

Continuing professional development for veterinarians in a changing world

B. Wieland ^{(1, 5, 6)*}, C. Daborn ⁽²⁾, N. Debnath ⁽³⁾ & A. Silva-Fletcher ⁽⁴⁾

(1) International Livestock Research Institute, PO Box 5689, Addis Ababa, Ethiopia

(2) Tropical Veterinary Services Ltd, PO Box 266, Karatu, Tanzania

(3) DAI Global, LLC, House 3, First Floor, Road 23B, Gulshan 1, Dhaka 1212, Bangladesh

(4) Royal Veterinary College, 4 Royal College Street, London, NW1 0TU, United Kingdom

(5) Institute of Virology and Immunology, Sensemattstrasse 293, 3147 Middelhäusern, Switzerland

(6) Department of Infectious Diseases and Pathobiology, Vetsuisse Faculty, University of Bern, 3012, Bern, Switzerland

*Corresponding author: barbara.wieland@ivi.admin.ch

Summary

The veterinary profession has time and again successfully adapted to new challenges and developments, with considerable evolution of the skills needed. Different contexts, production systems and societal requirements continue to shape the profession, resulting in an increasing demand for specialisation, interdisciplinary collaboration along value chains, and preparedness for the omnipresent risk of emerging diseases.

To keep up with changes, new insights, advances in research and novel ways to address challenges, continuing professional development (CPD) and the adaptation and updating of the veterinary curriculum have been essential to maintain and enhance the quality and performance of Veterinary Services.

This paper reviews actors involved in the provision of Veterinary Services and discusses how vital CPD is in addressing current and future challenges, by focusing on veterinarians and allied veterinary professionals. The authors examine how providers of CPD contribute to the system and how the internal and external factors of a cohort or individual affect the quality and impact of capacity development. The paper further examines the landscape of veterinary CPD in terms of organisational structures, pedagogical approaches, the transition from input- to outcome-based learning, modern delivery tools, and the demands on the different actors involved in the delivery of animal health services.

The authors conclude that CPD is essential if the quality of Veterinary Services is to keep pace with the ever-increasing and evolving demands of the 21st century. A CPD programme should therefore be constructed in a way that is tailored to the needs of veterinary professionals and to the requirements of their workplace, whether they work with animal keepers, livestock value chains, national governments or international regulatory bodies. An optimised and successful veterinary sector requires an evidence-based CPD programme that keeps those professionals who are involved in the delivery of animal health services both competent and relevant in a changing world.

Keywords

Allied veterinary professionals – Continuing professional development – Curriculum – Education – Professional development – Training – Veterinary continuing professional development – Veterinary curriculum – Veterinary para professionals.

Introduction

History shows that the veterinary profession has evolved over time and successfully adapted to new challenges and developments. Transformations in production systems and related value chains, increased regulation linked to the growth in cross-border trade of livestock and

their products, evolving societal and ethical values, new diseases and globalisation have all led to the need for specialisation, collaboration across different disciplines and professionalisation of Veterinary Services. Adjustments to veterinary curricula have been necessary to address the need for new knowledge and skills, but often these take time to materialise. Continuing professional development

(CPD), ‘the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for execution of professional and technical duties throughout the individual’s working life’ (1), for veterinarians and allied veterinary professionals (also referred to as para professionals), provides a more rapid route towards updating the knowledge and skills required to address demands for new competencies.

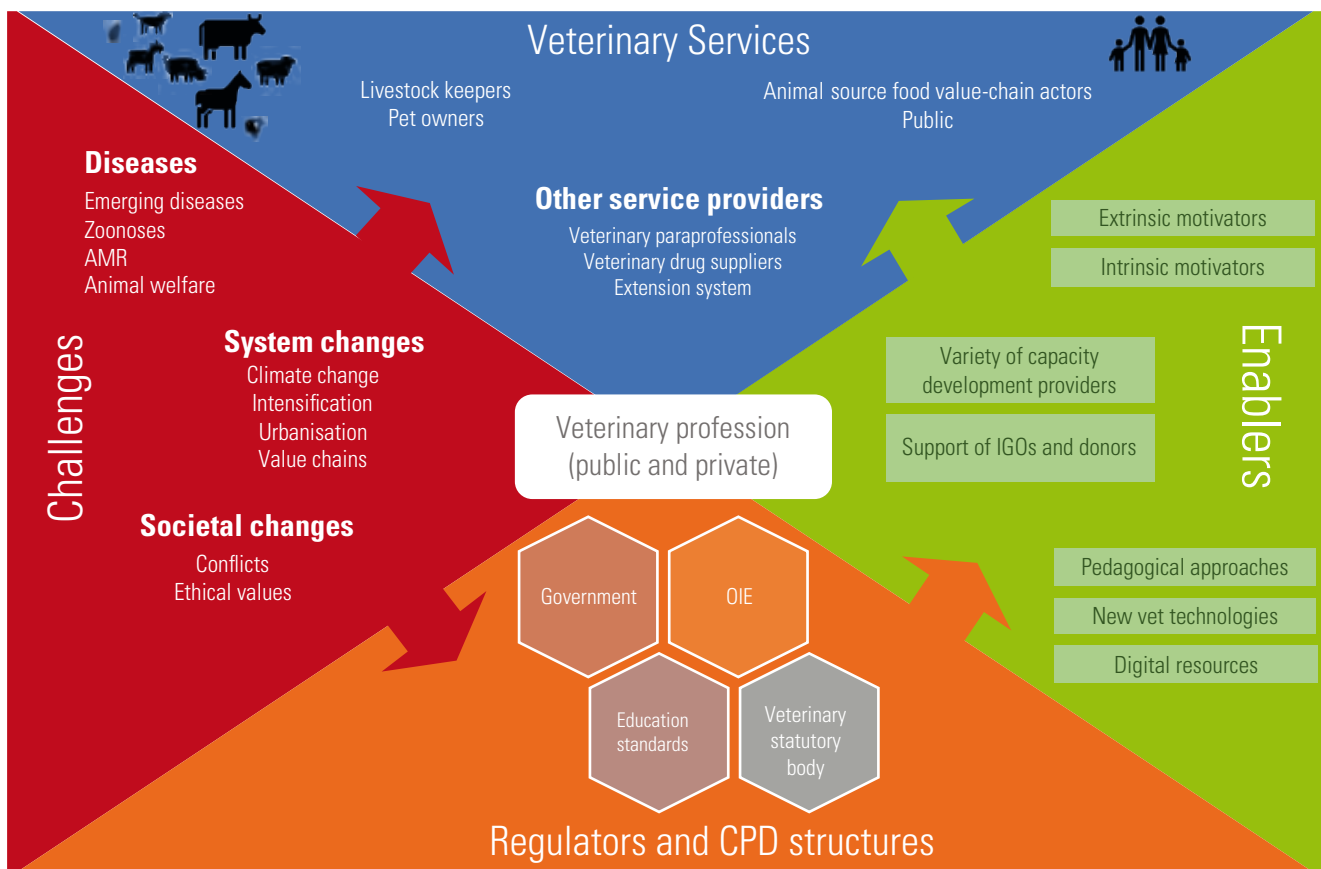
As outlined in Figure 1, the veterinary professional is positioned between the demand from customers for quality veterinary inputs and services, the need to address current and future challenges, regulations that oversee the quality of Veterinary Services, and education providers. Veterinarians and veterinary para professionals are also influenced by intrinsic and extrinsic factors that affect career-long learning. Building on evidence and examples from countries in the Organisation for Economic Co-operation and Development (OECD), as well as low- and middle-income countries (LMICs), the authors discuss possible CPD structures and approaches to address the links presented in Figure 1 and to move from input-based to outcome-based learning.

Actors and skills required for the delivery of Veterinary Services

In accordance with the standards of the World Organisation for Animal Health (OIE), areas considered within the veterinary domain include clinical services; herd-health management; food safety of animal-derived foods and meat inspection; the prevention, control and eradication of infectious diseases; and animal welfare.

Identification, traceability, and the implementation and oversight of animal-health-related regulations linked to livestock production and trade in livestock and livestock products comprise another essential area of the veterinary domain.

Whilst veterinarians from countries in the OECD are largely engaged in the private sector for the purpose of delivering private-good clinical services, veterinarians in LMICs are mostly engaged in the public sector, administering public-



AMR: antimicrobial resistance
 IGOs: international government organisations

Fig. 1
Context in which veterinary continuing professional development (CPD) takes place

good services that address a broader mix of areas in the veterinary domain. This diversity is not reflected in the current pool of CPD learning resources. Those resources available are market driven and significantly skewed in favour of the clinical skills required by OECD veterinarians. While the veterinarian plays a central role in providing Veterinary Services, he or she is not the only player and interacts with other service providers in formal or informal ways, with responsibilities that vary from system to system.

This reality is of particular importance in LMICs, where veterinary professionals have team leadership responsibilities that require training skills, so they can cascade their technical knowledge and skills to other livestock value-chain actors. This is essential if an integrated and quality-controlled system of delivering Veterinary Services is to be achieved. Examining livestock-production value chains helps to illustrate the variety of actors involved. These actors play different roles and require specific skills to support the system. The actors and their roles at various nodes in the value chain can be illustrated by the examples of poultry production in Bangladesh and extensive livestock production in Kenya (Table I).

The poultry value chain in Bangladesh is characterised by different levels of complexity, which mainly depend on how many brokers, 'middle-men' and traders are involved (2). Key veterinary challenges in these systems are infectious diseases, biosecurity, and scheduling of vaccinations. Further along the value chain, food safety risks are the main concern.

Veterinary Services are also essential for the extensive systems of livestock production practised in the arid and semi-arid lands of Africa. The multiplicity of environmental constraints, coupled with zoonotic and endemic livestock diseases, causes high levels of morbidity and mortality, particularly in young stock, inhibiting growth rates, creating trade barriers and posing risks to human health. These systems require a combination of sanitary and production-orientated skills, with a focus on the importance of adopting a multidisciplinary interprofessional approach to enhance market access.

Value chains evolve over time and are a reflection of a changing social and economic environment. These changes also require adaptations of veterinary inputs and services along the value chain, with responsibilities shifting between actors or requiring new skills. It is thus important to monitor these changes constantly for the veterinary system of a country to respond and adjust the services and training provided.

Current and future challenges facing veterinary professionals

In the discussion of current and future challenges for the veterinary profession, issues beyond the direct actions of veterinarians or allied veterinary professionals are becoming increasingly important. Through their work, veterinary professionals play an important role in economic development, by contributing to food security, helping livestock keepers to generate their income, and protecting public health through zoonoses control. Besides adapting to changing livestock production systems, which will bring changes to animal health and welfare priorities, veterinary professionals also need to take technological advances on board. All these transitions make a clear case for the importance of veterinary and allied veterinary professionals undertaking CPD.

A Technical Item presented at the 87th OIE General Session in 2019 investigated how external factors, such as climate change, affect Veterinary Services and provided a good indication of future challenges for the profession. The study combined expert opinion and the views of OIE Members, and there was general agreement that the main challenges faced by the veterinary profession are livestock pandemics, antimicrobial resistance, and zoonoses. Also considered important were issues related to intensifying livestock production, food-borne diseases and animal welfare (3). Other areas that need attention are wildlife diseases and aquatic medicine, given the growth of the aquatic sector as a food provider. As seen in OECD countries, with economic development also comes a shift towards more keeping of companion animals, which in turn requires new veterinary skills in emerging economies.

To address these challenges, an increasing level of specialisation, interdisciplinary collaborations along value chains, and climate-smart practices in support of a One Health approach are needed. Continuing professional development and the adaptation and updating of veterinary curricula are key interventions needed to keep pace with these changes, as well as new insights, advances in research and novel ways to address challenges.

Structures of continuing professional development programmes

As outlined above, different contexts, production systems and resources demand different skills of veterinary professionals. The content and organisational framework of

Table I
Simplified livestock-value chains related to animal health, listing the professionals involved and veterinary inputs and services needed, from the point of production to consumption

The two examples given are intensive poultry production in Bangladesh and extensive beef production in Kenya

Value chain	Actors, challenges & skills	Inputs for production	Production/farm	Trading/markets	Processing	Retail
Intensive poultry production, Bangladesh	Actors involved in Veterinary Services provision	Feed providers Veterinary drug sellers Health advisors Researchers	Farmers Private veterinarians Official veterinarians Health advisors Researchers	'Middle-men' and traders at different levels Truck drivers	Slaughterhouse workers Veterinary inspectors	Sales personnel Food safety inspectors
	Veterinary challenges	Veterinary drugs Vaccines Medical feed Knowledge	Neonatal mortality Nutrition Water Husbandry Welfare Epidemics Endemics Zoonoses Metabolic diseases Stock losses Infertility Breeding Biosecurity	Identification and traceability Movement controls Welfare standards Nutrition Water Transport Checkpoints Biosecurity Markets Quarantine Export regulations	Welfare standards Pre-mortem Humane slaughter Bleeding carcasses Traceability Post-mortem Sanitary standards Carcass quality Primal cuts Labelling Cold storage	Sanitary standards Butchery skills Packaging Labelling Marketing/promotion Cold storage
	Veterinary skills and roles	Oversight of medical feed Oversight of drug quality and drug dispensing Vaccine provision Coordination of surveillance and control programmes	Clinical and herd-health services Surveillance and control programmes Outbreak investigation Diagnostics Animal welfare	Health checks Certification Market inspection Animal welfare	Animal welfare Meat inspection Food safety diagnostics	Management of food safety risks
Extensive beef production, Kenya	Actors involved in Veterinary Services provision	Veterinary drug sellers Community animal health workers Private and public veterinarians Researchers	Disease reporters Private and public veterinarians Researchers	Traders Holding ground and/or quarantine personnel Veterinary inspectors	Slaughterhouse workers Veterinary inspectors	Butchers Sales personnel Food safety inspectors
	Veterinary challenges	Veterinary drugs Vaccines Medical feed Knowledge	Mortality of day-old chicks Nutrition and water Husbandry Bird density Welfare Epidemics Endemics Zoonoses Metabolic diseases Stock losses Infertility Breeding	Mixing multiple species Transport Bird density/heat stress Feed/water Biosecurity Export regulations	Humane slaughter Slaughtering skills Infrastructure Halal slaughter Cold chain Contamination Sanitary standards Carcass quality Post-mortem aging	Hygiene Cold chain Post-mortem aging
	Veterinary skills and roles	Disease diagnosis Treatment Prophylaxis production advice	Clinical and herd-health services Disease prevention Managing zoonotic risks Advanced production practice	Market information Disease recognition Health examination Sanitary certification Animal welfare	Pre- and post-mortem inspection skills Carcass grading	Butchery skills Sanitary/hygiene standards

the CPD undertaken in a given country must reflect this diversity, meaning that there is no 'one size fits all' solution. The obligation of a veterinary professional to undertake CPD, as seen in an increasing number of countries, has developed over time. Initially, it was often simply noted within professional codes of conduct as an expected activity. Nowadays, however, it has evolved into more formalised and mandatory systems in which the quantity and quality of CPD that should be undertaken is a stated requirement, especially for veterinarians although less so for allied veterinary professionals. Monitoring these programmes and assessment mechanisms is, in most cases, administered by a Veterinary Board or Council. Improvements have been shown in some CPD programmes – for example, in a large-scale comparative study in the United Kingdom (UK), in which graduates in the 2000s considered mandatory CPD more effective than did graduates of the 1960s (4). Nonetheless, at a global scale, challenges remain.

An independent review of OIE Performance of Veterinary Services (PVS) assessments found that continuing education training and staff development programmes for all technical staff, including veterinarians, allied veterinary professionals and community-based animal health workers, were almost universally poor, with 84% of the countries assessed scoring levels of 1 or 2 on a scale of 1 to 5 for this critical competency (CC) (5). The review noted that CPD was mandatory in only a few countries and that most of the continuing education provided was through *ad hoc* training from international agencies, non-governmental organisations and donors, who tended to focus on their priorities, not necessarily those of the country or livestock producers. Follow-on PVS assessments showed a marginal improvement in continuing education CC scores, but still fell short of level 4, the ideal level of achievement.

The OIE PVS assessments conducted globally show that different types of CPD programmes have been set up in different countries, with varying degrees of success. A considerable amount of evidence from the health professional sector suggests that commonly used 'input-based' CPD activities are ineffective in improving practitioner performance and health service outcomes (6, 7, 8). Traditional input-based teaching for CPD includes lectures that are episodic and non-reinforcing, with minimal interaction between learners and providers, and with too much emphasis on the acquisition of CPD point targets or certificates. Recent developments in CPD emphasise an outcome-based model of learning and consider novel or improved competencies as favourable outcomes (9). This is increasingly being recognised in newly developed CPD programmes, which use assessments and longer-term study projects to ensure quality, and employ traditional credit points to assess whether sufficient training has been completed. Table II provides some examples of old and newly developed CPD programmes.

Modern CPD programmes, including models from the European Board of Veterinary Specialisation and the UK Certificate in Advanced Veterinary Practice (CertAVP), can serve as examples to produce the veterinary specialists needed by economically important livestock value chains outside OECD countries. Twinning programmes offer an opportunity to share such experiences with LMICs. The OIE Veterinary Education Twinning Programme, established in 2013 (10) within the wider OIE initiative to improve the capacity of Veterinary Services in LMICs, has led to 12 twinning projects between a parent establishment (accredited and established) and a candidate establishment (in a developing country, aspiring to international accreditation), with evident success (11).

A weakness in some of the CPD systems adopted is that the learning programme is not focused on an individual practitioner's personal development needs or desired career path, but is simply a points-gathering exercise from attendance at input-based 'CPD events', such as conferences, which cost money to attend. Likewise, while there are often penalties in place, such as deregistration for non-compliance, there are rarely positive incentives, such as salary increments or preferential selection for further training or promotion based on CPD performance. In addition, in some instances CPD is not a requirement for public-sector veterinary personnel, with consequent impacts on their competencies and readiness to consider and adopt new ideas, whereas in other countries, such as Bangladesh, CPD is only mandatory for government veterinarians.

What counts as CPD varies from country to country, trending towards a more expansive attitude, as evidenced by the latest Royal College of Veterinary Surgeons (RCVS) guidance, which states, 'Anything that is relevant to you, as a veterinary professional, can be counted as CPD so it does not have to be clinically related or formal learning'. Equally variable is the method of undertaking CPD, ranging from face-to-face tuition to remote online e-learning, with the latter very much in the ascendancy for relevance, affordability and convenience. While Internet accessibility and speeds can still be challenging in both OECD Members and LMICs, the majority of users in both types of economy enjoy a rapidly improving online experience. This is opening the door to the increased use of digital tools and platforms for information searches, knowledge transfer, the exchange of ideas and communication in general.

Good CPD practice is embodied in formal CPD frameworks that offer CPD credit hours towards postgraduate certificates and/or diplomas, setting the individual learner on a pathway towards recognition and qualification as a specialist in a chosen area of the veterinary domain. Several countries offer pathways towards specialisation in selected subjects open to veterinarians and these tend to be linked to

Table II
Characteristics of examples of veterinary continuing professional development programmes

Country	Name and role of the regulatory body	Who provides CPD	CPD structure (CPs = credit points)	Targeted service providers
UK	Royal College of Veterinary Surgeons www.rcvs.org.uk/lifelong-learning/continuing-professional-development-cpd/	Universities, digital recording platform (1CPD), certified (AVP) assessment providers	VS – 35 hrs per year VN – 15 hrs per year	Veterinary surgeons (VS) Veterinary nurses (VNs)
South Africa	South African Veterinary Council savc.org.za Accreditation and monitoring of CPD activities	Universities, veterinary professional associations, regulatory bodies and accredited service providers	60 CPs per 3-year cycle, of which 20 points must be structured activities	Veterinarians Veterinary specialists Compulsory veterinary community service animal health technicians Laboratory animal technologists Veterinary nurses Veterinary technologists Veterinary physiotherapists
Bangladesh	Bangladesh Veterinary Council bvc.gov.bd	Bangladesh College of Veterinary Surgeons bcvsbd.org/	Board examinations Public veterinarians: 60 hrs per year	Public-sector veterinarians Board examinations to become a Member and Fellow of the College of Veterinary Surgeons
USA	Association of American Veterinary Medical Colleges www.aavmc.org Continuing education credits as mandated by the state	Universities, veterinary professional associations, regulatory bodies and accredited service providers	Examples: Indiana – 40 hours of CPs per 2 years Idaho – 20 hours of CPs per two years	Veterinarians
Australia	Australian Veterinary Association www.ava.com.au CPD accreditation and monitoring done by individual state veterinary boards	Universities, veterinary professional associations, accredited service providers and Accreditation Program of Australian Veterinarians (APAV)	Example: Queensland – 60 CPs per 3 years At least 15 CPs must be structured activity	Veterinarians
Kenya	Kenya Veterinary Board kenyavetboard.or.ke/cpd/ CPD accreditation and monitoring of CPD activities	Universities, veterinary professional associations, regulatory bodies and accredited service providers	VS – 20 CPs per year VP – minimum of 14 CPs per year Maximum number of CPD hours that can be accredited for 1 day is 8 hours	Veterinary surgeons (VS) Veterinary para professionals (VPs) Formal study for additional qualifications: – short training and organisational activities – professional involvement in professional associations, committees, etc. – publication of scholarly articles in journals and – book chapters – mentorship of students and interns – community service, e.g. extension activities, among others
Namibia	National Veterinary Council	CPD in Namibia mainly organised by the Veterinary Association	VS – 60 CPs per 3 years VP – 30 CPs per 3 years	Structured activities: courses, conferences, preparing and monitoring exams, review articles, giving lectures, developing curricula, promoting theses, online activities with written assessment
Tanzania	Veterinary Council of Tanzania	CPD courses organised by the Tanzania Veterinary Association (TVA) and in association with Zoetis and WSAVA	VS – 30 CPs per 3 years VP – 15 CPs per 3 years	CPD categories include: formal studies, short training and organisational activities, professional involvement, authorship, mentoring, community involvement
Mexico	National Council for Veterinary Medicine Education (CONEVET) No details regarding CPD accreditation and monitoring of CPD activities	CONEVET accredits colleges and certifies professionals (there are 40 veterinary schools)		

AVP: advanced veterinary practice

CE: continuing education

CONEVET: National Council for Veterinary Medicine Education

CPs: credit points

CPD: continuing professional development

UK: United Kingdom

USA: United States of America

VN: veterinary nurse

VP: veterinary para professional

VS: veterinary surgeon

WSAVA: World Small Animal Veterinary Association

professional postgraduate programmes offered by veterinary schools, such as the programmes offered in Nigeria leading to the award of a fellowship of the College of Veterinary Surgeons (www.lasu-info.com/2019/06/cvsn-postgraduate-admission-form.html). Other programmes fulfil the given criteria for recognition as a specialist, such as those listed by the South African Veterinary Council (www.savc.org.za/). Similarly, in Asia, the newly established Bangladesh College of Veterinary Surgeons offers fellowship status through a board examination process (bcvsgbd.org).

In addition to the introduction of systems to monitor and assess compliance with CPD requirements, some countries appraise the quality of a given CPD programme, delivered by a CPD provider, to certify that it is current and meets fundamental quality and relevance standards (Table II). This can be the function of a given country's Veterinary Board or Council, as is the case in Kenya, where the Kenya Veterinary Board requires that every continuous professional development provider must be registered with the Board and apply for approval and determination of the worth (in credit points) of the intended activity (kenyavetboard.or.ke/continuous-professional-development-cpd/). Elsewhere, this process is coordinated through an independent regional authority, as is the case with Veterinary Continuous Education in Europe (VETCEE), which runs an accreditation scheme for structured CPD for veterinarians (www.fve.org/vetcee/).

Enablers of continuing professional development

The CPD programmes that focus on the individual learner need to take other factors into consideration that are essential for making a change. Veterinary Services are social acts that take place in highly complex systems, involving different actors, and thus require a team approach to training (12).

When considering CPD for different actors in the value chain, different skills and competencies must be identified. The underlying pedagogical approaches should also reflect these differences. Although all the actors in the value chain can be considered adult learners, the same andragogical (i.e. adult learning) assumptions and principles (13, 14) cannot be applied to all of these students, given the likely differences in their levels of academic development and working perspectives. Some veterinary professionals in the value chain may have an interest in their own development and an ability for self-directed learning (15). They may also be more experienced in learning and assessment. The same cannot be assumed for other actors in the value chain, for example, farmers or community animal health workers. They may have a wealth of 'hands-on' experience

and are looking for CPD training appropriate to help solve immediate and practical problems. All actors, however, have the common need to balance the demands of work with CPD. They require bespoke training that is directly related to their individual and employer needs. Designing and delivering effective CPD requires an in-depth understanding of the problems *in situ* and the social and economic barriers facing potential trainees (16, 17). Arguably the most effective form of CPD is through a system of 'learning by doing', in which applied study is undertaken to enhance knowledge and skills in the work being performed or the area of intended specialisation. Ideally, this form of learning should be mentored by an appropriate expert and work assignments assessed and formally reviewed. There is a 'win-win' opportunity for such experts, usually employed by academic and research institutions, to become actively engaged in updating their own knowledge base by mentoring practitioners towards acquiring expertise in their chosen field of study.

Another model for the delivery of CPD to other actors involved in providing Veterinary Services can be built around a system of recognition and support for veterinarians who cascade new skills and knowledge to allied veterinary professionals, who in turn cascade them to community-based personnel. This approach has both practical and cost-efficient benefits, and merits being widely adopted as the CPD method of choice for livestock value chains and extensive livestock production systems. Inherent in this approach is the need for 'training of trainer' skills and an understanding of the pedagogical approaches appropriate for and sensitive to language barriers and illiteracy, adult learning and the environment in which these 'training of trainer' skills are best imparted. This approach can, for example, be integrated into CPD programmes for veterinarians, and practised across various systems of delivery, including face-to-face teaching, online teaching and workplace environments. Peer guidance for 'on-the-job training' and 'learning by doing' has the added value of strengthening interprofessional working relationships, enhancing complementarity, and reducing conflict over roles and responsibilities.

It is well established that reflection is an important component in learning for personal and professional development (18, 19, 20). In addition, it is sometimes necessary to 'unlearn' some behaviours and beliefs in order to develop and improve (21). Reflections by the student on their own assumptions and practice are therefore essential in CPD. Developing reflective practitioners is the central philosophy of the new approach proposed for CPD by the RCVS in the UK. This new programme, which builds on the four-stage model of self-assessment, career exploration, decision-making and implementation planning, is used in training medical graduates (22). Under this framework, the way in which CPD compliance for veterinarians

and veterinary nurses is assessed has changed, with the introduction of a new outcome-based learning model. This outcome-based approach comprises four elements – ‘plan, do, record and reflect’ – with a focus on the quality, impact and relevance of the CPD being undertaken (23). Setting out a CPD plan and providing a written or oral reflection on the learning impact once it has been completed are key innovations introduced by the new assessment model. The reflective element on the learning impact seeks information on:

- how well the CPD related to the learning needs and CPD plan
- what key things were learned
- what impact the CPD has had, in terms of professional development or work performed.

Evidence from other health professionals also provides support for this approach (24).

Novel CPD structures also allow different modes of delivery, such as face-to-face workshops, online courses (25), Webinars combined with discussions, recorded lectures, podcasts, audio-based radio programmes, and blended learning approaches based on face-to-face workshops and hands-on training. Mobile phones or Web-based platforms offer new opportunities to avoid heavy bureaucracy in monitoring the progress of registered veterinarians in their CPD. Such an example is the ‘1CPD’ recording platform in the UK (www.rcvs.org.uk/lifelong-learning/continuing-professional-development-cpd/access-1cpd/).

Successful models using participatory approaches have also been described from the health sector (16, 26). Continuing professional development for the veterinary sector is designed and delivered by private corporations, universities, international organisations and relevant government departments (see Table II for examples). The trainers who develop CPD for field veterinarians are often university-based educators and researchers, and they sometimes lack the same in-depth understanding of *in situ* issues. These trainers are, however, well placed to develop the confidence and skills in field veterinarians to construct their own knowledge, which then influences their practice (27).

A cost-efficient method for face-to-face workshops was found in Bangladesh, in the form of a conference, which brought together hundreds of veterinarians with different job descriptions (28). The conference consisted of plenary sessions and specialised lectures on relevant topics for the evolving veterinary sector in the country. Although interactive, face-to-face workshops, based on hands-on practice, are considered more effective in CPD delivery, distance learning has been evaluated as a satisfactory

method of learning for health professions (29), offering the opportunity to access training materials from different countries and allowing more flexibility. The benefits of veterinary CPD distance learning have been recognised at both the personal and societal level (30). There is a wealth of information available to support self-study, accessed by online search engines. These channels depend on the speed, distribution and affordability of Internet services available, which can be variable and challenging in both OECD countries and LMICs (though, as noted above, less and less so as the technology driving these services continues to rapidly improve). The Commonwealth Veterinary Association provides a comprehensive list of online self-learning sites (www.commonwealthvetassoc.com/links/). Other CPD opportunities are provided by more than 60 OIE Collaborating Centres, which offer scientific expertise and training opportunities, either within countries or globally, on a variety of topics relevant to the veterinary sector (www.oie.int/en/what-we-offer/expertise-network/collaborating-centres/).

When planning and running CPD programmes, it is important to understand the motivation of trainees to participate in the programme. These factors can be classified as extrinsic and intrinsic motivators (4, 31). Intrinsic motivators relate to self-motivation for professional development and wanting to improve one’s skills and knowledge. Programmes that allow individual preferences to be addressed have a positive impact on the trainee’s motivation. Recent advances in veterinary curricula focus on fostering skills related to lifelong learning, with the aim of strengthening the individual’s motivation to seek CPD, and not having to rely on external motivating factors.

External motivators include penalties or deregistration if CPD targets are not met. Positive external factors could include the prospect of promotion, increased respect and recognition from clients, or receiving payments for participating in and concluding training programmes. Specialisation diplomas and certification are routes by which veterinary professionals can focus their CPD towards gaining specialist status and furthering their careers.

Perceived barriers to participating in CPD include the timing and relevance of events, travelling distance, money, workload, stage of career, family demands, lack of information about available courses, and poor previous experiences (32, 33, 34).

It is also important to note the efforts of the OIE in supporting CPD for veterinarians and veterinary para professionals, by providing guidelines and recommending competencies to prioritise. This has also helped to focus investment from funders to strengthen such systems in LMICs.

Conclusions

An optimised and successful veterinary sector requires an evidence-based programme of CPD that fulfils the needs of all the actors involved, and society at large. The CPD being undertaken should update, strengthen and be highly relevant to the knowledge and skills required by veterinary professionals and para professionals engaged in the delivery of private- and/or public-good services. Market forces should drive the motivation to use CPD to improve the supply of services to the private sector while incentives, by way of promotion, salary increases and further training, are needed to motivate improvement in supplying services to the public sector.

While it is valuable to employ CPD to achieve set professional and allied professional standards of competency in the workplace, practitioners should be actively encouraged to build on these basic competencies to move into given fields of specialisation, as dictated by market needs, or to face emerging challenges. All actors in livestock value chains must be trained, and identifying and monitoring this training is part of the responsibility of veterinary service providers. Advances in digital tools offer opportunities to access high-quality training, even in remote areas, both in OECD countries and LMICs, but such training will need to undergo regular reappraisal to ensure that it is up to date and relevant for a given setting or country, and that it continues to address the specific needs of a changing world.

La formation professionnelle continue des vétérinaires dans un monde en mutation

B. Wieland, C. Daborn, N. Debnath & A. Silva-Fletcher

Résumé

La profession vétérinaire s'est adaptée à maintes reprises et avec succès à de nouveaux défis et évolutions qui ont nécessité la mobilisation d'un grand nombre de compétences nouvelles. La diversité des contextes, des systèmes de production et des exigences sociétales impose à la profession vétérinaire des transformations continues, avec pour conséquences une demande croissante de spécialisation et de collaborations interdisciplinaires le long des chaînes de valeur et la nécessité de mieux se préparer au risque omniprésent de maladies émergentes. Face aux changements intervenus, aux nouvelles connaissances, aux progrès de la recherche et aux nouvelles manières de relever les défis, la formation professionnelle continue (FPC) et l'adaptation et actualisation des cursus d'enseignement vétérinaire ont joué un rôle déterminant pour maintenir et améliorer la qualité et les performances des Services vétérinaires.

Les auteurs font le point sur les divers prestataires de services vétérinaires et examinent le rôle essentiel de la FPC pour relever les défis actuels et futurs, en mettant l'accent sur les vétérinaires et les professions connexes travaillant en lien avec les vétérinaires. Ils analysent la contribution des fournisseurs de FPC au système de santé animale, ainsi que l'influence sur la qualité et l'impact du renforcement des capacités d'un certain nombre de facteurs internes et externes à l'échelle des cohortes ou des individus. Les auteurs décrivent également le paysage de la FPC dans le domaine vétérinaire et plus particulièrement les structures organisationnelles, les approches pédagogiques, la transition d'un apprentissage axé sur les contenus à un apprentissage axé sur les résultats, les outils modernes de formation et les exigences imposées aux différents prestataires de services de santé animale dans un monde en constante évolution. En conclusion, les auteurs insistent sur l'importance cruciale de mettre en place des dispositifs de formation professionnelle continue destinés au secteur vétérinaire, afin que la qualité des services fournis soit à la hauteur des exigences croissantes et en constante évolution du 21^e siècle. Les programmes de FPC doivent donc être conçus en veillant à s'adapter aux besoins des vétérinaires et des professionnels

des domaines connexes concernant les compétences spécifiques qu'ils doivent déployer en fonction des exigences de leur activité, qu'ils travaillent auprès des gardiens d'animaux, des professionnels des filières issues de l'élevage, des gouvernements nationaux ou des organismes internationaux chargés de l'élaboration de normes. Un secteur vétérinaire optimisé et performant nécessite un programme de FPC fondé sur des données concrètes afin que les vétérinaires et les autres prestataires de services de santé animale puissent maintenir leur niveau de compétences ainsi que la pertinence de leurs interventions au regard des exigences évolutives d'un monde en pleine transformation.

Mots-clés

Enseignement – Formation professionnelle continue des vétérinaires – Paraprofessionnels vétérinaires – Professionnels des secteurs travaillant en lien avec les vétérinaires.



Perfeccionamiento profesional continuo veterinario en un mundo en plena evolución

B. Wieland, C. Daborn, N. Debnath & A. Silva-Fletcher

Resumen

La profesión veterinaria siempre ha sabido adaptarse con éxito a las novedades y nuevos problemas que han ido surgiendo, y que requieren la adquisición de nuevos conocimientos y aptitudes. Los diferentes contextos, sistemas productivos y necesidades sociales siguen configurando la profesión veterinaria y generando una creciente demanda de especialización, de colaboración interdisciplinaria en todos los eslabones de las cadenas de valor y de preparación ante el omnipresente riesgo que plantean las enfermedades emergentes. El perfeccionamiento profesional continuo (PPC) y la adaptación y actualización de los planes de estudios veterinarios han sido factores esenciales para seguir el ritmo de las transformaciones, las nuevas ideas, los avances científicos y las novedosas respuestas a los problemas y, gracias a ello, mantener y mejorar la calidad y el desempeño de los Servicios Veterinarios.

Los autores pasan revista a cuantos agentes intervienen en la prestación de servicios veterinarios y, centrándose en los veterinarios y cuerpos profesionales conexos, exponen la función crucial que cumple el PPC para hacer frente a los problemas de hoy y de mañana. También explican cómo contribuyen al sistema los proveedores de PPC y cómo los factores internos y externos de una cohorte o un individuo afectan a la calidad y la repercusión del desarrollo de capacidades. Además, describen el panorama que ofrece el PPC en veterinaria desde el punto de vista de las estructuras organizativas, los planteamientos pedagógicos, la transición del aprendizaje de asimilación al aprendizaje por resultados, las modernas herramientas de trabajo y las exigencias que deben satisfacer los distintos agentes que intervienen en la prestación de servicios zoonosanitarios en un mundo en plena evolución.

Los autores concluyen que es de la máxima importancia ocuparse del PPC para que los servicios veterinarios dispensados sigan siendo de calidad y respondiendo a las crecientes y mudables exigencias que trae consigo el siglo XXI. Hay que establecer pues un programa de PPC especialmente adaptado a las necesidades de los veterinarios y cuerpos profesionales conexos, pensando en dotarlos de las competencias necesarias para satisfacer los requisitos propios de su lugar

de trabajo, ya obren al servicio de la producción animal, de cadenas de valor ganaderas, de administraciones nacionales o de organismos internacionales de reglamentación. Un sector veterinario optimizado y eficaz requiere un programa de PPC científicamente fundamentado, que sirva a los veterinarios y demás agentes de la prestación de servicios zoonosanitarios para seguir siendo a la vez competentes y útiles ante las cambiantes exigencias que les plantea un mundo en plena evolución.

Palabras clave

Enseñanza – Perfeccionamiento profesional continuo veterinario – Profesionales paraveterinarios – Profesionales relacionados con la veterinaria.



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