

Ref. No.	C-VA.3
Title:	Veterinary Anaesthesia Critical Care And Analgesia
Category And Value:	C – 10 credits
Notional Study Hours:	100

The aim of the module is to enable the candidate to extend and consolidate clinical knowledge and skills gained at undergraduate level, and to develop an in-depth understanding of the application of that knowledge in a practice environment in relation to critical care and analgesia.

Assessment Strategy for this Module

Candidates will need to demonstrate that they have had extensive experience of clinical veterinary intensive care in the relevant species by keeping a learning / case diary as well as producing a number of detailed case reports (5).

It is suggested that this module could be assessed by the following methods:

- A **case diary**, that documents the candidate's experiences of critical care / analgesia cases over the period that the module is being completed (minimum of 90 days – not necessarily consecutive), includes critical commentaries on at least some of the learning resources used, and describes the application of the learning process to a wide range of cases encountered in practice.
- A **case book** of four cases each of up to 2000 words in length. These cases should be selected to demonstrate the candidate's ability to use the competences that have been acquired to cope with a challenging situation, rather than necessarily using classic "textbook cases" of particular conditions.
- In addition, to achieve the post nominal "veterinary anaesthesia", candidates will be required to undertake a practical examination involving clinical examination of an animal and discussion of appropriate anaesthesia, as well as a "spot test" (short answers to questions which would test knowledge and understanding of anaesthetic equipment and relevant clinical data such as ECG's blood biochemistry results etc.).

Module Content

This module can be taken from either a small or large animal perspective. This module will explore in greater detail the fundamental physiological and pharmacological tenets that underpin current knowledge and clinical practice of pain prevention and management. This module will also entail a study of the theoretical and practical aspects of the intensive peri-

operative care of animals. This will require a good understanding of the applied physiology of body fluids and electrolytes and acid base balance. The ability to assess and treat appropriately fluid and electrolyte and acid base disturbances as well as and understanding and management of blood transfusion in animals.

Candidates must be able to demonstrate that they have had experience of intensive peri-operative care of critically ill patients in the range of species normally encountered in clinical practice. A general knowledge of current developments in the whole field of critical care will be expected so that relevant aspects of medical peri-operative care may be applied in animals. Candidates should understand the function of apparatus used in intensive care.

At the end of the module, candidates should be able to:

- Provide appropriate care for the sick and or debilitated patient, including support / maintenance of normal homeostasis
- Thoroughly understand the fundamental and applied physiological principles that underpin current knowledge of the cardiovascular, respiratory and renal systems, as they apply to the management of critically ill patients
- Thoroughly understand the fundamental and applied physiological principles that underpin current knowledge of body fluids, electrolytes and acid base balance. Clinical practice of intensive peri-operative care - this will include a thorough understanding of the principles of respiratory and cardiovascular system support.
- Competently assess and treat appropriately fluid and electrolyte and acid base disturbances. Understanding the fluid compartments in the body, factors controlling fluid shifts within the body, the different types of replacement fluids available and how to calculate fluid and electrolyte replacement requirements
- Thoroughly understand the theory and practical aspects of managing blood transfusion in clinical cases.
- Understand the theory and practical aspects of providing nutritional support to critically ill patients, including the use of parenteral and enteral feeding techniques such as indwelling nasogastric or PEG tubes, nutritional formulations, calculation of caloric and substrate requirements, and methods of controlling vomiting or reflux and ileus
- Thoroughly understand the fundamental physiological and pharmacological tenets that underpin current knowledge and clinical practice of pain prevention and management
- Demonstrate a good general knowledge of current developments in the field of pain perception and analgesia
- Demonstrate practical competence and experience of managing acute peri-operative and more chronic pain in the range of species normally encountered in their clinical practice

- Understand the function of apparatus used in intensive care of patients, where relevant
- Understand the functional characteristics of anaesthetic breathing systems (“circuits”) and how they may be used for intensive care of unconscious patients
- Appreciate the advantages and disadvantages of intermittent positive pressure ventilation, and how this may be delivered to support critically ill patients
- Demonstrate a good general knowledge of, and experience in the use of, tracheostomy and thoracic drains where relevant to case management
- Appreciate how electronic monitoring systems may be used to monitor vital functions in sick animals, and be able to interpret the information they provide
- Demonstrate familiarity with commonly performed regional nerve blocks as used to provide analgesia pre and postoperatively
- Demonstrate a good general knowledge of current developments in the field of critical care
- Demonstrate a good general knowledge of relevant aspects of medical peri-operative care in animals
- Demonstrate understanding and experience of the management of sepsis and nosocomial infections in the context of critical care
- Demonstrate a good general knowledge of the principles of physiotherapy: and the nursing care of recumbent and debilitated patients including postural management, rehabilitation techniques and the maintenance of muscle tone
- Demonstrate experience of intensive peri-operative care of critically ill patients in the range of species normally encountered in clinical practice.
- Show thorough familiarity with the practical aspects of intensive peri-operative monitoring, treatment and care of animals
- Review and constructively criticise current literature on the speciality, to enable them to determine its relevance to their current practice
- Utilise their understanding of Evidence Based Medicine and Decision Analysis to develop practical diagnostic and treatment protocols for their patients
- Use available resources and communicate with owners in such a way as to achieve optimum results in their practice circumstances in relation to pain management and intensive care of patients

- Utilising knowledge to ensure effective communication with referring veterinary colleagues: writing clear, concise patient summaries, communicating suggestions for ongoing therapy, strategies for avoiding misunderstandings
- Using knowledge to develop effective team work: recognising the importance of effective interpersonal communication in perfecting protocols for dealing with emergencies
- Review the outcomes of at least part of their clinical work, using the process of clinical audit to improve performance
- Recognise when a case is truly unusual, and become familiar with the information resources available to enable them to deal with such cases
- Recognise when a case is beyond their personal or practice capabilities, and provide an effective channel for referral