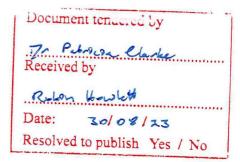# ADVANCED SKILLS for HIGHER EDUCATION VETERINARY ALLIED HEALTH PROFESSIONALS

10 April 2022

This draft Skills List represents the potential capabilities of the higher education (HE) graduate veterinary technician/veterinary nurse equipped with the knowledge, skills and attributes at the Australian Qualifications Framework Level 7—underpinned by the graduate attributes of an in-depth knowledge of their field, higher order communications skills, critical thinking, problem-solving, creativity, research skills, and a capability for inclusivity and using evidence-based practice.

In addition to this 13 Domain Skills List, all HE graduate veterinary technicians/veterinary nurses will meet the requirements of the Veterinary Nurses Council of Australia Day One Competency Standards and Day One Skills.

This Skills List has the capacity to provide the much needed level of support for veterinarians in times of a veterinarian shortage and practitioner burn-out, coupled with the demands of the increasing complexity of veterinary medicine, modes of service delivery, and societal expectations. These skills also serve as a foundation to differentiate the HE veterinary technician/veterinary nurse from the vocationally qualified veterinary nurse, and very importantly, enhance career pathways and opportunities for vocational veterinary nurses analogous with other health professions. In consultation with key stakeholders, HE curricula including skills development would continue to evolve in line with advances in veterinary medicine and societal needs.

PLEASE NOTE:

This is a sample of a proposed list of skills for which higher education graduate veterinary nurses and veterinary technologists ('veterinary technicians') could be trained. A number of the higher order skills would have to be endorsed in legislation.

These skills are based on the Essential Skills List of the American Veterinary Medical Association's Committee for Veterinary Technology Education and Activities.

https://www.avma.org/education/center-for-veterinary-accreditation/committee-

DOMAIN 3: ANIMAL WELFARE

Decision-making abilities:

The graduate veterinary technician/veterinary nurse will have knowledge of and understand how community values and science have progressed the welfare of animals from chattels to valued sentient beings and be able to communicate the benefits of sound animal welfare to animal owners and the community.

No.	Skill	Comments
1	Demonstrate knowledge and understanding of the progression of animal welfare standards through to animal sentience legislation in small and large animals	CORE
2	Demonstrate knowledge of the five freedoms and how they relate to commercial livestock production as well as domestic and exotic pets and zoos	CORE
3	Demonstrate knowledge of the animal welfare challenges applicable to all pet and livestock industries in Australia. This includes but not limited to puppy and kitten production, pet shops, captive native birds and reptiles, intensive production animal industries, free range production live animal export and inappropriate use of animals for any purpose (may include jumps racing, circus, rodeo, endurance riding, wildlife conservation etc.)	CORE

DOMAIN 4: PHARMACY & PHARMACOLOGY

Decision-making abilities:

Under veterinary supervision, the graduate veterinary technician/veterinary nurse will demonstrate the following abilities to maximise a drug's therapeutic benefits to the patient and to minimise the potential for adverse drug effects in companion animals, production animals and wildlife species.

No.	Skill	Comments
1	Classify drugs and chemical agents used in the therapy of companion animals and livestock and explain their physiological and pharmacological effects in different body systems	CORE
2	Explain the key mechanisms of the pharmacokinetics and pharmacodynamics of commonly used veterinary drugs and apply to drug usage in veterinary therapeutics	CORE
3	Effectively communicate drug information to clients (e.g., handling, storage, administration, side-effects, drug interactions, safety, reasons for use of drug)	CORE
4	Demonstrate the ability to monitor therapeutic responses to drugs and their and adverse effects	CORE
5	Administer and accurately record controlled drugs (S8) under veterinary direction and according to State legislative requirements	CORE

DOMAIN 8: ANAESTHESIA

Decision-making abilities:

Given the characteristics of the anesthetised patient and the procedure being performed, the graduate veterinary technician/veterinary nurse will <u>work with the veterinarian</u> to:

1. Assess the patient's risk status and determine appropriate anaesthetic and peri-anaesthetic protocols to provide effective pain management and maximum anaesthetic safety and effectiveness.

2. Choose and utilise appropriate techniques and equipment to accurately and effectively monitor the patient's ongoing status before, during and after anaesthesia to provide for adequate anaesthesia, analgesia and a safe recovery.

No.	Skill	Comments
1	Perform patient intubation (dog, cat) under veterinary supervision	CORE
2	Perform patient intubation (exotics, avian)	YEAR ONE
3	Create an anaesthesia plan in consultation with the veterinarian including pre-anaesthesia patient examination and assessment (using ASA guidelines), anticipated anaesthesia and procedural considerations, drug and support therapy, and monitoring along post-anaesthesia and recovery plans.	CORE
4	Induce general anaesthesia in small animals under veterinary direction (on premises) and following practice protocols	YEAR ONE
6	Perform local nerve blocks as part of a pain management plan in consultation with the veterinarian	YEAR ONE
7	Perform epidural anaesthesia in consultation with the veterinarian	YEAR ONE
8	Maintain and operate a ventilator	YEAR ONE
9	Evaluate patient and implement pain management protocols under veterinary supervision	CORE
10	Recognise and respond appropriately to patients in compromised states	YEAR ONE
11	Perform appropriate resuscitation procedures as needed (e.g., calculate and administer appropriate anaesthetic antagonists and emergency drugs as directed by veterinarian)	YEAR ONE
12	Work effectively as part of a resuscitation team, actively contributing and following directions	CORE

DOMAIN 11: DIAGNOSTIC IMAGING

Decision-making abilities:

1. Given the characteristic of the patient and the imaging study that has been requested, the graduate veterinary technician/veterinary nurse will work autonomously in producing diagnostic radiographs, and perform basic ultrasound scanning under veterinary supervision.
2. The graduate veterinary technician/veterinary nurse will perform routine care and maintenance of diagnostic imaging equipment.

No.	Skill	Comments
1	Demonstrate a sound understanding of the hazards relating to ionising radiation and ultrasonic pulse waves	CORE
2	Demonstrate knowledge of and apply protocols to maximise safety when using ionising radiation or ultrasound equipment	CORE
3	Successfully complete all theoretical and practical training to meet legislative requirements for a licence to use diagnostic X-ray equipment for veterinary radiography	CORE
4	Independently operate radiographic equipment to produce diagnostic radiographic images of dogs, cats and exotics	CORE
5	Independently perform ultrasound for basic scanning procedures in small and large animals e.g. bladders in ECC	YEAR ONE
6	Use ultrasound guided techniques to perform AFAST and TFAST assessments	YEAR ONE
7	Perform ultrasound guided cystocentesis	YEAR ONE
8	Utilise dental radiographic equipment to produce diagnostic intra-oral full mouth dental radiographic images (dog, cat)	YEAR ONE
9	Perform care and basic maintenance of ultrasonography equipment	CORE
10	Perform care and basic maintenance of endoscopic equipment	CORE
11	Perform radiographic contrast studies - GI series - Pneumocystogram - Intravenous pyelogram Year One	Postgraduate studies
12	Perform CT, fluoroscopy, MRI, scintigraphy	Post graduate studies

DOMAIN 12: LARGE ANIMAL PROCEDURES

Decision-making abilities:

The graduate veterinary technician/veterinary nurse will demonstrate an in-depth knowledge of, and safely perform, a range of procedures with minimum stress and maximum safety.

General

No.	Skill	Comments
1	Effectively auscultate heart and lungs of horse, cow and goat to a graduate standard	CORE
2	Calculate dose rates and administer parenteral injections (SC, IM, IV) under veterinary supervision	CORE
3	Perform nasogastric intubation in cow and horse (adults and neonates) under veterinary supervision (routine husbandry technique)	CORE
4	Perform syringe dosing (ruminants and horse)	CORE
5	Apply equine tail and leg wraps	CORE
6	Perform nursing care of the recumbent patient	CORE

Reproductive

No.	Skill	Comments
1	Perform pregnancy testing/scanning	YEAR ONE
2	Perform metrichecking (identifying cows with endometritis)	YEAR ONE
3	Perform AI in cattle	CORE
4	Administer dry cow therapy including the application of intramammary medications under veterinary supervision	CORE

Special applications

No.	Skill	Comments
1	Demonstrate knowledge of and perform dehorning & disbudding (cows, goats) including nerve blocks under veterinary supervision	CORE
2	Trim hooves ((ruminant and horse)	CORE
3	Float teeth (horse) under veterinary supervision	YEAR ONE

DOMAIN 13: RESEARCH & PROFESSIONAL DEVELOPMENT

Decision making abilities:

To be able to understand and perform clinical and investigative research utilising research processes, methodology and statistics. Be able to interpret scientific results and translate into clinical or industrial applications.

No.	Skill	Comments
1	Understand and apply skills for the acquisition of data for a determined research question utilising laboratory research techniques and clinical skills for research and development. (e.g. putting together a simple research proposal with a question)	CORE
2	Perform statistical analysis on data sets and define and use basic epidemiological concepts to assess contemporary problems within the animal industries	CORE
3	Demonstrate knowledge of research laboratory techniques (PCR, basic assays, genetic testing) and identify when each technique is to be utilised	CORE
4	Interpret scientific literature to identify new and novel treatments or findings	CORE
5	Academic Literacy: Compose scientific literature containing peer-reviewed research relevant to a given topic Interpret scientific literature to identify new and novel treatments or findings.	CORE