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Strategy recommendation for FVE General Assembly

on

Professional Pathways for Veterinary Graduates

by the EVERI / ESLAV Professional Pathways Taskforce

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Report from Task Force on Professional Pathways for Veterinary Graduates

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Executive Summary

The recent FVE demographic survey of the European veterinary profession shows, that the increased production of veterinary graduates makes it important for new graduates to consider new career paths.

EVERI was requested by the FVE General Assembly to look into this issue and a Taskforce was appointed to discuss how a profession in research and industry may become as natural an option for young veterinary graduates as entering into clinical practice. A natural outreach was to invite ESLAV to join the Task Force.

This report lists examples of current measures and new initiatives that can be taken by the FVE and other organizations and institutions in the EU Member States in order to help new graduates to choose career opportunities outside clinical practice.

Introduction and background for the Task Force

In 2014 FVE made a thorough demographic investigation of the European veterinary workmarket¹ (App.1). The report from this investigation showed that the number of veterinary graduates is increasing in many of the EU Member States and that on average 60% (even 80% in some of the countries) of graduates are entering into clinical practice. As the number of production animals and pets is not increasing at a rate that matches the rise in number of new graduates, the result is a surplus of veterinarians in these countries and poorer work conditions and pay. One of the conclusions of the survey is therefore that "With this in mind it is essential that the profession expands its employment horizons and seeks to enter non-traditional roles expanding employment options and opportunities".

The veterinary education is a tremendous asset to its graduates in its capacity of providing them with sound clinical and pathological knowledge of many different animal species coupled with excellent scientific methodology, enabling graduates to think biologically transversally and transcend disciplines Strong competencies in the modern workmarket, making veterinary graduates extremely well equipped to enter research and industry within biological/biochemical sciences such as pharmaceutical development, toxicology and other types of laboratory sciences.

Currently, the best known examples where veterinarians are uniquely qualified are the positions of the Designated Veterinarian in laboratory animal facilities (see Article 15 of Directive 2010/63/EU) or Official Veterinarians in slaughter houses. However, veterinarians are also employed in other fields, where the veterinary background is an excellent fit, e.g. as regulatory or project managers or scientific directors, very often competing with graduates with qualifications in other biological sciences e.g. medical doctors and pharmacists.

Unfortunately, these career options are not considered by many new veterinary graduates and students as job opportunities; either because there is little knowledge of the job opportunities and benefits (such as the much higher wages and better work-life balance) or because the career path of these professions is unclear or students may even be unaware of their assets and feel unqualified for the job position. Also, there may be some stigma associated with following a career working as a laboratory veterinarian in research facilities or working in industry.

On the background that veterinarians, who are members of EVERI have some knowledge of the requirements and opportunities, EVERI was requested by the FVE General Assembly to look into this issue and a Taskforce was appointed to discuss how a profession in research and industry may become as natural and option for young veterinary graduates as entering into clinical practice. A natural outreach was to invite ESLAV to join the Task Force. During the 6 months that the Task Force has existed, the Task Force has held 2 Skype Meetings and a lively correspondence via email with exchange of inputs and documents. EVERI would like to acknowledge the active collaboration of their sister organization ESLAV.

¹http://www.fve.org/news/download/FVE%20Survey%20 contents tforce ex summary.pdf

Suggestions from the Task Force

General comments

In order to increase knowledge and change the attitude of new graduates to exploring alternative career paths to clinical practice, the Task Force agreed that the profession has an important task in explaining that the main role of a veterinarian is to be the advocate for good health and welfare — be that in laboratory animals, production animals or pets or even in humans. Therefore there is every reason that veterinarians should be working with laboratory animals, indeed they are the best qualified to do this job. And this is also the case for looking after animals in slaughter houses, ensuring that food hygiene is optimal or developing new medicines for animals or humans.

The Task Force suggests that in relation to supporting new graduates in seeking and developing their career paths it is important to distinguish between the 3 different TYPES of careers, as the requirements and opportunities are very different for these:

- A career as a **Researcher** (e.g. Principal Scientist), in which it is expected that the graduate has prepared for this career during the veterinary studies (in public institutions usually a PhD is a must for this career option);
- A career as a "Laboratory Practitioner" (i.e. the Designated Veterinarian, Clinical Veterinarian, Animal Facility Manager), in which the veterinary certification is a prerequisite and very specific additional veterinary knowledge and skills² are required in addition;
- A career as a Manager with excellent biological/academic disciplines (pathology, microbiology, virology etc.) working in fields such as regulatory, quality assurance, pharmacovigilance, marketing, related to field the field of pharma/biotech/medical devices industry but also animal welfare, food safety and public health.

To aid clarity of the descriptions of current activities and new initiatives for the 3 career types, the Task Force has divided these into 3 categories:

- 1. *Push effects:* Initiatives to help ensure that veterinary graduates have knowledge of and are interested in a career in industry and research
- 2. *Push effect:* Initiatives to help ensure that veterinary graduates are best candidates and sought out for positions in industry
- 3. *Pull Effect:* Initiatives to help ensure that employers and headhunters e.g. biotechnology industry or in the public sector are aware that veterinary graduates are the best candidates.

²More information on roles and responsibilities of Laboratory Animal Veterinarians and Designated Veterinarians: ESLAV/ECLAM/LAVA/EVERI recommendations for the roles, responsibilities and training of the laboratory animal veterinarian and the designated veterinarian under Directive 2010/63/EU, Poirier GM et al., Lab Anim. 2015 Apr;49(2):89-99

1) Push effect - Initiatives to help ensure that veterinary graduates have knowledge of and are interested in a career in industry and research

Current status activities already in place in EU Member States

- In Denmark and Switzerland, the Veterinary Association hosts evenings for students, at which veterinarians, who have made a career in industry and research give speeches on their career path. Also a mentor partnership program has been established, in which young graduates are mentored by experienced veterinarians on how to develop their career.
- At the University of Munich (Germany), University of Copenhagen (Denmark), and the Veterinary Schools of Lyon and Toulouse (France), and the universities in Italy and Switzerland, once a year an event is organized where veterinarians from different working fields invited to talk about the possibilities offered to vets to work beside classical clinical practice (e.g. marketing, zoo, research etc.).
- Also at the Lyon Veterinary School, a seminar is held in the first 3 days of the curriculum for the 1st year focusing on the greatest challenges offered to humanity, Europe, France: economy, health, global warming, and environment. The students are encouraged to work on the challenges, find and describe them. They have to understand in what extend a veterinarian can be useful or profitable when he is involved in these fields. The university presents several portraits of veterinarians: clinicians, managers, researchers, wild life protectors, quality managers, laboratory animal veterinarians etc.
- Also at the Lyon Veterinary School, a mandatory visit is made of the central animal facility, during which groups of 15 students attend a 1 hour presentation about laboratory animal veterinarians followed by questions. They are told about all research activities in the Veterinary school, then they enter the animal facility and visit it with the designated veterinarian. During these visits university staff insists to get most questions they can ask about what is happening with animals, about rehoming, euthanasia etc. Also students are offered positions as technicians in the central facility (15 students every year). Same initiative was also in place in the Toulouse Veterinary School.
- At universities in Italy orientation meetings are held either during the first years to help students to select the exams and define the graduate curriculum, or in the last year to make them aware of professional opportunities in the job market.
- The British Veterinary Association (BVA) and The Danish Veterinary Association use the internet websites³, ensuring that information regarding biotechnology and careers in industry are readily available on the veterinary organizations in the member countries.
- The Danish Veterinary Association has developed a 'Lifescience Network' with Facebook and LinkedIn groups for students and veterinarians working outside clinical practice to promote exchange of career information and education opportunities.

Proposed initiatives

Overall, to expand the understanding of what it is to be a veterinarian, knowledge of the role that veterinarians may take in relation to public health and the environment and the benefit of the education herein, should be made clear to students. One suggestion is to use the French model

³ http://www.bva.co.uk/ and http://ddd.dk

where students in the first part of the curriculum have to work with the greatest challenges offered to humanity; find and describe them and explain the role of the veterinarian.

The Task Force encourages, that veterinarians in alternative work markets should be profiled (e.g. through video interviews) on possible career development and demonstration of the benefits of this career maybe even linking these to current 'Hot Topics'. These videos could be available on FVE and veterinary organization websites in the different Member States.

The Task Force also encourages increased contact between these veterinarians and students and new graduates e.g. through career workshops or mentorships. This can be organized through the veterinary associations and the veterinary schools.

Also, initiatives should be developed ensure that information on how to take advantage from acquired competencies in the EU work market is shared with students and new graduates to encourage work market mobility.

The Task Force also encourages that veterinary students at an early stage have contact to the field of Laboratory Science through visiting sites and learning of the role of the Designated Laboratory Veterinarian.

In relation to the specific career types described in the introduction, the Task Force suggests the following specific initiatives:

- Career in Research: Actively advice students on how to get a PhD and the following steps, explaining the different possibilities between careers in academia vs. careers in industry, both as a researcher.
- Career as a Practitioner in niche areas (e.g. laboratory animals, fish, mink, bees etc.): Actively
 inform on opportunities, career paths and what kind of competencies are required on Day1
 and how to achieve the specific knowledge and skills to obtain the certification of those
 competencies (e.g. Designated Veterinarian for Lab Animals).
- Career as a Manager: e.g. in industry, animal welfare, healthcare system or food safety: Actively inform on what kind of professional profile are requested, explain opportunities, roles and responsibilities, additional qualification needed and time to achieve, make information available on further education that aids the roles of the veterinarians as facilitators and mediators. Note that roles often taken by veterinarians are interdisciplinary working in the crossfield between education and research, so a suggestion for further education would include subjects such as facilitation and communication.

The Task Force suggests that FVE and veterinary organizations promote networking among young graduates working in industry and research, together other veterinary associations (i.e. ESLAV for Lab Animals Veterinarians) or social media (i.e. groups in Linkedin) should be promoted to increase student knowledge of the career and mobility and networking between member countries.

Initiatives that allow students, during the final year, to do a project in the new professional pathways areas should be encouraged and supported, looking for funding opportunities (grants, awards etc.) from industry and non-profit organization.

2) Push effect - Initiatives to help ensure that veterinary graduates are best candidates and sought out for positions in industry

Current status – general

- The Task Force recognizes that the competences on Day 1 are in general not sufficient to ensure the best qualifications for veterinarians for the fore mentioned profiles in the Industry. Specific trainings for those profiles are very difficult to include in the veterinary curricula, for several reasons, including lack of time, lack of funding and in some countries lack of recognition of the importance of work market such as laboratory animals.
- Further to the point above, training programs for niche areas (such as Lab Animal Science and Medicine) are postponed after graduation, and managed both by public (academia) and private training providers.
- Overall, most training programs are not fit to veterinary career needs, but it is difficult to carry out training events intended only to veterinarians, mainly for economic reasons. Training events are therefore usually aimed at a more diverse audience such as scientists, technicians, biologists, psychologists, zoologists, chemists, physicists and veterinarians, becoming of limited interest for veterinarians, as the level of education is low and too general. These courses are therefore used only to collect the required CPD credits.
- Some training opportunities come from events focused on a specific animal species (e.g. rabbits, rats and other non-conventional pets), so that veterinarians of different fields (practitioners, researchers, etc.) can collect information and keep updated their general competencies but specific aspects (e.g. use in research) are never or merely discussed.
- Obtaining information on the available CPD opportunities is sometimes difficult to collect and thus to share. In some Member States (e.g. Italy), there is a National Registry of the CPD accredited events, but accreditation is not compulsory and not all events are easily available to veterinarians.
- Some post graduate programs (e.g. ECLAM European College of Laboratory Animal Medicine), are so time-consuming, that they are not always compatible with a full time job.
- Professional experience already gained in the working place (e.g. the laboratory) is not adequately acknowledged or integrated in training programs as part of the credits system (i.e. ECTS).
- Training programs are proposed by the veterinary scientific associations, but most of the events are aimed to give basic information (knowledge), instead of real competencies that can be used in the real work life.

Current status – Specific to careers in research and as practitioners in niche fields such as laboratory medicine

- At the University of Munich, one of the facility leaders has initiated a course on laboratory animal medicine, which veterinary students, doctoral students and future lab animal veterinarians can attend. Lessons with general topics on lab animals take place every 2nd week at the veterinary university and there is an accreditation to earn official credential points for visiting the lessons.
- At the University of Copenhagen students may choose to spend the last year of the curriculum, specializing in Biomedicine, with a focus on research and laboratory skills.

- At the University of Copenhagen and University of Lyon, veterinary students are taught the "level C" FELASA. In Copenhagen, this course is mandatory for veterinary student specialized in biomedicine, whereas in France this is as an optional for volunteers in the end of the curriculum.
- In Switzerland all who want to handle laboratory animals in a research program, have to fulfill an education program organized by the University of Zürich. If you want to become a project leader for a laboratory animal reseach program, you need an additional education program organized by the University of Zurich. The Swiss government veterinary organization checks if you have completed this education.
- It is worth to note that the exact definition of competencies needed for specific veterinary roles (i.e. Designated Veterinarian for Lab animals) is still under debate among the scientific associations and the regulatory authorities, based on the consideration that the veterinarian is responsible for his own CPD and this must be adequate to the specific environment (i.e. type of establishment) in which he is requested to work.

Current status - Specific to careers in management

- Further to the points made under the general points, because of the diversity of the opportunities that new graduates have, because of comprehensive biological knowledge and project management skills students are well equipped to cope with most types of positions, however in most university focus on softer skills such as communication and facilitation is low.

Proposed initiatives - general

- Graduates should be aware that qualifications from a university in one EU State Member is recognized in the other EU Member States, including the CPD systems and graduates should be encouraged to make the most of this work market mobility.
- CPD systems should be in place, easily available and communicated both centrally through the FVE and locally through organizations in the individual Member States.
- The Task Force recommends to strengthen the FVE collaboration with Universities/Veterinary Faculties (through EAEVE) to identify potential opportunities for additional training for students that wants to choose the new career pathways
- A list should be created with exact careers opportunities as veterinarians (this list should not be limited and must be updated) with potential training needed: e.g. to work as Marketing Product Manager in veterinary Pharma, having some specific degree from a Marketing school would be an additional asset to veterinary degree.
- The Task Force recommends that the FVE supports the establishment of a European network of experts, together with scientific associations, in order to ensure the best available expertise available to training providers.
- The Task Force recommends that the FVE supports the establishment of an harmonized CPD evaluation system, clarifying the concept of ECTS or "equivalent" and supporting the inclusion/recognition of practical experience in the CPD programs

The Task Force suggests considering the following specific initiatives for practitioners in niche fields:

- The Task Force recommends that the FVE encourage collaboration between the statutory bodies in the EU member countries to set specific guidelines for CPD, as was done for Day One competencies after graduation.
- The Task Force supports the uniform CPD program under development by VetCEE subcommittees (Appendix 4: FVE policy paper on veterinary education). The Task Force supports any initiative that allows for development of a program in which new graduates may join a team and train under the supervision of a qualified veterinarian (as in the case of the Designated Veterinarian in Lab animal medicine).
- Student orientation activities such as the Extra Mural Study Program developed by EVERI could be further expanded through examples to support trans-European networking and workforce mobility.
- Support aligned interpretation and enforcement of the European legislation for concerning the competences for the specific veterinary roles such as the Designated Veterinarian as described in the paper 'ESLAV/ECLAM/LAVA/EVERI recommendation for the roles, responsibilities and training of the laboratory animal veterinarian and the designated veterinarian under Directive 2010/63/EU'.
- The Task Force encourages promotion of the collaboration between educational institutions and statutory bodies across the EU

The Task Force suggests considering the following specific initiatives for practitioners in niche fields:

- Further to the points made under the general points, because of the diversity of the opportunities that new graduates have, it is difficult to pose specific subjects that should be available to veterinary students in order to improve their necessary knowledge of their chosen field of employment. However, the Task Force encourages that subjects that may be needed for positions in management may be made readily available for both new graduates and more experienced veterinarians.

3) Pull Effect – Initiatives to help ensure that employers within public health and industry are aware that veterinary graduates are the best candidates for vacant positions

Current status

In general, initiatives to actively seek to promote employment of veterinary graduates are not well known by members by the Task Force and in some countries such as Italy, industry already has a very good acceptance of the veterinary skills; veterinarians have a very good reputation. However one initiative was discussed:

 In Denmark, the chairman of the Veterinary Organization has visited several companies to discuss skills of the veterinary candidates, both to promote benefits and to learn about wishes that employers seek from their managers.

Proposed initiatives

- There is a need for encouraging stages in the industry, a description of how academic skills fit the industry and public sector requirements – maybe the University or The National Veterinary Associations, such as the "Ordre des Vétérinaires" (Veterinary Order in France) can make this "bridge"?
- The Task Force encourages the enforcement of active and efficient professional associations at the national level. In countries such as France, the "Ordre des Vétérinaires" would not interfere in business if there is not a legal concern. It doesn't work as a trade union, so another type of professional organisation must be developed.
- More involvement of the statutory bodies to help get our message out.
- Creation of registers according to specialisation e.g. Toxicologist register to provide easy access to EU veterinary professionals and promotion of these registers.
- Creation of clear identical messages across the EU on the capabilities of veterinarians.
- The Task Force supports active networking between veterinarians to raise awareness of employers of veterinary skills.

Summary and next steps

In this report, the Task Force has listed a number of initiatives that will hopefully help encourage more new veterinary graduates seek employment in research, practice in niche areas such as laboratory animals and management in the public health or industry sector.

The Task Force encourages the FVE and organizations in the Member States to consider the suggestions for initiatives, some of which are readily addressed and may completed in a short space of time, other will need some planning and require finances. In all circumstances, the Task Forces highly recommends that a small group of people be designated to make a strategic plan for how, and which of, the suggested initiatives should be implemented.