Introduction

The quality of veterinary training is achieved by the concerted action of a series of steps during learning by the students. Very often, quality of learning (and, indirectly, of teaching) is translated into the concept of the competence of the graduate, e.g. the graduate is sufficiently qualified to properly perform the tasks associated to the degree awarded by the educating Establishment. This concept is clearly embraced by the Directive 2005/36/EC when establishing the requirements for knowledge and skills to enable veterinarians to perform all their duties (Annex V: Veterinarian, 5.4.2.). The Directive is also very clear in establishing that the educating establishment should assure that the person in question has acquired the following knowledge and skills (Article 38, point 3).

The essential competences have been broken down into three main areas:
A. General professional skills and attributes
B. Underpinning knowledge and understanding
C. Practically-based veterinary competences (describing the basic practical competences that are expected at the point of graduation, and following an extended period of further professional training in practice).

A. General professional skills and attributes

The new veterinary graduate should be able to:

A.1. Know the ethical and deontological regulations of veterinary activity in force, in Portugal and in the European Union, and act in accordance with legal and professional responsibilities.
A.2. Be aware of the ethical responsibilities of the veterinarian in relation to individual animal care and client relations, and also more generally in the community in relation to their possible impact on the environment and society as a whole.
A.3. Use one’s professional capabilities to contribute as far as possible to the advancement of
veterinary knowledge in order to benefit veterinary practice and further improve the quality of animal care, animal welfare, and veterinary public health (evidence based medicine).

A.4. Ensure that the animal is in harmony with the environment that surrounds it.

A.5. Know the institutions, official bodies and others that regulate or oversee activities related to veterinary services in Portugal, in the European Union and in the world.

A.6. Have an elementary knowledge of the organization and management of a veterinary practice, including:

a) Know, as an employee or employer, the legislation about health and safety at work and also civil responsibility;

b) Knowing the legal requirements and best practices that guide the development of medical records and records related to the use of veterinary medicines;

c) Know how fees are calculated and invoices drawn up, and the importance of following good practices for record keeping, book-keeping and clinical cases in both paper and computer;

d) Ability to use information technology effectively to communicate, share, collect and analyze information.

A.7 Communicate effectively with clients, the lay public, professional colleagues and responsible authorities; listen effectively and respond sympathetically to them, using language in a form appropriate to the audience and the context.

A.8 Know how to prepare clear case reports and maintain patient records in a form satisfactory to colleagues and understandable by the public.

A.9 Understand the need and professional obligation for a commitment to continuing education and training, and professional development, throughout one’s professional life.

A.10 Develop self-assessment skills and adaptation to evaluation by peers, recognizing when and from where to seek professional advice, assistance and support.

A.11 Work effectively as a member of a multi-disciplinary team.

A.12 Be able to cope with uncertainty and adapt to change.

A.13 Be aware of the economic and emotional climate in which the veterinarian operates, and respond appropriately to the influence of such pressures.
B. Underpinning Knowledge and understanding

The new veterinary graduate will need to have acquired a thorough knowledge and understanding of the following:

B.1 The sciences and techniques on which the activities of veterinarians are based.
B.2 Research methods and the contribution of basic and applied research to all aspects of veterinary science.
B.3 Forms of data collection, data processing and interpretation.
B.4 The structure and functions of healthy animals and their husbandry
B.5 Legislation relating to animal welfare (including transport).
B.6 The etiology, pathogenesis, clinical signs, diagnosis and treatment of the most common diseases affecting domestic animals.
B.7 Medicines legislation and guidelines on responsible use of medicines.
B.8 The principles of disease prevention and the promotion of health and welfare.
B.9 Veterinary public health issues including zoonoses.
B.10 The legislation on animal health, in particular notifiable diseases.
B.11 Methodological processing bases of foodstuffs of animal origin.
B.12 The evaluation methodologies for food of animal origin and fraud detection.
B.13 The national and Community legislation on veterinary measures relating to the prevention and control of foodborne risks to human health.
B.14 Sanitary inspection activities in the slaughter of domestic ungulates, poultry, lagomorphs and game as well as the decisions to apply.
B.15 Environmental issues related to medical activity, including management and treatment of liquid and solid waste.

C. Practical Competences

The new veterinary graduate should be able to undertake the following:

C.1 Obtain a complete accurate and relevant history of the animal or group of animals, as well as its/their management and environment.
C.2 Handle and restrain an animal safely and humanely, and instruct others in performing these techniques.
C.3 Perform a complete clinical examination.
C.4 In an emergency, perform first aid procedures and basic life support, including \textit{haemorrhage} management, injuries, breathing difficulties, eye and ear damage, unconsciousness, deterioration of clinical conditions, burns, tissue and internal organs damage and \textit{resuscitation procedures} in all animal species.

C.5 Assess correctly the nutritional status of an animal and be able to advise the client on principles of husbandry and feeding for the species.

C.6 Select the complementary diagnostic methods most suitable for the considered set of differential diagnoses, according to their usefulness, cost and benefit, able to adapt to the clinical status of the animal, as well as the economic and emotional conditions of the clients.

C.7 Use the technical equipment for complementary examination (radiology, ultrasound and others) safely and according to the law.

C.8 Collect, preserve and transport samples, perform standard laboratory tests, and interpret the results of those generated in-house, as well as those generated by other laboratories.

C.9 Follow correct procedures after diagnosing infectious, notifiable and zoonotic diseases.

C.10 Know and access the appropriate sources of data on licensed medicines; prescribe and dispense medicines correctly and responsibly in accordance with relevant legislation and ensure that medicines and waste are safely stored and/or disposed of (in accordance with applicable standards).

C.11 Correctly apply the principles of cleaning and disinfecting of facilities, sterilization of surgical equipment and of aseptic surgery.

C.12 Apply properly and safely sedation techniques, local, regional and general anesthesia, and know how to assess and control pain.

C.13 Advise on, and administer appropriate treatment.

C.14 Perform correctly and safely, the most common surgical procedures in domestic animals.

C.15 Implement health and animal welfare records, as well as production records, when applicable.

C.16 Plan, implement, execute and evaluate preventive Veterinary medicine and biosecurity programs appropriate to most common domestic animals, according to the accepted standards of animal husbandry, health, welfare and protection of public health and the environment.

C.17 Minimize the risk of contamination, cross infection and accumulation of pathogens in veterinary care facilities and in the field.
C.18 Recognize when euthanasia is necessary and perform it humanely, using appropriate methods, whilst showing sensitivity to the feelings of clients and considering the safety, performance conditions and constraints involved; advise on the disposal of the carcase.

C.19 Perform a necropsy, preparing the respective report, take samples properly according to purposes for which they are intended and store and transport them according to their degree of risk to public health.

C.20 Promote correct processing of animal carcasses and biological waste in accordance with environmental legislation.

C.21 Ensure compliance with the hygienic requirements of facilities, equipment and utensils and staff, the correct execution of slaughter and implement the necessary measures to protect the health of people involved.

C.22 Perform ante and post mortem inspection of food animals and correctly identify conditions affecting the quality and safety of products of animal origin.

C.23 Verify and interpret the information on the food chain, considering them at the time of the ante and post mortem examination.

C.24 Value the need and usefulness of reporting the results of inspections to different operators and official entities.

C.25 Run the official plans of passive and active surveillance for the control and eradication of enzootic and epizootic diseases.

C.26 Ensure proper separation and disposal of by-products.

C.27 Apply quality assurance methodologies, in particular the hazard analysis and critical control points.

C.28 Know and apply the fundamentals of food technology: general manufacturing processes and unit operations.

C.29 Plan and carry out audits to the food business operators, depending on their type, capabilities and estimate risk to public and animal health, by checking the fulfillment of the legal requirements and knowing how to prepare audit reports that include corrective measures.

C.30 Determine the need for further laboratory testing during inspection actions, when needed.