

CONTINUING EDUCATION AND INCORPORATION OF THE 'ONE HEALTH' CONCEPT

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Summary: Sixteen Members of the OIE Regional Commission for the Middle East responded to a survey detailing their awareness of OIE initiatives in training of veterinarians, continuing education programmes, understanding of the concept of 'One Health', whether 'One Health' competencies are being addressed in current educational programmes and the future role of the OIE in veterinary continuing education.

Veterinary medicine continuing education is active in most Members, although very few Members require continue education by law or as a requirement for licensure. Almost all Members are aware of current OIE guidance on 'Day One Graduate Competencies' and 'Veterinary Education Core Curriculum'. Most Members feel that their educational programmes are in compliance with these guidelines. Over half of the Members have a veterinary statutory body and almost all countries have professional medical organisations of one type or another. The Members demonstrated a strong recognition that 'One Health' embodies active collaboration between veterinary services and public health to address zoonotic diseases. Almost half of the Members have implemented action plans for 'One Health' approaches. 'One Health' collaborations already exist in almost all Members for key zoonoses (brucellosis, rabies and tuberculosis), as well as food safety. Although many 'One Health' competencies are addressed, the 'One Health' concept itself is only moderately integrated into continuing education for veterinarians.

Continuing education is delivered through a number of formats such as lectures, panel discussions, field trips and veterinary laboratories, but only half of the responding Members use simulation exercises requiring the application of core veterinary skills and 'One Health' competencies.

Virtually all responding Members would like to see the OIE take a larger role in supportive continuing education for veterinarians through an OIE regional Collaborating Center, developing guidance and standards, twinning programmes and creation of a national focal point on veterinary education.

Keywords: Middle East – 'One Health' – veterinary education – World Organisation for Animal Health (OIE)

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1. Introduction

The World Organisation for Animal Health (OIE) has recognised that veterinary education and continuing education for veterinarians is critical for keeping individuals, institutions, governments and countries current and relevant in ensuring trade of animals and animal products, preventing spread and proliferation of transboundary animal (and human) diseases, as well as, keeping countries competitive in and accessing global markets for goods, services and knowledge [2, 3]. Over the past five years, the OIE has produced recommendations for Competencies of graduating veterinarians 'Day 1 graduates' [2], Veterinary Education Twinning Projects [3] as well as guidelines for Veterinary Education Core Curriculum [6].

The OIE is recognised by the World Trade Organization Sanitary and Phytosanitary Agreement as the international standards setting organisation for safe international trade in terrestrial animals and their products and "protection of human life and health from risks arising from diseases carried by animals" [4]. The OIE has been at the forefront in globalizing the 'One Health' concept as part of a tripartite effort with the World Health Organization and the Food and Agriculture Organization of the United Nations [7]. 'One Health' recognises the importance of collaboration, cooperation and partnership across disciplines and sectors in order to address complex health challenges shared by populations of humans, domestic animals, wildlife and their environments. The concept of 'One Health' is not new and has evolved as the world has grappled with: globalization of trade, information and travel; increased interdependence between countries for knowledge, goods and services; emerging diseases like HIV/AIDS, SARS and avian influenza; and increased recognition that such complex challenges require multi-faceted and equally as complex solutions [5].

The OIE seeks to foster improved global governance of animal health systems and views the 'One Health' interface (the interaction and interdependence of and between humans, animals and ecosystems) as a critical element in addressing global threats like H5N1 avian influenza. In areas related to the animal-human-ecosystem interface, collaboration and cooperation among the various sectors is essential to effective and efficient efforts and the OIE has been working along multiple different avenues to increase the guidance provided to its Members on how to best work at the interface [4].

This report summarizes the results of a questionnaire on "Continuing education and incorporation of the 'One Health' concept" sent to OIE Delegates for the 12th Conference of the OIE Regional Commission for the Middle East.

The questionnaire had two objectives: 1) to gather data related to continuing education / in-service training by Veterinary Services of the Region; and 2) to make a rapid analysis of incorporation of 'One Health' concepts and core competency domains into continuing education efforts.

The aim of this report is to provide a synthesis of the responses from Members and to inform recommendations for incorporation of 'One Health' concepts, skills and competency areas into continuing education for veterinarians.

2. Methodology

The questionnaire was designed in five sections to capture the following information:

- 1) awareness of OIE initiatives in training of veterinarians and compliance with those initiatives along with information on how the veterinary profession is regulated in Member Countries;
- 2) continuing education programmes, opportunities and methodologies utilized for graduate veterinarians;
- 3) understanding of the concept of 'One Health' by Members including working definitions, implementation plans and integration and existing collaboration between veterinarians and other health professions;
- 4) an outline of how 'One Health' competency domains are being utilized in continuing education for veterinarians; and finally,
- 5) recommendations on how the OIE can best strengthen support for veterinary education.

3. Survey findings

Sixteen (16) of 20 Members of the OIE Regional Commission for the Middle East replied to the questionnaire (Afghanistan, Cyprus, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Sudan, Syria, Turkey, United Arab Emirates and Yemen). Replies are summarised in the [Appendix](#).

Part I: Initial Veterinary Education and access to the profession

Thirteen (13) of 16 (81%) responding Members indicated awareness of both the OIE 'Day One Graduate Competencies' for veterinary training programmes and 'Veterinary Education Core Curriculum'. Twelve (12) of these 13 Members indicated they feel their country is in compliance with these guidelines.

Nine (9) Members (56%) indicated the veterinary profession is regulated by a veterinary statutory body in respective countries, with the remaining 7 Members citing their respective ministries or other body regulating the veterinary profession.

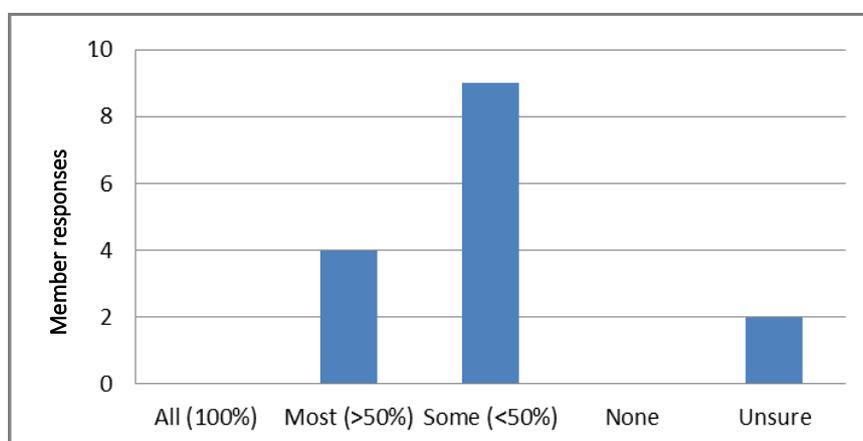
Part II: Continuing Education for veterinarians

Most Members (14 of 16 responses or 88%) indicated their countries have continuing education programmes for veterinarians, although 1 of the 14 Members suspended programmes the past two years due to budget constraints. A single Member was unsure about continuing education programmes but indicated that other 'un-official' opportunities exist (e.g. refresher courses and NGO-developed trainings).

Ten (10) Members reported that continuing education is accessible to both veterinarians in public (Veterinary Authority) and private sectors. Five (5) Members (31%) indicated continuing education is made available only to public sector veterinarians.

[Chart 1](#) shows a visual representation of estimates by Members of veterinarians who receive continuing education on an annual basis. A majority of Members indicated less than 50% of Veterinarians receive continuing education each year.

Chart 1.
Proportion of veterinarians receiving continuing education training each year



A total of 13 Members indicate that 'Most' (4) or 'Some' (9) veterinarians receive annual continuing education.

Eleven (11) responding Members (69%) indicated that continuing education for veterinarians is not required by law or licensing authority. Most responding Members (13) indicated a government ministry or directorate as responsible for continuing education / training programmes for veterinarians, while 2 additional countries indicating universities / academic institutions are responsible. Topics for continuing education are determined in many ways, with several Members mentioning a 'needs based' determination.

Tally of training methods used by Members for delivery of continuing education programmes:

Lectures	15	94%
Wet laboratories / hands-on training	14	88%
Field trips	13	81%
Panel discussions	13	81%
Simulation exercises	8	50%

Twelve (12) responding Members (75%) have a veterinary medical association, followed by human medical associations (69%), livestock associations (69%) and teachers associations (62%). Many other types of health-related professional associations were noted.

Part III: 'One Health' concept

Eleven (11) of the 16 Members (69%) stated that the Veterinary Services have an agreed definition of 'One Health', 7 do not and 2 were unsure. A majority of Member definitions indicated some form of contribution to 'public health' as the principal driver.

Figure 1 is a Wordle™ visualisation created with Member definitions of 'One Health'.



Fig. 1.
Wordle™ visualisation created from frequency of words used in Member definitions for 'One Health'

The larger the word in the figure, the more common its use across all Member responses.

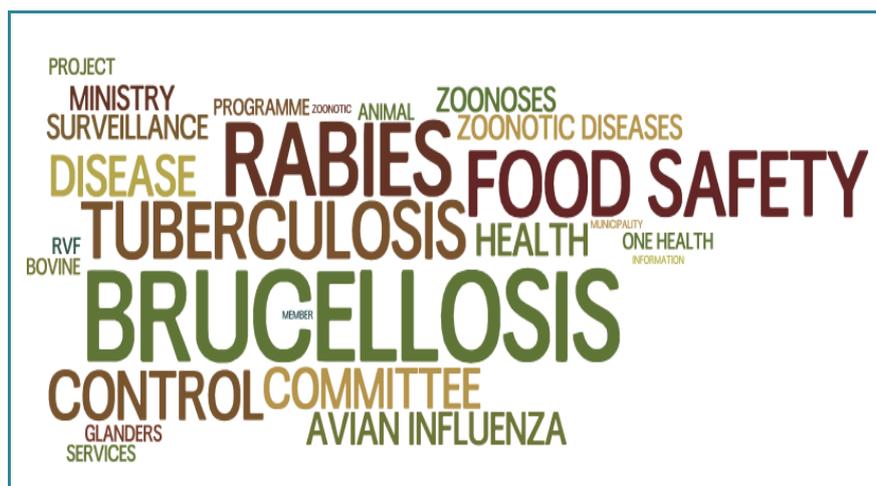
The four most commonly repeated words or phrases in Member definitions were:

- 1) Public health
- 2) Zoonotic
- 3) Collaboration
- 4) Diseases.

Seven (7) Members (44%) replied their Veterinary Services have implemented a 'One Health' action plan, and 5 additional Members have a 'One Health' action plan for future implementation. Almost all (94%) respondents indicated their veterinary services have programme areas where they are working together with other health disciplines.

Figure 2 provides a Wordle™ visualisation of the current collaborations reported.

Fig. 2.
Wordle™ visualisation
areas of collaboration
between Veterinary
Services and other health
professions



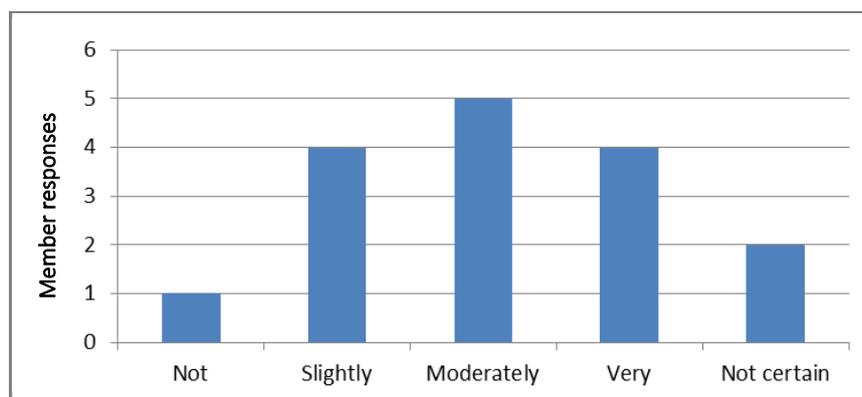
The larger the word in the figure, the more common its use across all Member responses.

The most common multi-disciplinary areas for collaboration are:

- 1) Brucellosis
- 2) Rabies
- 3) Food Safety
- 4) Tuberculosis

Integration of ‘One Health’ concepts into continuing education programmes was variable across Members, with 4 reporting ‘very’, 5 ‘moderately’, 4 ‘slightly’, 1 ‘not’ and 2 ‘not certain’ (Chart 2).

Chart 2.
How well is the ‘One Health’
concept integrated into
continuing education for
veterinarians?



16 Member responses on integration of ‘One Health’ concept into continuing education for veterinarians.

Part IV: ‘One Health’ competency domains

Members responded that most ‘One Health’ competency domains are covered in continuing education programmes for veterinarians.

Tally of Member responses for ‘One Health’ competency domains:

Collaboration & Partnership	13	81%
Communication	14	88%
Management	14	88%
Culture & Belief	12	75%
Values & Ethics	12	75%
Leadership	13	81%
Systems thinking	12	75%
Policy & Advocacy	13	81%
Research	14	88%

Part V: Work of OIE in Continuing Veterinary Education

All responding Members felt that that OIE should strengthen its support on veterinary continuing education. Among the proposed approaches, Members prioritized;

- 1) an OIE regional veterinary education **Collaborating Centre** (100% of responses),
- 2) developing **standards** on initial veterinary education (80%),
- 3) facilitate **twinning** activities (80%),
- 4) creation of a national **Focal Point** on Veterinary Education (80%), and
- 5) developing **Guidelines** on post-graduate and continuing education (73%), as the preferred methods.

4. Discussion and conclusion

Continuing education for Veterinarians is a large commitment of OIE to encourage its Members to improve the quality of their National Veterinary Services [1]. 'One Health' is widely recognised across the Middle East with strong evidence that Veterinary Services are implementing 'One Health' approaches in their operations. The 'One Health' approach has been promoted and supported globally by the OIE for many years. As 'One Health' evolves there has been increasing recognition that it is not a new 'discipline', but a 'way' of thinking. Veterinary educators are increasingly aware of the importance in identifying core competencies, and building veterinary education around these. Such a competency based approach provides a means to round out competency and skill sets desired for 'One Health professionals'. It is encouraging that a majority of Members recognise and include global 'One Health' competency areas in their continuing education programmes for veterinarians.

Recognition that animal and human health and wellbeing are interdependent is an important indicator that the 'One Health' concept is being implemented by Members. A majority of Members indicated they have a 'One Health' implementation plan in place or one to put one in place in the future. Working together across health professional disciplines is a hallmark of the 'One Health' approach to addressing complex health challenges. The variety of professional associations identified by Members indicates potential opportunities for cross-disciplinary or multi-disciplinary training programmes and inter-professional networking to promote and expand the 'One Health' concept. One recent example was a joint meeting of the Uganda Medical Association (UMA) and Uganda Veterinary Association (UVA) held in February 2013.

Looking again at Figure 1, it was interesting to note that 'environment' is one of the words used least frequently. More involvement with environmental health provides great opportunity for Veterinary Authorities to broaden their application of 'One Health' at the interface of humans, animals and the environment.

Significant findings and inferences in this report include:

- Most Middle Eastern countries have continuing education programmes but less than 50% of veterinarians receive continuing education training each year;
- Strong awareness of OIE 'Day One Graduate Competencies' and 'Veterinary Education Core Curriculum' programmes across Members;
- A majority consensus that the OIE should strengthen its support for veterinary education;
- Broad understanding of 'One Health' as multiple collaborative efforts at the interface of animals, humans and the environment;
- Active implementation of 'One Health' collaborations with Public Health Agencies focused on key zoonotic diseases (e.g. brucellosis, rabies, influenza and tuberculosis) and food safety
- Recognition of the 'One Health' concept as an opportunity for Veterinary Education and continuing education for veterinarians, and room for improvement in integrating this concept into continuing education training programmes for veterinarians

In summary, this report shows that the veterinary education and continuing education are important to the Member Countries of the OIE Regional Commission for the Middle East. The Member Countries would like to see the OIE take a larger role in supporting veterinary education. The 'One Health' concept and approaches are gaining momentum and attention across OIE Member Countries. While no two Members shared the same working definition of 'One Health', there is strong commonality across definitions showing 'One Health' supports multi-disciplinary collaborative approaches to address complex challenges at the interface of human, animal and environmental health. The report also shows several opportunities for enhancing veterinary continuing education by incorporating more active learning methodologies such as wet laboratories and simulation exercises and by integration of 'One Health' concepts and competency based programmes. As the recognised global authority for animal health, the OIE has a key opportunity to support the expansion and improvement of veterinary education and to engage its Members in the implementation of 'One Health' approaches by advocating, among other means, for the inclusion of the 'One Health' concept into veterinary education.

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.../Appendix

Appendix

Responses to questionnaire
(16 of 20 Members replied)

Part I: Initial Veterinary Education and access to the profession

1) Are you aware of the OIE guidelines on Veterinary Education and if so, which ones?	
Not aware	2
Aware of "Day One graduates" competencies	1
Aware of "Veterinary Education Core Curriculum"	0
Aware of both	13
2) According to your knowledge, is the initial veterinary education in your country in compliance with these guidelines?	
Yes	12
No	4
3) Is the veterinary profession regulated by a Veterinary Statutory Body in your country?	
Yes	9
No	7
3a) If no, which institution(s) decide(s) on the recognition and fellowship of veterinarians?	7

Part II: Continuing Education for veterinarians

1) Does your country currently have continuing education programmes for Veterinarians?	
Yes	14
No	1
Unsure	1
1a) If no, why not?	3
1b) If yes, are continuing education programmes accessible only to Veterinarians of the Veterinary Authority (official) or to private ones as well?	
Only to Veterinarians of the Veterinary Authority	5
Only to private Veterinarians	0
Both	10
1c) If yes, what proportion of Veterinarians receive continuing education training on an annual basis?	
All (100%)	0
Most (>50%)	4
Some (<50%)	9
None	0
Unsure	2
2) Is continuing education for Veterinarians required by law, professional licensing authority (Veterinary Statutory Body), or other?	
Law	1
Licensing authority (Veterinary Statutory Body)	2
Other	2
Not required	11
Unsure	1
3) Who is responsible for delivery of continuing education/ training programmes for Veterinarians in your country?	16
4) How are topics for continuing education courses / content determined?	16

5) What teaching methodologies are used in continuing education courses / trainings / seminars / workshops for veterinarians?	
Lectures	15
Panel discussions	13
Simulation exercises	8
Field trips	13
Veterinary laboratories	14
Other	3
6) Professional associations, protecting the interests of a profession, present in member countries.	
Veterinary Medical	12
(Human) Nurse / Nursing Association	6
Human Medical Association	11
Public Health Association	7
Laboratory / Disease	9
Wildlife Association	7
Livestock / Animal Producers Association	11
Teachers	10
Others	7
Part III: 'One Health' concept	
1) Does Veterinary Services in your country have an agreed definition of "One Health"?	
Yes	11
No	3
Unsure	2
1a) If yes, what is that definition?	10
2) Does Veterinary Services in your country have an already implemented action plan for "One Health" approaches or concepts?	
Yes	7
No	6
Unsure	3
2a) If no, does Veterinary Services in your country have an action plan for future implementation of One Health approaches or concepts?	
Yes	5
No	0
Unsure	2
3) Does Veterinary Services in your country have specific diseases or programme areas where Veterinary Services work together with other health professionals or professions?	
Yes	15
No	0
Unsure	1
3a) If yes, please provide examples;	15
4) How well is the One Health concept integrated into continuing education training for Veterinarians?	
Not at all	1
Slightly	4
Moderately	5
Very	4
Not certain	2

Part IV: 'One Health' competency domains

1) One Health core competency domains in continuing education for Veterinarians and Veterinary-professionals in your country.

Collaboration & Partnership	13
Communication	14
Management	14
Culture and Belief	12
Values & Ethics	12
Leadership	13
Systems Thinking	12
Policy & Advocacy	13
Research	14

Part V: Work of OIE in Continuing Veterinary Education

1) Do you think that the OIE should strengthen its work on veterinary education?

Yes	15
No	0

1a) If yes, please identify how you propose this be done: (several answers are possible)

Development of <u>standards</u> on initial veterinary education	12
Development of <u>guidelines</u> on post-graduate and continuing education	11
Creation of a <u>Collaborating Centre</u> on Veterinary Education in the Region	15
Facilitate VEE <u>twinning activities</u> in the Region	12
Creation of a <u>Focal Point</u> on Veterinary Education	12