to others outside of this group.
    - Because we want everyone to feel comfortable sharing their thoughts and feelings.
- It's important to hear from each of you because you each have different experiences and opinions.
  - Everyone participates in different ways.
    - Some are quiet, others are more talkative.

- So we're going to be making sure that everyone has an equal opportunity to speak.
  - If we have to cut you off at some point it is for the sake of time.
  - Please don't feel that we're not interested in what you have to say.
- And it's okay to disagree with each other
  - and, in fact, hearing everyone's opinions will add value to our discussion and provide an opportunity to share thoughts and perspectives.
  - there are no right or wrong answers and please remember that what works in one context may not work in another and so we expect to see different points of view. We just ask that everyone keep an open mind towards other people's perspectives.
    - But we are going to ask that only one person speak at a time.
- I'm also going to keep an eye on the time to make sure we get to cover all the important topics.
  - We have about two hours and there are a number of different topics that we'd like to discuss.
- Please know that you have the option of withdrawing from this study at any time.
  - If you need to leave for any reason
    - please do so quietly
    - and just let STUDENT TBA know.
- Also, if you're not on call we would ask that you please turn off your cell phones or pagers so that they do not interrupt our discussion.
- Toward the end of the session we will begin serving dinner and then handing out the honorariums
- In the mean time, please help yourself to coffee and tea.
- Any questions?
- OK, let's begin.

**Icebreaker** (5 minutes; begins 6:05; Moderator TBA)

- Let's start by going around the table and introducing ourselves.
  - Tell us your name
  - where you grew up
  - what your first very first job was
- So I will start:
  - My name is TBA
  - Information TBA.
- (to go last).....
- My name is Student TBA
  - Information TBA

## Identifying Best Aspects of a Team

### **Individuals Write Down Best Aspects of a Team** (5 Minutes; begins 6:10; Moderator)

We've all been on various teams, whether they be work-related or not, that are fun to be on, and are very effective. Let's kick off the discussion by thinking about what makes a great team

Prompts:

- Think of a team you've been on that has functioned well – it could have been a work-related, volunteer-related, or sports-related team – basically any type of team you've been on that has functioned well
- Now take a minute and think about what it was exactly, characteristics of that team that allowed it to function well?

Now, using the paper in front of you - what I would like everyone to do is write down what you believe are all the characteristics of an effective team. Using your experience as a basis for thinking about what makes a successful teams and what are the characteristics that make such a team function well.

- You can include as many items in this list as you'd like.

*(Student hands out Best Aspects of Team sheet.)*

*(Give them a few minutes to write things down.)*

### **Individuals Tell Best Aspects of their Teams** (15 minutes; begins 6:15; Moderator)

Now let's start by going around the room and having each person tell us one characteristic off their list that has contributed to the effectiveness of a team you have been a part of. Then after we've been around the room once we'll go back and fill in any other characteristics of an effective team that we haven't covered.

- If someone has already mentioned something you have written down, you don't need to say it again—feel free to contribute your thoughts at the time it is discussed – then we can skip it and go on to the next item on your list.

As you are talking, Student TBA will write down the things you say on the flip chart, so everyone can keep track of what's been said.

*(Student writes items on flip chart.)*

Probes:

- *How does that contribute to the functioning of an effective team?*
- *What makes that an important part of a high functioning team?*
- *Does this apply to the functioning of every team?*
- *Does this apply to veterinary teams? (How? To what effect?)*

Stepping back and looking at all of these items, can you think of anything else that we should include that contributes to effectively functioning team that we haven't mentioned so far?

*(Ask them to pass back the Best Aspects sheet.)*

### **Veterinary Health Care Team Concept and Identification of Registered Veterinary Technician's Role on Team** (15 minutes; begins 6:30; Moderator)

Let's now turn to the veterinary health care team. I'd like to take a few minutes and have you think about the veterinary practice you are currently working in:

- How do you see your role as part of the veterinary health care team?

Please take out the diagram that you prepared ahead of time to illustrate how you fit within the veterinary health care team.

Using the diagram please tell us about the role you currently see yourself having in your practice.

Prompts:

- What are your responsibilities in this role?
- What involvement do you have in your role with other members of the practice team?
- How does your role contribute to or fit into the functioning of your practice team?

Probes:

- As a Registered Veterinary Technician is the role different for non-registered technicians?
- As a Registered Veterinary Technician is the role different for veterinary assistants?
- Do you think this is a common role/ experience among Registered Veterinary Technicians in practice?
- Do you think other members of the team perceive a Registered Veterinary Technician's role in this same way?

*(Student adds items to flipchart.)*

### **Identification of Other Team Members' Roles** (15 Minutes; Begins 6:45; Moderator)

Okay, now let's switch directions and have you think about the roles of the other members of the veterinary team in the practice you are currently working in:

Looking at the Venn diagram you drew - how do you see the role of others within members of your practice team?

To give us a focus- why don't we start with the roles of veterinarians:

Prompts:

- What are the roles of veterinarians within your current practice team?
- Are they different for associate vs. owner veterinarians?
- Is there a clear definition of which duties are to be performed by veterinarians vs. by R.V.T.'s in your practice?
- How does this contribute to the effectiveness of your practice?
- What relationship do veterinarians have with you? Other members of the team?

Probes:

- How does that role contribute to the overall effectiveness of your practice?
- Is that the appropriate role for a veterinarian? Why or why not?
- Are there tasks that would be more appropriately done by veterinary technicians? Others that you are doing that should be done by veterinarians?

What about the other members of your practice team?

Prompts:

- Who are the other team members within your current practice team?
- What role do they have within your practice team?
- How do they contribute to the effectiveness of your practice?

Probes:

- How does that contribute to the overall effectiveness of your practice?
- Should that be the role of that team member? Why or why not?

- Are there areas where this member should be used more? Areas used less?

*(Student adds items.)*

Looking back at all we have identified and discussed are we missing any members of the veterinary team? Are we missing any aspect of the team that we need to discuss further?

### **Team Challenges** (15 Minutes; Begins 7:00; Moderator)

Now that we've talked about some of the characteristics of an effective team as well as the different roles within a veterinary team, we would like to spend some time identifying and discussing some of the challenges and/ or breakdowns that you have experienced as being part of a veterinary team irrespective of when or where it was.

What we would like you to do is take a minute and try to think about some of the challenges and/ or barriers you experience with other members of the veterinary team – this could be veterinarians, other technicians, front office staff - anyone. The purpose here is to identify some of the challenges you experience that maybe impacting upon the functioning of the veterinary team so that we can begin to work toward overcoming common challenges to the effectiveness of practice teams as a whole.

Prompts:

- Think about some of the challenges you experience interacting with other members of the veterinary team?
- Who are those challenges with?
- What are the challenges?

Probes:

- What do you feel is the underlying cause?
- How does this affect the overall team? The client? The veterinary patient?
- Is this a common challenge/ barrier in veterinary practice?
- How could this be improved?

### **Individuals Complete Demographics Sheet** (10 Minutes; Begins 7:15; Moderator)

The final thing we are going to ask of you as part of the focus group tonight is to fill out the brief questionnaire being handed out by TBA. .

- The information on this questionnaire is important to us because it will help us keep track of who took part in the discussion.

However, just like our discussion, all your answers will be confidential and we won't share any personal information with anyone else.

*(Student collects the completed form.)*

### **Summary** (10 Minutes; begins 7:25 or as 1<sup>st</sup> course is served; Moderator)

We've now covered all the main topics for this discussion.

I'm going to summarise the key points that have been made and then I'll ask you to let me know if I've left anything out.

- To start, we talked about the best and worst teams that we've been on, as well as several things that enhance or detract from team function—the items that we've written out on the flip chart.
  - These included things like, XXX, XXX, etc.
- Then we talked about the concept of the veterinary health care team, and the role of each of the members on it.
  - From what you've said...
- 
- Finally, we talked about factors that enhance team function, as well as some of the challenges that you've faced when dealing with coworkers.

Would you say that this is a good summary of the key things that we have talked about today?

Is there anything else that you can think of? Have we overlooked anything?

*(Student collects the completed demographics sheet)*

*(Student hands out honorariums at the end of the evening.)*



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

Date: \_\_\_\_\_

**Veterinary Technician Demographic Information**

Please complete the following demographic information form. All responses will be kept confidential and anonymous.

1. I am: Female \_\_\_\_\_ Male \_\_\_\_\_.
2. I am \_\_\_\_\_ years old.
3. I've been a veterinary technician for \_\_\_\_\_ year(s).
4. I received my veterinary training from (which college)  
\_\_\_\_\_.
5. I'm currently working: Full Time \_\_\_\_\_; Part Time \_\_\_\_\_
6. The practice I work in is strictly small animal: \_\_\_ yes; \_\_\_ no
7. If no, what percentage of the practice is small animal: \_\_\_\_\_.
8. How many veterinarians work in your practice: \_\_\_ full time; \_\_\_ part time
9. How many Registered Veterinary Technicians work in your practice: \_\_\_ full time; \_\_\_ part- time.
10. Please indicate whether or not **you** (you personally) have hospital management duties in your practice: \_\_\_ yes; \_\_\_ no
11. Please indicate if your practice has an assigned hospital management position (ie, that does not perform technician or receptionist duties): \_\_\_ yes; \_\_\_ no
12. Please indicate the duties that the hospital manager performs in your practice (ie. Personnel management, scheduling, client relations, accounts payable and receivable, etc.)

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13. Please indicate whether or not your practice has receptionists that do not have technician duties: \_\_\_\_ yes; \_\_\_\_ no

14. Do veterinary technicians in your practice perform table-side appointments with clients? \_\_\_\_ yes; \_\_\_\_ no

15. If yes, please describe the duties of the technicians during these appointments: (ie. TPR, taking history, initial physical exam, etc. )

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16. Please indicate the price your clinic charges for each of these elective procedures, as well as the number of each that would be performed weekly in your practice

<b>Procedure</b>	<b>Cost</b>	<b>Number per week</b>
Office visit		
Canine Spay		
Canine Neuter		
Feline Spay		
Feline Neuter		
Dental Prophylaxis (Canine) (average without extractions)		
Dental Prophylaxis (Feline) (average without extractions)		

17. Who routinely discusses financial information (including quotes) with clients in your practice? \_\_\_\_ vet; \_\_\_\_ vet tech; \_\_\_\_\_ other (please specify).

The next part of the survey is a “Practice Self-Assessment” modified from one in Dr. Carin A. Smith’s book, “Team Satisfaction Pays”.

Please rate your agreement with the following statements, using a scale of 1-4, with:

1 No

2 Often Not

3 Often Yes

4 Yes

*In this practice, I personally:*

Have a clear vision for my own job/career 1 2 3 4

Am aware of and uphold the hospital's vision and mission 1 2 3 4

Have a clear job description: I know what to do and the priorities 1 2 3 4

Have a clear idea of what other are supposed to do, and their priorities 1 2 3 4

Am able to deal with interpersonal conflict without long-term discontent 1 2 3 4

Know how I am doing, in terms of what I do well 1 2 3 4

Know how I am doing, in terms of what needs improvement 1 2 3 4

I am recognized for my efforts 1 2 3 4

I am making the best possible use of my talents and skills 1 2 3 4

The work I do is important and valued 1 2 3 4

I feel everyone is treated fairly and consistently 1 2 3 4

I feel comfortable speaking up when my view differs from others 1 2 3 4

I feel comfortable speaking up when I have a question 1 2 3 4

I feel that my ideas and contributions are invited and acknowledged 1 2 3 4

I enjoy coming to work: I'm glad I work here 1 2 3 4

*In our hospital overall, we:*

Share a clear vision about "who we are and why we're here" 1 2 3 4

Full utilize each team member's expertise ensure that every person is continually learning  
1 2 3 4

Pinch in and help each other 1 2 3 4

Treat each other with respect 1 2 3 4

Hold regular team meetings where things get done 1 2 3 4

Please feel free to share any other comments regarding your experience this evening:

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ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

June, 2009

Dear Participant:

I would like to thank you for your involvement in tonight's group discussion pertaining to your perceptions of the veterinary health care team, including identifying factors which may enhance or detract from optimal team function.

Please find enclosed with this letter a forty dollar honorarium offered as a token of our appreciation and to help cover any costs you may have incurred by participating tonight. It is anticipated the results of the focus group discussions will be written up as a research paper as well as presented at conferences. To find out more about the results, you may also contact me at (519) 674-1666 or at [imoore@ridgetown.uoguelph.ca](mailto:imoore@ridgetown.uoguelph.ca) .

This study has been funded by and has received funding from Medi-Cal/Royal Canin Veterinary Diets and we would like to thank them for their contribution.

Thank you again for your participation.

Sincerely,

Irene Moore, DVM  
Project Coordinator

## **Appendix B**

### **Veterinarian focus groups**

- B.1 Veterinarian recruitment letter of introduction**
- B.2 Veterinarian recruitment follow-up phone script**
- B.3 Consent to participate in research-Veterinarian focus group consent form**
- B.4 Veterinarian focus groups discussion guide**
- B.5 Veterinarian participant demographic questionnaire**
- B.6 Veterinarian participant thank you letter**



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

DATE TBA

Dear Dr.

This letter is to invite you to be part of a research project conducted by Drs. Jason Coe and Irene Moore from the Ontario Veterinary College. As part of a larger research study looking at the impact of veterinary team communication on patient outcomes, a series of focus groups have been designed to explore veterinarians' perspectives of the veterinary team concept. These focus groups will provide an opportunity to discuss ideas, experiences and perceptions in a small group setting. We would greatly appreciate your involvement in this important aspect of the study. A series of focus groups involving veterinary technicians will also be conducted.

More specifically, we are hoping you would be willing to commit one evening to a group discussion with five to ten other veterinarians about your perceptions of the health care team, including identifying factors which may enhance or detract from optimal team function. In order to try to accommodate your schedule, separate group discussions are being held at the LOCATION TBA on DATES TBA beginning at 6:00 pm. Again, we are only asking you to commit to one of these evenings. The discussion will run for approximately two hours with a complimentary dinner provided. As a token of our appreciation and to help cover some of the costs you may have incurred to participate, each participant will receive a \$40 (TBA) dollar honorarium at the end of the evening.

This research project has been reviewed and received clearance by the University of Guelph Research Ethics Board. Any information pertaining to you or comments you make during the group discussion will be kept strictly confidential. If you agree to participate in this study you have the option of withdrawing at any point without consequence.

We recognize that you, as a veterinarian, are very busy and that life in practice can instantaneously become very hectic. Therefore, we hope that by asking for a commitment of only one evening we can minimize the disruptions, burden, or inconvenience your participation may cause to your practice and/or life. We believe that this research will make an important contribution to our understanding of veterinary team communication and a valuable contribution to our overall research project. We hope that you, as a private practitioner, will also be able to take something away from this experience.

Over the next two weeks Dr. Moore will be following up this letter with a phone call in order to arrange a convenient time to discuss the project in more detail and answer any questions you may have. If you have any immediate questions please feel free to contact Dr. Moore at (519) 674-1666 or [imoore@ridgetownc.uoguelph.ca](mailto:imoore@ridgetownc.uoguelph.ca).

Thank you for taking the time to consider this request. We are looking forward to the prospect of working with you in the near future.

Sincerely,

Jason B Coe, DVM, PhD  
Assistant Professor  
Department of Population Medicine

Irene Moore, DVM, B.Sc.(Agr.)  
MSc Candidate  
Department of Population Medicine

## **RECRUITMENT SCREENER (FOR VETERINARIANS)**

### Contacting the participant

Hello, May I please speak to [Dr. Surname]

Hello [Dr. Surname] how are you today?

### Explaining the project

My name is Dr. Irene Moore, and I'm calling from the Ridgetown Campus, University of Guelph.

You are being contacted in order to find out more about being in a focus group which is part of a research project being conducted by the Ontario Veterinary College on veterinary team communication. We are trying to understand veterinarian's perspectives on the veterinary health care team concept. So we're putting together focus groups of veterinarians so that we can hear your thoughts. We will be conducting separate focus groups with veterinary technicians.

Can I tell you a little more about this?

We're especially interested in finding out what makes your interactions with the veterinary team satisfying or not so satisfying, as well your ideas as to how team function can affect patient outcomes. So it would be discussion on topics like this that you would be participating in. It will only be one meeting and it will last about two hours. We won't try to sell you anything or talk you into doing anything else. Does this sound like it would work for you?

This focus group would be a group session, involving you and a few other veterinarians. As I mentioned, the focus group discussion would last about two hours and will be followed by a three course meal. We will also give you a \$40 honorarium at the end of the session, to help cover any costs incurred by your participation.

First the session that we're setting up is on [day, date] at [location] at [time]. Is this something that would fit into your schedule?

If no, thank them for their time and ask if they would mind answering a few questions:

### Demographic Information from Non-Participants:

Do you mind if I ask a few more questions to collect some demographic information?

First, how many years have you been in practice?

Secondly, what percentage of your practice is small animal?

Are you currently employed? (If on maternity leave, sick leave, or retired, thank them for their time and end call.) Are you an owner or an associate? How long have you been at the practice? Are there any other veterinarians working at your practice? How many?

Please indicate how many people are employed at your practice. How many are registered veterinary technicians? Who are the other members of your health care team?

If they do agree to participate, continue with:

### Screening Participants

If it would be alright I would like to ask you a few questions at this time.

As you likely know, we are trying to get a number of people with different experiences for the focus groups and I just want to see how you might fit.

First, what percentage of your practice is small animal? (If not 100% small animal, thank them for their time and end call.)

Are you currently employed? (If on maternity leave, sick leave, or retired, thank them for their time and end call.) Are you an owner or an associate? How long have you been at the practice? Are there any other veterinarians working at your practice? How many?

Please indicate how many people are employed at your practice. How many are registered veterinary technicians? Who are the other members of your health care team?

Thank you so much for taking the time to answer these questions!

If the need for the participant is questionable or not required – Thank them for their time, explain that the information they have provided has been extremely valuable, inform them that at this time the project is under development and that we maybe contacting them in the future regarding participation. Again, thank them for their time and state how important their contribution has been. Otherwise continue with:

### Scheduling the session.

So the session would be at [location] on [date]. We will start at [time] and end by [ ] with a light meal. If I do put your name down it is very important that we have everyone show up. Do you think you can come?

It is also very important that we start on time. Will you have any problem getting there by [ ]?

Again, we will be paying you a \$40 honorarium at the completion of the session. We will also be serving a light meal. Do you have any food allergies or special requirements?

OK--so the group will consist of seven to nine other veterinarians and the discussion topic will be your perspectives of the veterinary team concept. I should tell you that we will be tape recording the session so that we don't lose anything that was said but everything will be kept confidential. We will use verbatim quotes, but we won't use your full name in anything or identify you in any way. Is this OK?

If no end call, Thank them for their time, explain that the information they have provided has been extremely valuable, inform them that at this time the project is under development and that we maybe contacting them in the future regarding participation. Again, thank them for their time and state how important their contribution has been. Otherwise continue with:

Also, I want you to know that anything you do at the focus group session will be completely voluntary and you will be free to leave at any time for any reason.

I'd like to confirm your participation in this focus group with the details of time, place and location. Would you prefer this to be sent by mail, email, or fax?

I also need to let you know that we will be starting right on time at [ ]. So, if you arrive after we have started we may not be able to let you participate. It is very important that you get there on time or a few minutes early. There will be a light refreshment available from [ ] until we start.

We'll call you back a day or two before the group as a reminder. Is this the best phone number to use to reach you if we call on [ ]

Thank you so much. We look forward to chatting with you on [date].



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

## **CONSENT TO PARTICIPATE IN RESEARCH**

### **Veterinary Team Communication: Exploring Veterinarians' and Veterinary Technicians' Perceptions of the Companion Animal Veterinary Team**

#### **Veterinarian Focus Group Participant**

You are asked to participate in a research study conducted by Dr. Jason Coe, DVM, PhD from the Department of Population Medicine at the University of Guelph and Dr. Irene Moore, DVM from the Ridgeway Campus, University of Guelph. The results of this study will contribute to Dr Moore's MSc thesis. If you have any questions or concerns, please feel free to contact Dr. Jason Coe at 519-824-4120 Ext. 54010 or Dr. Irene Moore at 519-674-1666.

#### **PURPOSE OF THE STUDY**

4. To explore the veterinarian and veterinary technician perspective on the veterinary team concept.
5. To hear from veterinarians and veterinary technicians about their perceived roles in the veterinary health care team, as well as that of other team members.
6. To identify factors which may enhance or detract from optimal veterinary team function.

Information gathered during this study may be used for publication as well as to develop best practice veterinary team guidelines. It may also be used in directing future research projects.

#### **PROCEDURES**

Focus group participants will participate in a group discussion with 5-10 other veterinarians to investigate their perspectives of the veterinary team concept, including identifying factors which may enhance or detract from optimal team function. They will also explore their perception of the veterinarian's and veterinary technicians's role within the veterinary team. The discussion will take about two hours and will be audio recorded so that the researchers will have a record of the discussion to refer to in the future.

#### **POTENTIAL RISKS**

There is a potential risk of self-consciousness or embarrassment associated with participating in this form of discussion with your peers. Every effort will be made to ensure the confidentiality of participants in connection with this study.

#### **HONORARIUM FOR PARTICIPATION**

Participants will receive a \$40 honorarium and dinner for completing the session.

## **CONFIDENTIALITY**

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study. During the discussion group, you will be asked to share your first name only. When the audio recording is transcribed all participant identifiers will be removed in order to maintain confidentiality, although we will be using verbatim quotes in published materials and presentations. The audio recording of the session will be stored in a secure location at the University of Guelph for seven years. A transcriber, bound by a confidentiality agreement, will be hired and have access to the audio recordings collected in conjunction with this study in order to produce verbatim transcripts of the interviews. Otherwise, access to the audio recordings will be limited to our research team at the University of Guelph.

In signing this consent form you agree to keep everything pertaining to this group strictly confidential, including the identity and comments of other members participating in the group. Any findings released from the outcome of this study will not be directly linked to any of the project participants. In signing this consent you are aware and agreeable to the use of non-identifying verbatim quotes in published materials and presentations.

## **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

## **RIGHTS OF RESEARCH PARTICIPANTS**

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Officer  
University of Guelph  
Reynolds Building, Room 203  
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606  
E-mail: [sauld@uoguelph.ca](mailto:sauld@uoguelph.ca)  
Fax: (519) 821-5236

## **SIGNATURE OF RESEARCH PARTICIPANT**

I have read the information provided for the study "Veterinary Team Communication: Exploring Veterinarians' and Veterinary Technicians' Perceptions of the Companion Animal Veterinary Team – Veterinarian Focus Groups Participant" described herein. My questions have been answered to my satisfaction, I understand the discussion will be audio recorded and I agree to participate in this study with the assurance that my identity on written materials and audio recordings will remain completely confidential. However, I agree to the use of verbatim quotes in any published materials and presentations as long as my identity remains protected. I have been given a copy of this form.

\_\_\_\_\_  
Name of Participant (Please print)

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

SIGNATURE OF WITNESS

\_\_\_\_\_  
Name of Witness (Please print)

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Date

## VETERINARIAN FOCUS GROUP - DISCUSSION GUIDE

(Turn on the recorder)

**Introduction** (5 minutes; begins 6:00; Moderator)

- Hello and welcome.
- Thank you for taking the time to join our discussion exploring veterinarian's perspectives of the veterinary health care team concept.
- My name is Tanya Darisi
  - I am a professional moderator with experience running a number of focus groups
  - I am currently working on my PhD in Psychology
- This is Student Jen Robertson
  - She is a 3<sup>rd</sup> year veterinary student that will be helping with the session this evening
  - During the discussion today, our role here is to:
    - ask questions,
    - listen,
    - keep the conversation moving,
    - and get everyone involved.
- The discussion that we will have today is part of a larger research project looking at veterinary team communication. This phase of the project has been funded by TBA.
  - We want to hear:
    - what your thoughts are on the concept of the veterinary health care team
    - factors which you feel enhance team function
    - and some of the challenges that can be faced as a veterinarian while interacting with coworkers and employees
  - This information will be used
    - to develop a greater understanding of the common interactions taking place among different members of the veterinary healthcare team
    - to develop best practice team guidelines, as well as to set the stage for future quantitative research examining the impact of team communication on patient care and employee satisfaction.
  - Everyone here is a practicing small animal veterinarian and has experience interacting within a veterinary health care team.
    - so we are particularly interested in hearing your thoughts pertaining to your perceived role in the veterinary team, as well as your thoughts on the role of other members of the veterinary team
    - including some of the challenges you've faced during interactions with other team members.
- As you can see, there is a microphone set up to record our conversation.
  - So while we are talking, please speak up so that we can catch all of your valuable comments.
  - But it is important for you to know that your names will not be attached to any comments in our report
    - so you are assured confidentiality.
- In keeping with respect for confidentiality,
  - Please protect the identity of clients, veterinarians, veterinary technicians or veterinary clinics in this discussion by not using their names during our discussion.
  - Also, please do not repeat what people have said here to others outside of this group.
    - Because we want everyone to feel comfortable sharing their thoughts and feelings.
- It's important to hear from each of you because you each have different experiences and opinions.
  - Everyone participates in different ways.
    - Some are quiet, others are more talkative.

- So we're going to be making sure that everyone has an equal opportunity to speak.
  - If we have to cut you off at some point it is for the sake of time.
  - Please don't feel that we're not interested in what you have to say.
- And it's okay to disagree with each other
  - and, in fact, hearing everyone's opinions will add value to our discussion and provide an opportunity to share thoughts and perspectives.
  - there are no right or wrong answers and please remember that what works in one context may not work in another and so we expect to see different points of view. We just ask that everyone keep an open mind towards other people's perspectives.
    - But we are going to ask that only one person speak at a time.
- I'm also going to keep an eye on the time to make sure we get to cover all the important topics.
  - We have about two hours and there are a number of different topics that we'd like to discuss.
- Please know that you have the option of withdrawing from this study at any time.
  - If you need to leave for any reason
    - please do so quietly
    - and just let Jen know.
- Also, if you're not on call we would ask that you please turn off your cell phones or pagers so that they do not interrupt our discussion.
- Toward the end of the session we will begin serving dinner and then handing out the honorariums
- In the mean time, please help yourself to coffee and tea.
- Any questions?
- OK, let's begin.

### **Icebreaker** (5 minutes; begins 6:05; Moderator)

- Let's start by going around the table and introducing ourselves.
  - Tell us your name
  - where you grew up
  - what your first very first job was
- So I will start:
  - My name is Tanya Darisi
  - Information TBA.
- (to go last).....
- My name is Student Jen Robertson
  - Information TBA

## Identifying Best Aspects of a Team

### **Individuals Write Down Best Aspects of a Team** (5 Minutes; begins 6:10; Moderator)

We've all been on various teams, whether they be work-related or not, that are fun to be on, and are very effective. Let's kick off the discussion by thinking about what makes a great team

Prompts:

- Think of a team you've been on that has functioned well – it could have been a work-related, volunteer-related, or sports-related team – basically any type of team you've been on that has functioned well
- Now take a minute and think about what it was exactly, characteristics of that team that allowed it to function well?

Now, using the paper in front of you - what I would like everyone to do is write down what you believe are all the characteristics of an effective team. Using your experience as a basis for thinking about what makes a successful teams and what are the characteristics that make such a team function well.

- You can include as many items in this list as you'd like.

*(Student hands out Best Aspects of Team sheet.)*

*(Give them a few minutes to write things down.)*

### **Individuals Tell Best Aspects of their Teams** (15 minutes; begins 6:15; Moderator)

Now let's start by going around the room and having each person tell us one characteristic off their list that has contributed to the effectiveness of a team you have been a part of. Then after we've been around the room once we'll go back and fill in any other characteristics of an effective team that we haven't covered.

- If someone has already mentioned something you have written down, you don't need to say it again—feel free to contribute your thoughts at the time it is discussed – then we can skip it and go on to the next item on your list.

As you are talking, Student TBA will write down the things you say on the flip chart, so everyone can keep track of what's been said.

*(Student writes items on flip chart.)*

Probes:

- *How does that contribute to the functioning of an effective team?*
- *What makes that an important part of a high functioning team?*
- *Does this apply to the functioning of every team?*
- *Does this apply to veterinary teams? (How? To what effect?)*

Stepping back and looking at all of these items, can you think of anything else that we should include that contributes to effectively functioning team that we haven't mentioned so far?

*(Ask them to pass back the Best Aspects sheet.)*

## **Veterinary Health Care Team Concept and Identification of Veterinarian's Role on Team** (15 minutes; begins 6:30; Moderator)

Let's now turn to the veterinary health care team. I'd like to take a few minutes and have you think about the veterinary practice you are currently working in:

- How do you see your role as part of the veterinary health care team?

Please take out the diagram that you prepared ahead of time to illustrate how you fit within the veterinary health care team.

Using the diagram please tell us about the role you currently see yourself having in your practice.

Prompts:

- What are your responsibilities in this role?
- What involvement do you have in your role with other members of the practice team?
- How does your role contribute to or fit into the functioning of your practice team?

Probes:

- As a veterinarian is the role different for associates vs practice owners?
- As a veterinarian is the role different for practice owners vs partners in a practice?
- Do you think this is a common role/ experience among veterinarians in practice?
- Do you think other members of the team perceive a veterinarians role in this same way?

*(Student adds items to flipchart.)*

## **Identification of Other Team Members' Roles** (15 Minutes; Begins 6:45; Moderator)

Okay, now let's switch directions and have you think about the roles of the other members of the veterinary team in the practice you are currently working in:

Looking at the Venn diagram you drew - how do you see the role of others within members of your practice team?

To give us a focus- why don't we start with the roles of veterinary technicians:

Prompts:

- What are the roles of veterinary technicians within your current practice team?
- How are veterinary technicians utilized in your current practice team?
- How does this contribute to the effectiveness of your practice?
- What relationship do veterinary technicians have with you? Other members of the team?

Probes:

- How does that role contribute to the overall effectiveness of your practice?
- Is that the appropriate role for a veterinary technician? Why or why not?
- Are there areas veterinary technicians should be used more? Areas used less?

What about the other members of your practice team?

Prompts:

- Who are the other team members within your current practice team?
- What role do they have within your practice team?
- How do they contribute to the effectiveness of your practice?

Probes:

- How does that contribute to the overall effectiveness of your practice?
- Should that be the role of that team member? Why or why not?
- Are there areas where this member should be used more? Areas used less?

*(Student adds items.)*

Looking back at all we have identified and discussed are we missing any members of the veterinary team? Are we missing any aspect of the team that we need to discuss further?

## **Team Challenges** (15 Minutes; Begins 7:00; Moderator)

Now that we've talked about some of the characteristics of an effective team as well as the different roles within a veterinary team, we would like to spend some time identifying and discussing some of the challenges and/ or breakdowns that you have experienced as being part of a veterinary team irrespective of when or where it was.

What we would like you to do is take a minute and try to think about some of the challenges and/ or barriers you experience with other members of the veterinary team – this could be other veterinarians, technicians, front office staff - anyone. The purpose here is to identify some of the challenges you experience that maybe impacting upon the functioning of the veterinary team so that we can begin to work toward overcoming common challenges to the effectiveness of practice teams as a whole.

Prompts:

- Think about some of the challenges you experience interacting with other members of the veterinary team?
- Who are those challenges with?
- What are the challenges?

Probes:

- What do you feel is the underlying cause?
- How does this affect the overall team? The client? The veterinary patient?

- Is this a common challenge/ barrier in veterinary practice?
- How could this be improved?

### **Individuals Complete Demographics Sheet** (10 Minutes; Begins 7:15; Moderator)

The final thing we are going to ask of you as part of the focus group tonight is to fill out the brief questionnaire being handed out by Jen. .

- The information on this questionnaire is important to us because it will help us keep track of who took part in the discussion.

However, just like our discussion, all your answers will be confidential and we won't share any personal information with anyone else.

*(Student collects the completed form.)*

### **Summary** (10 Minutes; begins 7:25 or as 1<sup>st</sup> course is served; Moderator)

We've now covered all the main topics for this discussion.

I'm going to summarise the key points that have been made and then I'll ask you to let me know if I've left anything out.

- To start, we talked about the best and worst teams that we've been on, as well as several things that enhance or detract from team function—the items that we've written out on the flip chart.
  - These included things like, XXX, XXX, etc.
- Then we talked about the concept of the veterinary health care team, and the role of each of the members on it.
  - From what you've said...
- Finally, we talked about factors that enhance team function, as well as some of the challenges that you've faced when dealing with coworkers.

Would you say that this is a good summary of the key things that we have talked about today?

Is there any thing else that you can think of? Have we overlooked anything?

*(Student collects the completed demographics sheet)*

*(Student hands out honorariums at the end of the evening.)*



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

Date: \_\_\_\_\_

**Veterinarian Demographic Information**

Please complete the following demographic information form. All responses will be kept confidential and anonymous.

18. I am: Female \_\_\_\_\_ Male \_\_\_\_\_.

19. I am \_\_\_\_\_ years old.

20. I've been a veterinarian for \_\_\_\_\_ year(s).

21. I received my veterinary training from (which college)

\_\_\_\_\_.

22. I'm currently working: Full Time \_\_\_\_\_; Part Time \_\_\_\_\_

23. The practice I work in is strictly small animal: \_\_\_ yes; \_\_\_ no

24. If no, what percentage of the practice is small animal: \_\_\_\_\_.

25. How many veterinarians work in your practice: \_\_\_ full time; \_\_\_ part time

26. How many Registered Veterinary Technicians work in your practice: \_\_\_ full time; \_\_\_ part-time.

27. Please indicate whether or not **you** (you personally) have hospital management duties in your practice: \_\_\_ yes; \_\_\_ no

28. Please indicate if your practice has an assigned hospital management position (ie, that does not perform technician or receptionist duties): \_\_\_ yes; \_\_\_ no

29. Please indicate the duties that the hospital manager performs in your practice (ie. Personnel management, scheduling, client relations, accounts payable and receivable, etc.)

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30. Please indicate whether or not your practice has receptionists that do not have technician duties: \_\_\_ yes; \_\_\_ no

31. Do veterinary technicians in your practice perform table-side appointments with clients?

\_\_\_ yes; \_\_\_ no

32. If yes, please describe the duties of the technicians during these appointments: (ie. TPR, taking history, initial physical exam, etc. )

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33. Please indicate the price your clinic charges for each of these elective procedures, as well as the number of each that would be performed weekly in your practice

Procedure	Cost	Number per week
Office visit		
Canine Spay		
Canine Neuter		
Feline Spay		
Feline Neuter		
Dental Prophylaxis (Canine) (average without extractions)		
Dental Prophylaxis (Feline) (average without extractions)		

34. Who routinely discusses financial information (including quotes) with clients in your practice? \_\_\_ vet; \_\_\_ vet tech; \_\_\_\_\_ other (please specify).

The next part of the survey is a “Practice Self-Assessment” modified from one in Dr. Carin A. Smith’s book, “Team Satisfaction Pays”.

Please rate your agreement with the following statements, using a scale of 1-4, with:

1 No

2 Often Not

3 Often Yes

4 Yes

*In this practice, I personally:*

Have a clear vision for my own job/career 1 2 3 4

Am aware of and uphold the hospital's vision and mission 1 2 3 4  
Have a clear job description: I know what to do and the priorities 1 2 3 4

Have a clear idea of what other are supposed to do, and their priorities 1 2 3 4  
Am able to deal with interpersonal conflict without long-term discontent 1 2 3 4  
Know how I am doing, in terms of what I do well 1 2 3 4  
Know how I am doing, in terms of what needs improvement 1 2 3 4  
I am recognized for my efforts 1 2 3 4  
I am making the best possible use of my talents and skills 1 2 3 4  
The work I do is important and valued 1 2 3 4  
I feel everyone is treated fairly and consistently 1 2 3 4  
I feel comfortable speaking up when my view differs from others 1 2 3 4  
I feel comfortable speaking up when I have a question 1 2 3 4  
I feel that my ideas and contributions are invited and acknowledged 1 2 3 4  
I enjoy coming to work: I'm glad I work here 1 2 3 4

*In our hospital overall, we:*

Share a clear vision about "who we are and why we're here" 1 2 3 4  
Full utilize each team member's expertise ensure that every person is continually learning  
1 2 3 4  
Pinch in and help each other 1 2 3 4  
Treat each other with respect 1 2 3 4  
Hold regular team meetings where things get done 1 2 3 4

Please feel free to share any other comments regarding your experience this evening:

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September, 2009



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine

Dear Doctor:

I would like to thank you for your involvement in tonight's group discussion pertaining to your perceptions of the veterinary health care team, including identifying factors which may enhance or detract from optimal team function.

Please find enclosed with this letter a forty dollar honorarium offered as a token of our appreciation and to help cover any costs you may have incurred by participating tonight. It is anticipated the results of the focus group discussions will be written up as a research paper as well as presented at conferences. To find out more about the results, you may also contact me at (519) 674-1666 or at [imoore@ridgetownc.uoguelph.ca](mailto:imoore@ridgetownc.uoguelph.ca) .

This study has been funded by Medi-Cal/Royal Canin Veterinary Diets and we would like to thank them for their contribution.

Thank you again for your participation.

Sincerely,

Irene Moore, DVM  
Project Coordinator

## **Appendix C**

### **Team Effectiveness Questionnaire Development**

- C.1 Phases of Survey Development**
- C.2 Veterinary clinic recruitment letter of introduction**
- C.3 Consent to participate in research**
- C.4 Participant demographic questionnaire**
- C.5 41 Item Team Effectiveness Questionnaire**
- C.6 41 Item Team Effectiveness Instrument-Factor Analysis Pattern Matrix**

## **Appendix C.1-Phases of Survey Development**

### ***Phase I: Focus groups exploring veterinary team effectiveness***

A previous qualitative focus groups study of veterinarians and Registered Veterinary Technicians (RVTs) informed questionnaire development (Footnote A, Chapters 2 and 3). In brief, a series of four focus groups were held with groups of 4-8 RVTs (n= 26) and four focus groups were held with groups of 4-6 veterinarians (n=23). All participants were employed in 100% small animal practices, and were randomly recruited from clinics from Wellington, Waterloo, Oxford, Perth, Halton, Peel, Brandt, and Hamilton-Wentworth counties in the province of Ontario. RVT focus groups were held in June, 2009, while veterinarian focus groups were held in September, 2009. Focus groups were conducted using a semi-structured interview guide asking participants their perspectives of the veterinary health care team, including characteristics of effective teams as well as challenges and barriers to working as a team.

### ***Phase II: Initial item generation***

Questionnaire items were then derived for use in the current study by the author based on the themes identified during thematic analysis<sup>1</sup> of the verbatim transcripts produced from the RVT and veterinarian focus groups.

Questions were subsequently reviewed for face validity, relevance, and clarity by individuals known to the author, including a veterinarian, an RVT, a receptionist, and a kennel attendant. They were asked to rank the questions for inclusion in a team effectiveness questionnaire on a 4 point scale, with responses from 1 (not relevant), 2 (unable to assess relevance without item revision), 3 (relevant but needs minor alterations) to 4 (very relevant and succinct). The author and a colleague familiar with questionnaire development then reviewed the questions and

rankings, eliminating items not receiving a ranking of 4 by at least 3 of the 4 raters.<sup>2</sup> The questionnaire utilized a 7 point Likert format anchored by 1 (“totally disagree”) and 7 (“totally agree”) for the responses. A 7 point scale was used to reduce potential endpoint aversion and increase the likelihood of a variety of responses.<sup>3</sup> After review, the initial 216 items were reduced to 51 items.

### ***Phase III: Pilot testing of the first draft of the TE***

Pilot testing of the 51-item Team Effectiveness (TE) instrument was then performed online (Footnote B) using a convenience sample of three companion animal veterinary clinics in January, 2011. To invite participation, a letter with a link to an electronic version of the survey, as well as a confidential access code, was provided for each member of the 3 participating veterinary practices. Participants were offered a \$10 coffee gift certificate for their participation. A total of 22 people from 3 clinics completed the pilot survey. The results of the pilot study were used to further revise the survey; inter-items correlations of greater than 0.8 were identified and items were selected for removal based on this finding to reduce redundancy.<sup>3</sup> After reverse coding negatively worded items, a total TE score was developed by summing the scores of all items remaining in the questionnaire. Items with correlations of less than 0.4 with the summed total TE score were eliminated. The final TE instrument contained 41 items (Appendix C.5).

### ***Phase IV: Psychometric evaluation of the final TE instrument***

The final TE instrument was administered to 274 participants from 48 practices as part of the current study. In order to assess the construct validity of the TE instrument in measuring team effectiveness<sup>3</sup>, as well as to measure other outcomes of team effectiveness, several measures validated with other populations were included in the online surveys. They were then used in

subsequent correlation analysis with the TE instrument. Measures included the MBI-GS to measure burnout (Footnote A, Chapter 4) and a validated measure of Relational Coordination (RC). RC describes timely, frequent, accurate, and problem-solving communication amongst team members<sup>4,5</sup>. Furthermore, teams with high levels of relational coordination have mutual respect, shared goals, and knowledge of each other's work<sup>4,5</sup>. The RC survey consists of 7 questions for each of 7 employee groups with responses assessed with a five-point Likert-type scale. An overall RC score for each participant was calculated by summing and averaging scores for each question.

In addition to the validated instruments, 2 global questions were also included to help assess the validity of the TE instrument. Intent to stay was described by the question "how likely are you to leave your job in the next year?" (1 = "extremely likely" to 7 "extremely unlikely"), while the global measure of team effectiveness was assessed by "overall, I feel we have an effective team" (1 = "totally disagree" to 7 = "totally agree"). A definition of team effectiveness was not provided a priori.

Construct validation of the TE instrument was assessed using Spearman's rho between the total TE score and several related constructs: the 3 domains of the MBI-GS, RC, job satisfaction, and the global questions regarding intent to stay in the position, as well as perceived team effectiveness. Spearman's rho was used for correlational analysis, since not all of the scales were normally distributed. A strong positive correlation was identified between TE and Relational Coordination ( $r=0.636$ ,  $p<0.000$ ) and between TE and the single-item global TE measure ( $r=0.777$ ,  $p<0.000$ ). Moderate positive correlation between TE and Intent to Stay in the Job as well as TE and the professional efficacy subscale of the MBI-GS were noted. A strong, negative, correlation was identified between TE and the exhaustion and cynicism subscales of the MBI-

GS. Thus, the TE instrument performed as expected, demonstrating good validity with other tools to assess related constructs.

### ***Identification of factors relating to team effectiveness***

Exploratory factor analysis was used to explore the interrelationships among items making up the TE survey. Kaiser's criterion was used to identify factors to be retained for further investigation, using an Eigenvalue of 1.0 or more.<sup>3</sup> To help interpret the items loaded on each factor, an oblique rotation using a Direct Oblimin technique was performed. To confirm the number of factors to retain, Monte Carlo Principal Components Analysis was executed. The items within each factor were examined by the primary author and a research colleague to determine the construct represented by the factor. The reliability (Cronbach's alpha) of the TE instrument and each of the factors were assessed.

Kaiser's criterion indicated 6 factors had Eigenvalues of 1.0 or more, explaining 63.82% of the variance. The Scree Test revealed breaks at components 1 and 4. Oblique rotation using a Direct Oblimin technique indicated 6 factors should be retained. However, Monte Carlo Principal Components Analysis showed only 4 factors should be retained, explaining a total of 57.75% of the variance. The items within each of the 4 factors were examined by the primary author and a research colleague familiar with factor analysis, and each factor was named to reflect the underlying meaning: Subscale 1 (Coordinated Team Environment), Subscale 2 (Toxic Environment), Subscale 3 (Team Engagement) and Subscale 4 (Individual Engagement) (Appendix C.6).

The Cronbach alpha for all 41 items of the Total TE instrument was 0.964 indicating the scale had excellent internal consistency.<sup>3</sup> The descriptive statistics and Cronbach Alphas of the Total

TE instrument, Coordinated Team Environment factor, Toxic Environment factor, Team Engagement factor and Individual Engagement factor) are found in Table 2. All factors demonstrated acceptable reliability ranging from 0.890 to 0.920.

Thus, the TE instrument appears to be a valid, reliable tool to assess team effectiveness in veterinary health care teams.

**Footnote A:**

Moore I. C. Exploring and evaluating veterinary health care team effectiveness. MSc thesis, Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, ON, 2013.

**Footnote B:**

LimeSurvey Project Team / Carsten Schmitz (2012). / LimeSurvey: An Open Source survey tool /LimeSurvey Project Hamburg, Germany. URL <http://www.limesurvey.org>

## References

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3. Streiner D, Norman G. *Health Measurement Scales: A practical guide to their development and use*. 4th ed. New York: Oxford University Press, 2008.
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5. Gittell JH, Weinberg DB, Pfefferle S, Bishop C. Impact of relational coordination on job satisfaction and quality outcomes: a study of nursing homes. *Human Resource Management Journal* 2008;18:154-170.



ONTARIO VETERINARY COLLEGE

Department of Population Medicine

Date TBA

Clinic TBA

Dear Dr. TBA:

This letter is to invite you to be part of a research project conducted by Drs. Jason Coe and Irene Moore from the Ontario Veterinary College. The goal of the project is to develop a reliable, validated survey instrument to assess team effectiveness in veterinary clinics. We would greatly appreciate your involvement in this important aspect of the study.

We recognize that your veterinary team is very busy and that life in practice can instantaneously become very hectic. Therefore, we hope that by asking for a commitment of only one hour we can minimize the disruptions, burden, or inconvenience your clinic's participation may cause to your practice. We believe that this research will make an important contribution to our understanding of veterinary team effectiveness and a valuable contribution to our overall research project. By participating in the study, veterinary team members would have the opportunity to self-reflect on their own perceptions of their work environment. The results of the study would be used to fine-tune an instrument to assess team effectiveness in veterinary health care teams. This in turn would allow veterinary clinics to develop "best practices" to provide a satisfying work environment that is able to efficiently provide quality care to veterinary patients and clients. We hope that you, as a private practitioner, will also be able to take something away from this experience. Upon completion of the study, each participating clinic will receive an executive summary of the aggregated data without identifying information. By recognizing areas of strength and potential weaknesses in veterinary health care teams, owners and managers may be able to adapt their policies and structures to maximize their team's effectiveness. Suggestions will also be made as to strategies to improve certain areas of practice that were determined to be problematic.

More specifically, we are hoping you would allow one of the investigators (Irene Moore) to come to your clinic to discuss the purpose of the study, and to describe how each member of the veterinary team can access the survey. Each team member will be given an access code to the online survey. Should they choose to participate, they are able to access the study at a time and place that is convenient for them. It is anticipated that the explanation of the survey will not take greater than one half hour of your team's time. The completion of the survey will take approximately one half hour of each team member's time. We will arrange a time that will be suitable for all members of your team to participate in the information session. As a token of our appreciation, refreshments will be provided. In addition, each participant in the clinic that completes the surveys will receive a \$10 gift certificate from Tim Horton's.

This research project has been reviewed and received clearance by the University of Guelph Research Ethics Board (REB# 10AU036) and has received funding from Medi-Cal/Royal Canin Veterinary Diets. Any information pertaining to your team or comments your team makes on the comment sheets will be

kept strictly confidential. If your team agrees to participate in this study, each member still has the option of withdrawing at any point without consequence.

Within the next few weeks, Dr. Moore will be following up this letter with a phone call in order to arrange a convenient time to discuss the project in more detail and answer any questions you may have. If you would like to know more about the project ahead of time, please feel free to contact Dr. Moore at (519) 674-1500, ext. 63666 or [imoore@ridgetownc.uoguelph.ca](mailto:imoore@ridgetownc.uoguelph.ca).

Thank you for taking the time to consider this request. We are looking forward to the prospect of working with you in the near future.

Sincerely,

Jason B Coe, DVM, PhD

Assistant Professor

Department of Population Medicine

Irene Moore, DVM, B.Sc.(Agr.)

MSc Candidate

Department of Population Medicine



ONTARIO VETERINARY COLLEGE

Department of Population Medicine

## **CONSENT TO PARTICIPATE IN RESEARCH**

### **Development of an Instrument to Assess Veterinary Team Effectiveness**

You are asked to participate in a research study conducted by Dr. Jason Coe, DVM, PhD from the Department of Population Medicine at the University of Guelph and Dr. Irene Moore, DVM from the Ridgetown Campus, University of Guelph. The results of this study will contribute to Dr Moore's MSc thesis. If you have any questions or concerns, please feel free to contact Dr. Jason Coe at 519-824-4120 Ext. 54010 or Dr. Irene Moore at 519-674-1666. Funding has generously been supplied by Medi-Cal Royal Canin Veterinary Diets.

### **PURPOSE OF THE STUDY**

1. To develop a reliable, validated instrument to assess team effectiveness in veterinary clinics.
2. To have veterinary teams complete previously validated instruments and other assessments to assess job satisfaction, relational coordination, turnover and burnout.
3. To compare results of the study instrument to the results of the previously validated instruments.

Information gathered during this study may be used for publication as well as to develop best practice veterinary team guidelines. It may also be used in directing future research projects.

### **PROCEDURES**

All members of the veterinary team will complete the study instrument as well as two other survey instruments. Each participant, as well as the clinic overall, will be asked to fill out a demographic questionnaire. The explanation of the study and completion of the surveys will take about one hour.

### **POTENTIAL RISKS**

There is a potential risk of self-consciousness or embarrassment associated with participating in this form of assessment. Every effort will be made to ensure the confidentiality of participants in connection with this study. You will be assigned a number, rather than using your name, to help protect your confidentiality.

### **POTENTIAL BENEFITS**

By participating in the study, you and your coworkers will have the opportunity to self-reflect on your own perceptions of your work environment. The results of the pilot study will be used to fine-tune an instrument to assess team effectiveness in veterinary health care teams. You will be contributing to a body of knowledge that will benefit all people involved in veterinary medicine. By exploring aspects of team effectiveness, we hope to identify "best practices" that will help veterinary practices provide a satisfying work environment that is able to efficiently provide quality care to veterinary patients and clients. In addition, areas that can potentially be improved can also be pinpointed. In future, the success of any interventions designed to improve team effectiveness can then be assessed by readministering the instrument.

## **COMPENSATION FOR PARTICIPATION**

Participants will receive refreshments for participating in the information session. In addition, each participant in the clinic that completes the surveys will be eligible to receive a \$10 gift certificate from Tim Horton's.

## **CONFIDENTIALITY**

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study. Both clinics and participants will be assigned identification numbers. Following data collection, all identifying information will be removed in order to protect the confidentiality of participants. Any findings released from the outcome of this study will not be directly linked to any of the project participants. Only aggregate data will be presented in research reports, presentations and publications preventing identification of any individual. All survey data will be safeguarded in locked file cabinets at the Ridgetown Campus, University of Guelph. In signing this consent you are aware and agreeable to the use of non-identifying verbatim quotes in published materials and presentations.

## **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

## **RIGHTS OF RESEARCH PARTICIPANTS**

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Officer	Telephone: (519) 824-4120, ext. 56606
University of Guelph	E-mail: <a href="mailto:sauld@uoguelph.ca">sauld@uoguelph.ca</a>
Reynolds Building, Room 203	Fax: (519) 821-5236
Guelph, ON N1G 2W1	

## **SIGNATURE OF RESEARCH PARTICIPANT**

I have read the information provided for the study "Development of an Instrument to Assess Veterinary Team Effectiveness" described herein. My questions have been answered to my satisfaction. I agree to participate in this study with the assurance that my responses will remain completely confidential. However, I agree to the use of verbatim quotes in any published materials and presentations as long as my identity remains protected. I have been given a copy of this form.

---

Name of Participant (Please print)

---

Signature of Participant

---

Date

SIGNATURE OF WITNESS

---

Name of Witness (Please print)

---

Signature of Witness

---

Date



ONTARIO VETERINARY COLLEGE  
Department of Population Medicine  
**Participant Demographic Information**

**ID#:** \_\_\_\_\_

1. Please indicate your gender:  
Female  Male
2. Please indicate your age: \_\_\_\_\_
3. Please indicate your position in the clinic:  
 Owner  
 Associate Veterinarian  
 Manager  
 Registered Veterinary Technician  
 Veterinary Technician  
 Veterinary Assistant  
 Receptionist  
 Kennel Person  
 Other \_\_\_\_\_
4. Are you working full-time or part-time?  
 Full-time  Part-time   
 If part-time, please indicate the numbers of hour/week worked: \_\_\_\_\_
5. Please indicate the number of years you have worked at your current place of employment: \_\_\_\_\_
6. How long have you been working in the veterinary field: \_\_\_\_\_ years
7. Which college did you obtain your veterinary-related education from?  
 \_\_\_\_\_
8. Please feel free to share any other comments regarding your experience today's meeting:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Appendix C.5: Team Effectiveness (TE) Instrument (41 Items)

All questions used a 7 point Likert scale, with the options:

- **Totally Disagree**
- **Strongly Disagree**
- **Somewhat Disagree**
- **Neither Agree nor Disagree**
- **Somewhat Agree**
- **Strongly Agree**
- **Totally Agree**

Questions:

**Divided into 3 sections: Thinking about the Individual, the Individual's Coworkers, and the Individual's Team.**

**Individual Questions (13): ("Thinking about your role on the veterinary health care team, please indicate the degree to which you disagree or agree with the following statements"):**

IndTE1	I have respect for my coworkers.
IndTE2	I trust my coworkers.
RIndTE3	I am frustrated with my job.
IndTE4	I have a voice in the decisions made in the clinic.
RIndTE6	I am sometimes over-ruled by others, even when I am following the clinic protocol
RIndTE7	I am sometimes pulled in too many directions.
RIndTE8	I am overloaded with responsibilities.
IndTE9	My opinion is listened to.
IndTE10	My skills are fully utilized.
IndTE11	I am comfortable speaking up if I have a problem.
IndTE12	I am encouraged to expand my knowledge to enhance my role in the clinic.
IndTE15	I am recognized as an important part of the team.
IndTE17	I receive adequate financial compensation for the work that I do.

**Coworker Questions (8): ("When thinking about the coworkers with whom you working the clinic, please indicate the degree to which you disagree or agree with the following statements. Note that coworkers includes your peers as well as managers."):**

CoTE1	My coworkers have respect for me.
CoTE2	My coworkers trust me.
RCoTE3	My coworkers will not do things if they don't feel it is their job.
RCoTE4	Sometimes my credibility with clients is undermined by my coworkers.
RCoTE5	I do not have confidence in the abilities of some of my coworkers.
RCoTE6	Some of my coworkers resist change.
CoTE7	When a coworker is experiencing a personal crisis, everyone pulls together to ensure things still run smoothly in the clinic.
CoTE8	My coworkers come to work with a good attitude.

**Team Questions (20): ('when thinking about everyone working together in your clinic as a veterinary health care team, please indicate the degree to which you agree or disagree with the following statements'):**

- TeTE1 Everyone pitches in to get the job done.  
RTeTE2 Sometimes there are conflicting messages in the clinic.  
RTeTE3 There is tension in the clinic.  
RTeTE5 There are communication breakdowns in our clinic.  
RTeTE6 The team is being brought down by someone with a negative attitude.  
RTeTE7 There is uncertainty in our clinic about why decisions are made.  
TeTE8 Everyone relates to one another equally in the clinic.  
TeTE9 There is open communication in the clinic.  
TeTE10 In our clinic, there is a willingness to be flexible.  
TeTE11 We have many formal and informal avenues of communication.  
TeTE12 Everyone's opinion is listened to in the clinic.  
TeTE13 Staff has input into who is hired.  
TeTE14 There are complementing personalities on the team.  
TeTE15 We have effective staff meetings.  
TeTE17 Everyone is working towards the same goals in the clinic.  
TeTE19 We regularly review policies and procedures.  
TeTE20 We have a team effort when dealing with clients.  
TeTE21 Our entire team has the opportunity to provide input into major changes in the clinic.  
TeTE22 There is ownership of mistakes in the clinic.  
TeTE23 Team members are recognized for their contributions.

**(41 questions in Final Instrument; "R" indicates it is reversed score item)**

**Global Questions (3):**

Overall, I feel we have an effective team.

(7 point scale: Totally disagree to Totally agree)

On the whole, how satisfied are you with your job?

(7 point scale: Not at all satisfied to Extremely satisfied)

How likely are you to leave your job in the next year?

(7 point scale: Extremely likely to Extremely unlikely)

## Appendix C.6: Team Effectiveness Instrument—Factor Analysis Pattern Matrix

### Factor I (9 items): Coordinated Team Environment

TeTE15	We have effective staff meetings.
TeTE19	We regularly review policies and procedures
TeTE11	We have many formal and informal avenues of communication
TeTE17	Everyone is working towards the same goals in the clinic.
TeTE20	We have a team effort when dealing with clients.
TeTE9	There is open communication in the clinic.
TeTE21	Our entire team has the opportunity to provide input into major changes in the clinic.
TeTE22	There is ownership of mistakes in the clinic.
TeTE23	Team members are recognized for their contributions.

**Cronbach Alpha = 0.920; One factor extracted**

### Factor II (12 items): Toxic Environment

RIndTE7	I am sometimes pulled in too many directions.
RIndTE8	I am overloaded with responsibilities.
RTeTE2	Sometimes there are conflicting messages in the clinic.
RIndTE6	I am sometimes over-ruled by others, even when I am following the clinic protocol
RTeTE5	There are communication breakdowns in our clinic.
RTeTE3	There is tension in the clinic.
RIndTE3	I am frustrated with my job.
RTeTE6	The team is being brought down by someone with a negative attitude.
RTeTE7	There is uncertainty in our clinic about why decisions are made.
RCoTE6	Some of my coworkers resist change.
RCoTE4	Sometimes my credibility with clients is undermined by my coworkers.
RCoTE3	My coworkers will not do things if they don't feel it is their job.

**Cronbach Alpha = 0.920; Two factors extracted**

### Factor III (11 items): Team Engagement

CoTE1	My coworkers have respect for me.
IndTE2	I trust my coworkers.
CoTE2	My coworkers trust me.
IndTE1	I have respect for my coworkers.
CoTE8	My coworkers come to work with a good attitude.
CoTE7	When a coworker is experiencing a personal crisis, everyone pulls together to ensure things still run smoothly in the clinic.
TeTE14	There are complementing personalities on the team.
RCoTE5	I do not have confidence in the abilities of some of my coworkers.
TeTE1	Everyone pitches in to get the job done.
TeTE10	In our clinic, there is a willingness to be flexible.
TeTE8	Everyone relates to one another equally in the clinic.

**Cronbach Alpha = 0.890; Two factors extracted**

**Factor IV (9 items): Individual Engagement**

- IndTE4 I have a voice in the decisions made in the clinic.
- IndTE9 My opinion is listened to.
- IndTE15 I am recognized as an important part of the team.
- IndTE11 I am comfortable speaking up if I have a problem.
- IndTE12 I am encouraged to expand my knowledge to enhance my role in the clinic
- IndTE10 My skills are fully utilized.
- TeTE13 Staff has input into who is hired.
- TeTE12 Everyone's opinion is listened to in the clinic.
- IndTE17 I receive adequate financial compensation for the work that I do.

**Cronbach Alpha = 0.896; One factor extracted**