ELIGIBILITY

1. The candidate shall meet the eligibility prerequisites for Fellowship outlined in the Fellowship Candidate Handbook.

2. Membership of the College must be achieved prior to the Fellowship examination.


OBJECTIVES

To demonstrate that the candidate has:

1. attained sufficient knowledge, training, experience, and accomplishment to meet the criteria for registration as a specialist in Equine Dentistry.

2. achieved extensive practical experience and accomplishment relevant to Australia or New Zealand and an understanding of Equine Dentistry on a global basis.

3. become recognized as an authority by veterinary colleagues and by other professional people working in the field.
LEARNING OUTCOMES

1. The candidate will have a detailed knowledge of:

   1.1. the embryologic development, anatomy, physiology and function of the normal equine oral cavity, dentition and periodontal anatomy.

   1.2. the aetiology, pathogenesis, diagnosis, differential diagnosis, treatment, prognosis and prevention of equine oral and dental diseases including:

      1.2.1. developmental and congenital abnormalities

      1.2.2. infectious and inflammatory disorders

      1.2.3. metabolic and endocrine disorders

      1.2.4. neoplasia and paraneoplastic disorders

      1.2.5. behaviour disorders

      1.2.6. systemic diseases including viral, bacterial and fungal infections with oral cavity or dental involvement.

   1.3. the aetiology, pathogenesis, clinical signs, diagnosis and treatment of equine periodontal disease, periodontal surgery and dental prophylaxis.

   1.4. the principles of oral and dental surgery including:

      1.4.1. wound healing, haemostasis and wound infection

      1.4.2. indications for and techniques of tooth extraction

      1.4.3. the principles of fracture healing and repair

      1.4.4. the diagnosis, management and prognosis of fractures of the maxilla and mandible

      1.4.5. teeth fractures and fracture repair including the use of intraoral acrylics, plates, screws, pins, wires and external fixators

      1.4.6. repair of oronasal fistulae

      1.4.7. management of luxated and avulsed teeth

      1.4.8. the use of implants.

   1.5. the principles of orthodontics including:

      1.5.1. the clinical signs, diagnosis and management of malocclusions

      1.5.2. tooth movement and the forces required to move teeth

      1.5.3. the use of active and passive orthodontic appliances.

   1.6. the principles of endodontics including:

      1.6.1. aetiology and pathogenesis of pulpal pathology

      1.6.2. the clinical signs and treatment of endodontic disease

      1.6.3. endodontic techniques

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1 Knowledge Levels:

**Detailed knowledge** - candidates must be able to demonstrate an in-depth knowledge of the topic including differing points of view and published literature. The highest level of knowledge.

**Sound knowledge** – candidate must know all of the principles of the topic including some of the finer detail, and be able to identify areas where opinions may diverge. A middle level of knowledge.

**Basic knowledge** – candidate must know the main points of the topic and the core literature.
1.6.4. endodontic emergencies
1.6.5. reimplantation of avulsed teeth, stabilisation, follow up treatment and prognosis.

1.7. the principles of restorative dentistry including

1.7.1. composition of, indications for and use of dental amalgam, composite resin cements an glass ionomer cements
1.7.2. cavity design and preparation
1.7.3. impression materials and impression taking
1.7.4. crown preparation and bonding techniques
1.7.5. different types of crowns available, their uses and adaptations in veterinary dentistry.

1.8. the range and use of dental hand and power instrumentation in veterinary dentistry and the indications for their use.

1.9. the pharmacology and pharmacokinetics of drugs and therapeutic products used in equine veterinary dentistry.

1.10. the principles of imaging including radiology, CT, MRI and scintigraphy as these modalities apply to the equine oral cavity and related structures.

1.11. the principles of anaesthesia and analgesia as they apply to the management of diseases of the equine oral cavity and related structures.

2. The candidate will have a basic knowledge of:

2.1. basic comparative oral anatomy in mammals.

3. The candidate will be able to perform the following, with a detailed level of expertise:

3.1. critically evaluate the current veterinary literature and opinions in the field of Equine Dentistry
3.2. standard dental equilibration
3.3. performance floating
3.4. treatment of periodontal disease
3.5. involved periodontal treatment including diastemata
3.6. pulp capping
3.7. root canal treatment
3.8. perform restorative dentistry
3.9. intra-oral extraction of cheek teeth
3.10. wolf tooth extractions
3.11. surgical extraction of incisors, canines or cheek teeth
3.12. mandibular or maxillary fracture fixation
3.13. involved oral surgical procedures including sinus surgery
3.14. miscellaneous soft tissue oral surgery

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### Skill levels:
- **Detailed expertise** – the candidate must be able to perform the technique with a high degree of skill, and have extensive experience in its application. The highest level of proficiency.
- **Sound expertise** – the candidate must be able to perform the technique with a moderate degree of skill, and have moderate experience in its application. A middle level of proficiency.
- **Basic expertise** – the candidate must be able to perform the technique competently in uncomplicated circumstances.
3.15. malocclusion treatment plan, including detailed consultation and charting
3.16. management of clinical malocclusion (by tooth reduction and floating)
3.17. management of clinical malocclusion (use of an orthodontic device).

EXAMINATIONS
Refer to the *Fellowship Candidate Handbook, Section 5.*

**Written Paper I: 3 hours duration**

This paper is designed to test the Candidate’s knowledge of the principles of Equine Dentistry as described in the Learning Outcomes. Answers may cite specific examples where general principles apply, but should primarily address the theoretical basis underlying each example.

**Written Paper II: 3 hours duration**

This paper is designed to (a) test the Candidate’s ability to apply the principles of Equine Dentistry to particular cases/problems or tasks, and to (b) test the Candidate’s familiarity with the current practices and current issues that arise from activities within the discipline of Equine Dentistry in Australia and New Zealand.

**Practical and Oral Examinations:**
These examinations further test the candidate’s achievement of the above-mentioned learning outcomes. The practical examination will consist of written multiple short answer questions of a practical and clinical nature relating to images, videos and/or examples of diagnostic imaging. The practical examination is of up to three hours duration and will consist of 20 to 30 cases for analysis. The oral examination is of at least one hour in duration and may consist of questions of a theoretical and practical nature for which verbal answers are required.

**TRAINING PROGRAMS**

Refer to the *Fellowship Candidate Handbook, Section 3.3*

1. The training program must provide intensive training in equine dentistry under direct supervision at a specialist referral level.

2. The training program requires two years (96 weeks) of directly supervised training (DST) at an approved facility.

3. In addition to directly supervised training, the candidate should be able to demonstrate active participation in formal teaching conferences such as clinico-pathologic case conferences, resident seminars and teaching and case rounds.

4. The candidate is expected to attend relevant scientific meetings and conferences and attendance at an international veterinary conference is recommended.
5. **ACTIVITY LOG AND ACTIVITY LOG SUMMARY**

Refer to the *Fellowship Candidate Handbook*, Section 2.8 and 2.9

5.1. The Chapter requires the candidate to document a minimum of 300 equine dental cases and the breadth of training should include cases spanning the breadth of the categories listed under "Activity Log Categories". Cases must be of the type seen in referral practice which are considered to be specialist procedures. The minimum numbers of specific procedures must be accomplished by the candidate are shown in the following table. Any single case can be allocated to a single category that most appropriately describes the type of case. The candidate should attempt to gain as broad a range of experience as possible. Exceeding the minimum threshold of cases does not guarantee the required level of competency to pass the Fellowship examination.

5.2. Cases suitable for inclusion are those supervised cases where the candidate is directly involved in the decision and planning of the case and is the Primary or Assistant dentist. The candidate is the Primary dentist when he or she plans and performs the essential parts of the dental procedure. The candidate should be the Primary dentist in at least 40% (120) of the cases. Revisit appointments on the same case for the same presenting problem are NOT to be entered separately in the Activity Log.

5.3 Activity Logs shall use the following categories for both the Activity Log Submission (*Fellowship Candidate Handbook* Appendix 8.5, Guidelines Appendix 1) and Activity Log Summary (*Fellowship Candidate Handbook* Appendix 8.8, Guidelines Appendix 2) of the *Fellowship Candidate Handbook*.

**Activity Log Categories (and minimum case numbers)**

**Oral Medicine (40 cases)**

**Periodontics (100 cases)**
- Standard dental equilibration (25 cases)
- Performance floating (25 cases)
- Treatment of periodontal disease (25 cases)
- Involved periodontal treatment including diastemata (25 cases)

**Endodontics (20 cases)**
- Pulp capping (10 cases)
- Root canal treatment (10 cases)

**Restorative dentistry (20 cases)**

**Oral surgery (100 cases)**
- Intra-oral extraction of cheek teeth (15 cases)
- Wolf tooth extractions (10 cases)
- Surgical extraction of incisors, canines or cheek teeth (15 cases)
- Mandibular or maxillary fracture fixation (20 cases)
- Involved oral surgical procedures including sinus surgery (20 cases)
- Miscellaneous soft tissue oral surgery (20 cases)
Orthodontics (20 cases)
   Malocclusion treatment plan, including detailed consultation & charting (10 cases)
   Management of clinical malocclusion (by tooth reduction and floating) (10 cases).

6. **TRAINING IN RELATED DISCIPLINES**

   Refer to the *Fellowship Candidate Handbook, Section 2.4.2*

   Candidates for Fellowship in Equine Dentistry must spend 6 of the **96** weeks supervised time in the related disciplines training as per the following:

   - Equine Surgery (80 hours, 2 weeks)
   - Radiology / Diagnostic Imaging (80 hours, 2 weeks),
   - Anaesthesia and Critical Care (80 hours, 2 weeks) and

   Related disciplines training must be undertaken with a specialist, or other person approved by the TCC, in that discipline. Guidelines for TRD are to be found in Appendix 3.

7. **EXTERNSHIPS**

   Refer to the *Fellowship Candidate Handbook, Section 2.4.1*

   Externships allow exposure to other specialists, facilities and a greater range of cases. They should be used to gain exposure to areas within the program which are deficient, particularly with respect to subject areas that may be under-represented in the Activity Log.

8. **PUBLICATIONS**

   Refer to the *Fellowship Candidate Handbook, Section 2.10*

9. **RECOMMENDED READING LIST**

   The candidate is expected to research the depth and breadth of the knowledge of the discipline. This list is intended to guide the candidate to some core references (indicated by an *) and source material. The list is not comprehensive and is not intended as an indicator of the content of the examination.

   **Texts:**

   1. **Core:**


Veterinary Clinics of North America: Exotic Animal Practice. Oral Biology, Dental and Beak Disorders. 2003 Sep; 6(3).


2. Additional:

Australian Veterinary Dental Society Annual Conference Proceedings 1990 - current


Veterinary Clinics of North America. Equine Practice.


Australian Veterinary Dental Society Annual Conference Proceedings 1995 - current


Veterinary Clinics of North America. Equine Practice.

Page and Schroeder Periodontitis in Man and Other Animals

Craig, Powers & Wataha Dental Materials

Journals:

1. *Core:*

Australian Veterinary Journal
Australian Equine Veterinarian
Equine Veterinary Journal
AAEP Proceedings
Journal of Veterinary Dentistry
Equine Veterinary Education
Veterinary Clinics of North America Equine Practice
Veterinary Record
Anatomy Record
Journal of the American Veterinary Medical Association
Archives of Oral Biology

2. *Additional:*

Compendium on Continuing Education for the Practicing Veterinarian
Compendium on Continuing Education Dental
Equine Practice
Large Animal Veterinarian
New Zealand Veterinary Journal
Journal of Endodontics
Journal of Comp Path Ther
Journal of Arch Sci
Journal of Dental Research
Journal of Oral Pathology
Journal of Prosthetic Dentistry
Journal of Comparative Pathology
Journal of Morphology
Journal of Periodontology
Journal of Mammals
Journal of Physiology
Scandinavian Journal of Dental Research
Veterinary Archives
Pathology Annual
In Practice
Veterinary Radiology
Sacanning Microscopy
Cells, tissues and Organs
Pathology Annual
European Journal of Orthodontics
American Journal of Orthodontics
Japanese Journal of Vet Res
Acta Odontol Scand
Acta Zoologica Fennica
Acta Radiol Suppl
Cornell Vet
Caries Reasearch
American Journal of Veterinary Research
Seminars in Veterinary Medicine

FURTHER INFORMATION
For further information contact the College Office

Telephone: International +61 (07) 3423 2016
Fax: International +61 (07) 3423 2977
Email: acvs@gil.com.au
Web: www.acvs.org.au
Postal Address: Building 3, Garden City Office Park, 2404 Logan Road
EIGHT MILE PLAINS QLD 4113 Australia.
### Appendix 1: Activity Log (Template): Equine Dentistry

<table>
<thead>
<tr>
<th>DATE (S)</th>
<th>CATEGORY e.g. species, organ system, type of activity</th>
<th>PATIENT DETAILS: ID, SPECIES, BREED, AGE</th>
<th>PRESENTATION</th>
<th>DIAGNOSTIC TESTS</th>
<th>DIAGNOSIS</th>
<th>TREATMENT</th>
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<td>Healthy tooth on 6m post op XRay</td>
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* CATEGORY: for cumulative breakdown, Refer to Subject Guidelines.
** INITIALS: of Clinicians/Investigators – please asterisk the Primary Clinician/Investigator/Surgeon

Signature of supervisor: ____________________________

### Appendix 2: Activity Log Summary (Template): Equine Dentistry

<table>
<thead>
<tr>
<th>NAME:</th>
<th>SUBJECT:</th>
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Equeine Dentistry Fellowship Guidelines December 2011
© 2011 The Australian and New Zealand College of Veterinary Scientists ABN 00 50 000894 208
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APPENDIX 3: LIST OF LEARNING OUTCOMES FOR TRAINING IN RELATED DISCIPLINES (TRD)

Throughout the two year training program, the Fellowship candidate in Equine Dentistry must be exposed to and actively involved in training in related disciplines. The Fellowship candidate is encouraged to develop a working relationship with one or more specialists in each discipline to facilitate regular discussion and interaction regarding case management. In addition, involvement and participation of a specialist in these disciplines in clinical rounds and seminars attended by the Fellowship candidate is encouraged, as is participation of the Fellowship candidate in relevant rounds and seminars specific to this discipline.

In addition, a minimum of 80 hours (i.e. two weeks full time) must be devoted exclusively to the study and practice of each of these related disciplines. The Fellowship candidate must ensure that this time is spent effectively in consolidating knowledge and skills and in covering aspects of this discipline that will not be addressed adequately during the remainder of their program. The Fellowship candidate is expected to be proactive in searching out opportunities, materials and expert tuition and in compiling and organizing relevant material for future reference.

Training in the related discipline of Equine Surgery

The 80 hours of training must be directly supervised by a Fellow of the ANZCVS, or a Diplomate of the ECVS or ACVS, or exceptionally- and with prior approval from the credentials committee- another recognised expert. The role of the supervisor is to provide guidance and training in Equine surgery as it applies to the Equine Dental patient.

Essential areas that should be covered include but are not limited to:

1. Formulation of a treatment plan that encompasses the needs of the surgical patient. Developing the ability to consider an overall view of the patient’s situation should be promoted.

2. Monitoring the patient’s response to treatment and modifying treatment as indicated.

3. Medical conditions that may affect the patient during anaesthesia, surgery or recovery.

4. Medical treatment as an alternative or as a complement to surgical treatment in selected conditions.

5. Indications for laboratory and other diagnostic tests and interpretation of results
Training in the related discipline of Radiology/Diagnostic Imaging

The 80 hours of training must be directly supervised by a Fellow of the ANZCVS (Veterinary Radiology), or a Diplomate of the ECVDI or ACVR, or exceptionally - and with prior approval from the credentials committee - another recognised expert. The role of the supervisor is to provide guidance and training in diagnostic imaging as it applies to the Equine Dental patient.

Training in this discipline is an extremely important component of the three year training program. It is essential that the Fellowship candidate be competent in performing or supervising imaging studies, particularly using radiography and ultrasonography, and is able to perform the immediate and timely interpretation of findings, correlate these studies with clinical findings and make appropriate decisions for determining the treatment of the patient. A methodical and thorough approach to interpretation of images must be developed.

Topics to be reviewed throughout the training program, and techniques to gain practical experience with, include but are not limited to the following as they apply to the equine dental patient:

Principles, indications, limitations, application and interpretation of the following imaging modalities:

1. Radiography including digital radiography, contrast radiography and fluoroscopy
2. Ultrasonography including ultrasonography of the musculoskeletal system, abdomen and thorax
3. Nuclear scintigraphy
4. Computed tomography (CT)
5. Magnetic resonance imaging (MRI)
6. Storing images and construction of reports

Training in the related discipline of Anaesthesia, Pain Management and Critical Care

The 80 hours of training must be directly supervised by a Fellow of the ANZCVS (Anaesthesia), Diplomates of the ECVA or ACVA, or exceptionally - and with prior approval from the credentials committee - another recognised expert. The role of the supervisor is to provide guidance and training in the discipline of anaesthesia, pain management and critical care as it applies to the equine dental patient.

Topics to be reviewed throughout the training program and techniques to gain practical experience with include but are not limited to the following as they apply to small animal surgical patient:

1. Review of basic physiology-cardiovascular physiology, respiratory gas transport, the GI barrier; regulation of arterial blood pressure, blood and ECF volume, local control of blood flow
2. Review of pathophysiology-infection and inflammation, fever, sepsis and SIRS, disorders of haemostasis, multi-organ failure

**Critical care**

- Fluid and electrolyte disorders and their therapy
- Electrolyte disorders and their therapy
- Acid base disorders and their therapy
- Blood component therapy
- Nutrition and metabolism in critically ill surgical patients
- Vascular access
- Haemodynamic monitoring
- Disorders of circulatory flow; haemorrhage and hypovolaemia, colloid and crystalloid resuscitation, cardiac failure
- Monitoring the critically ill patient

**Pain management**

- Basic physiology of acute and chronic pain
- Pathophysiological effects of pain in small animals
- Recognition and monitoring of pain in small animals
- Prevention and control of pain: pre-emptive analgesia, post-operative analgesic techniques, management of acute (including post-operative) and chronic pain
- Alternatives for pain management in the equine: drugs administered systemically (including as continuous rate infusion). Drug actions and interactions, indications and contraindications, and potential adverse effects.

**Anaesthesia**

- Pre-operative assessment and patient preparation: pre-anaesthetic evaluation and premedication
- Equipment used in general anaesthesia delivery and monitoring
- Pharmacology of drugs used for sedation/ tranquilization, analgesia, muscle relaxation and anaesthesia. Drug action and interaction. The effect of drugs on gastrointestinal motility, the cardiovascular and respiratory systems.
- Application of analgesic techniques before, during and after a surgical procedure and knowledge of their influence on the course of anaesthesia
Anaesthesia induction, maintenance and recovery techniques in the equine

Tranquilization and anaesthesia in the equine

Airway maintenance, oxygenation and ventilation, acute respiratory failure

Special anaesthetic considerations: anaesthesia of the neonate, geriatric patient, patient with systemic disease (eg. SIRS), neurological, renal, liver or respiratory disease and the trauma patient. Anaesthesia of the equine with acute abdomen and other acute abdominal surgeries

Monitoring during anaesthesia, effects on the respiratory and CV systems and support of these systems during anaesthesia

Prevention and management of anaesthetic accidents and crises

Post anaesthetic complications including the prevention, diagnosis and management of post-anaesthetic lameness in the equine

Current techniques used during recovery from general anaesthesia

Local and regional anaesthesia techniques used in the equine including dental nerve blocks, epidural and spinal anaesthesia.

FURTHER INFORMATION

For further information contact: The College Office

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