

World Veterinary Day 2016



Theme:

Continuing education with
a 'One Health' focus

Presentation:

'Past, present and future of 'One
Health' with especial emphasis
to education and activities'

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Sources: 📖 Samad MA (2016). *Bangladesh Veterinary Medical Record* 2(1): 1-28
📖 Internet

World Veterinary Day Award 2016



1863 (IVC)
1958 (WVA)



30 April 2016
FAO 1946
WHO 1948



1924 (OIE)
2003 (WOAH?/
OIE)

Selected Theme (OIE & WVA):

'Continuing education with a 'One Health' focus' 2016

Why One Health?

- ① Worldwide, nearly 75% of all emerging human infectious diseases in the past three decades originated in animals



:: view large map ::

Environmental Medicine

- ② Environmental health may affect human and animal health through contamination, pollution and poor conditions that may lead to new infectious agents.



Human-Animal Bond

③ The human-animal bond beneficially impacts the health of both people and animals



One Health, One Medicine, One World

- ④ The world population is projected to grow from 7 billion in 2011 to 9 billion by 2050.
- ⑤ To provide adequate health care, food and water for the growing global population, the health profession and their related disciplines and institutions must work together.



Definition of 'One Health'

- 'One Health is the collaborative effort of multiple health science professions, together with their related disciplines locally, nationally and globally- to attain optimal health for people, domestic animals, wildlife, plants and our environment'
- **One Health Commission**
- **AVMA defines**, 'One Health as the collaborative effort of multiple disciplines working locally, nationally and globally to attain optimal health for people, animals and our environment.'

One Health Initiative

‘One World-One Medicine-One Health’

- **Addressing the connections between health and environment**
- Accelerated biomedical research discoveries
- **Enhanced public health efficacy**
- Expanded scientific knowledge base
- **Improved medical education and clinical care**
- Advancing health care for the 21st century- humans and animals
- **Collaborative -- Synergistic -- Enlightening**

When properly implemented, it will help protect and save untold millions of lives in our present and future generations

Scope of One Health

- ① Convergence of human, animal and plant health and the health of the environment
- ② **Human-animal bond**
- ③ Professional education and training
- ④ **Research, both basic and translation**
- ⑤ Ensuring a safe food and water supply that is high quality, available and affordable
- ⑥ **Agricultural production and land use**
- ⑦ National resources and conservation
- ⑧ **Disease surveillance, prevention and response, both infectious and chronic diseases**

Scope of One Health (Contd.)

- ⑨ Commonality of diseases- among people & animals such as cancer, obesity & diabetes
- ⑩ **Clinical medicine demand for interrelationship between the health professionals**
- ⑪ Environmental agent detection & response
- ⑫ **Disaster preparedness and response**
- ⑬ Public policy and regulation
- ⑭ **Global trade and commerce**
- ⑮ Communications and outreach

Outcomes from 'One Health' Approach

- ① **More interdisciplinary programs in education, training, research and established policy**
- ② **More information sharing related to disease detection and diagnosis as well as education and research**
- ③ **More presentation of diseases both infectious and chronic diseases**
- ④ **New therapies and approaches to treatment for unmet needs**

Development of 'One Health' Concept

A. Ancient (Pre-modern) Medicine

a. 1st Phase : 9000 BC to 1761 ('One Health' system)

- Same doctor practiced medicine both in human and animal, so the pre-modern medicine really was 'one' i.e. 'One Health'

B. Modern Medicine

b. 2nd Phase : 1761 to 1987 (Specialized Medicine but 'One Health' suggested)

- Rinderpest outbreaks = 1st Vet. School (1761) in Lyon, France
- Medical College (n= NA) = Veterinary Medical College (n = 588)
- Specialized Medical system continued just 226 (1987-1761) years

c. 3rd Phase : 1987 to 2016 (OH Concept)

- The emerging and re-merging infectious diseases gave a wake-up call for the need to collaborate between the human and Veterinary Medicine
- OH initiative - founded in 1987 at Michigan State University, and the OH institute celebrated its 25th anniversary in 2012.

Contributions on 'One Health'

- **1821-1902: Rudolf Virchow (MD, German Pathologists)** emphasized, “Between animal and human medicine there are no dividing lines-nor should there be. The objective is different but the experience obtained constitutes the basis of all medicine”
- **1849-1919: William Osler (MD, Father of Pathology)**, trained with many well-known physician and veterinarians, including Dr. Virchow. He published the book, “The Relation of Animals to Man”
- **1927-2006: Calvin Schwab (DVM, MPH)** coined the **term**, ‘One Medicine’ in his textbook, ‘Veterinary Medicine and Human Health’ and called for a unified approach against zoonosis.

OH Institutions and Organizations

- One Health Commission- 2010 Headquarter in Kansas City & then in 2014 shifted to North Carolina, USA
- The One Health Initiative Autonomous pro bono Team'-2006-2007
- One Health Platform Foundation- Belgium

Partnering to create a global
'One Health Day' – annually
observed on 3 November



International OH Organizations

- One Health Initiative Task Force (OHITF)- AVMA
- **One Health Institute (OHI)- UC Davis**
- Institute of International Health- Michigan State University
- **National Center for One Health-The Netherlands**
- Global Health Institute- University of Wisconsin
- **Global Health Institute, Thailand- 2012**
- One Health Academy, Washington DC
- **International Journal of One Health- India**
- One Health (Journal)- Elsevier 2016
- **One Health Network South Asia**
- One Health Global Network, Edinburgh
- **One Health Newsletter, 2008 (Florida State Department)**

International 'One Health' Activities

Year	Organization / Society/ Conference	Outcomes/ Concept
2004	The Wildlife Conservation Society	'One Health, One World'
2007	Int. AI Conference, New Delhi	'One Health' approach
2007	AMA + AVMA jointly passed	'One Health' resolution
2008	FAO, OIE, WHO & World Bank	'One World, One Health'
2009	One Health Expert Meeting, Canada	'One Health' concept
2009	The One Health Office established	CDC, USA
2010	The European Union, Belgium	'One Health' Umbrella
2010	The United Nation + World Bank	'One Health' approaches
2011	High Level Technical Meeting,	'One Health' movement
2012	The Global Risk Forum sponsors	'One Health' summit
2015	Elsevier B. V.	'One Health' – (Journal)
2015	Veterinary World (India)	Int. J. One Health
2016	University of Minnesota, USA	One Medicine, One Sci
2019	LEP Publications, Bangladesh	Journal of Veterinary Medical and One Health Research

One Health Activities in Bangladesh

A. Institutions

- Institute of Epidemiology and Disease Control and Research (IEDCR), Ministry of Health and Family Planning, Bangladesh
- Epidemiology Unit, Department of Livestock Services, Bangladesh

B. Seminars/Conferences/Meetings

- Total 8 OH Conferences conducted in Bangladesh started from 2008
- 12 Recommendations for Strengthening the OH Bangladesh and OH approach have been made on only for coordination not for workforce

Recommendations of OH Conferences in BD

01. Hold regarding human-animal health and vice-versa
02. **Formulate a database for our members for better and quick communication**
03. Make a network of One Health members using Hub-net and the One Health Hub
04. **To develop a One Health strategic framework and action plan**
05. Take necessary steps for formulating an institutional program for One Health
06. **Appoint a One Health Strategic Secretary**
07. Create an organizational SOP for One Health in Bangladesh
08. **Identify barriers to the One Health approach**
09. Influence Government on the necessity of implementing a OH approach through further workshops, Symposia and training
10. **Publish articles to international journals to promote the One Health approach in Bangladesh**
11. Involve policy makers involve in One Health Hub Bangladesh programs
12. **Organize another regional conference on OH in the year 2015**

Veterinary Medical Academic Institutions

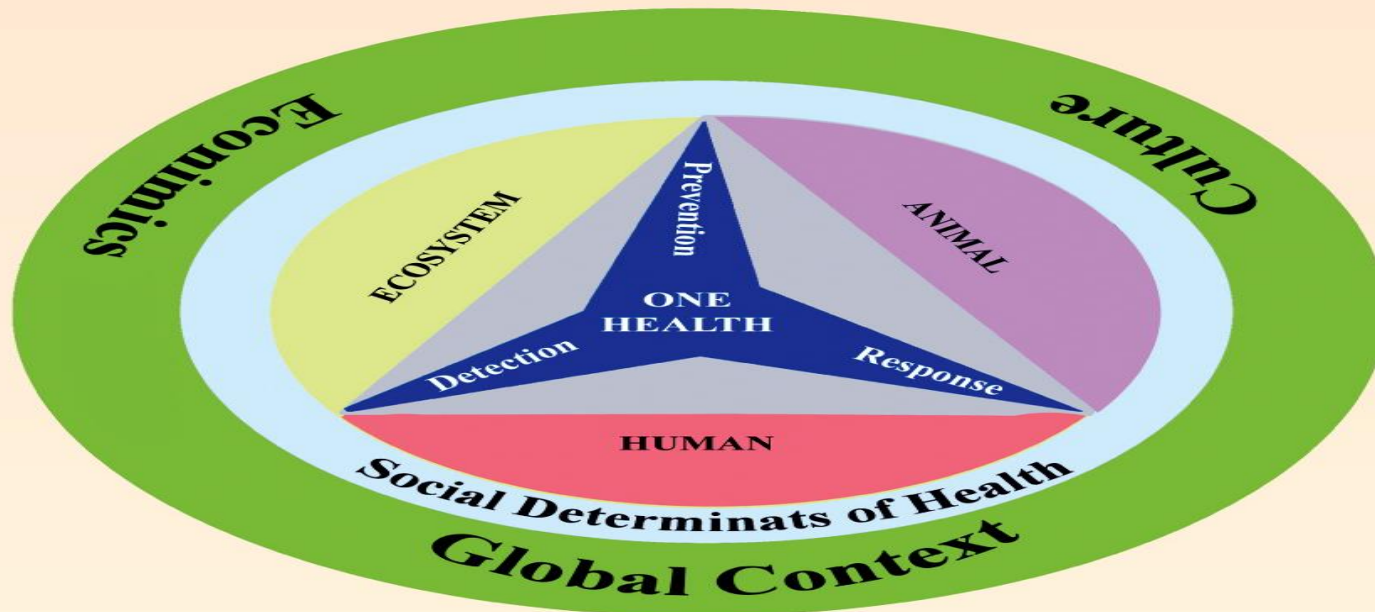
SN	Continent	Total No. of country	Total No. of Country		ECAVMA recognized status of Vet School			
			Estd. Vet. School	Not Estd. Vet School	Un- listed	Listed	Accre- dited	Total
1	Africa	54	20	34	19	042	00	061
2	Asia	44	30	14	65	190	00	255
3	Europe	47	36	11	02	094	06	096
4	Oceania	14	02	12	00	008	05	008
5	North America	23	10	13	01	073	38	074
6	South America	12	10	02	33	061	00	094
TOTAL		194	108	86	120	468	49	588

ECAVMA = Economic Council of American Veterinary Medical Association

Role of Vets in One Health

Human Health

- Reduce global hunger
- Control of zoonotic diseases
- Monitor food quality & safety
- Disease surveillance
- Biomedical research
- Biosecurity
- Human-animal bond: Maintaining companion Animal health



Animal health

- Promote animal welfare
- Prevent disease outbreaks
- Increase animal production for food
- Increase & support animal product exports
- Disease surveillance, diagnosis & control
- Provide clinical & herd health expertise
- Combating antimicrobial resistance

Ecological health

- Protect biodiversity
- Management of wild life resources
- Control movement of exotic species and diseases
- Disease prevention in wild animals
- Conservation of natural resources
- Climate change adaptation activities

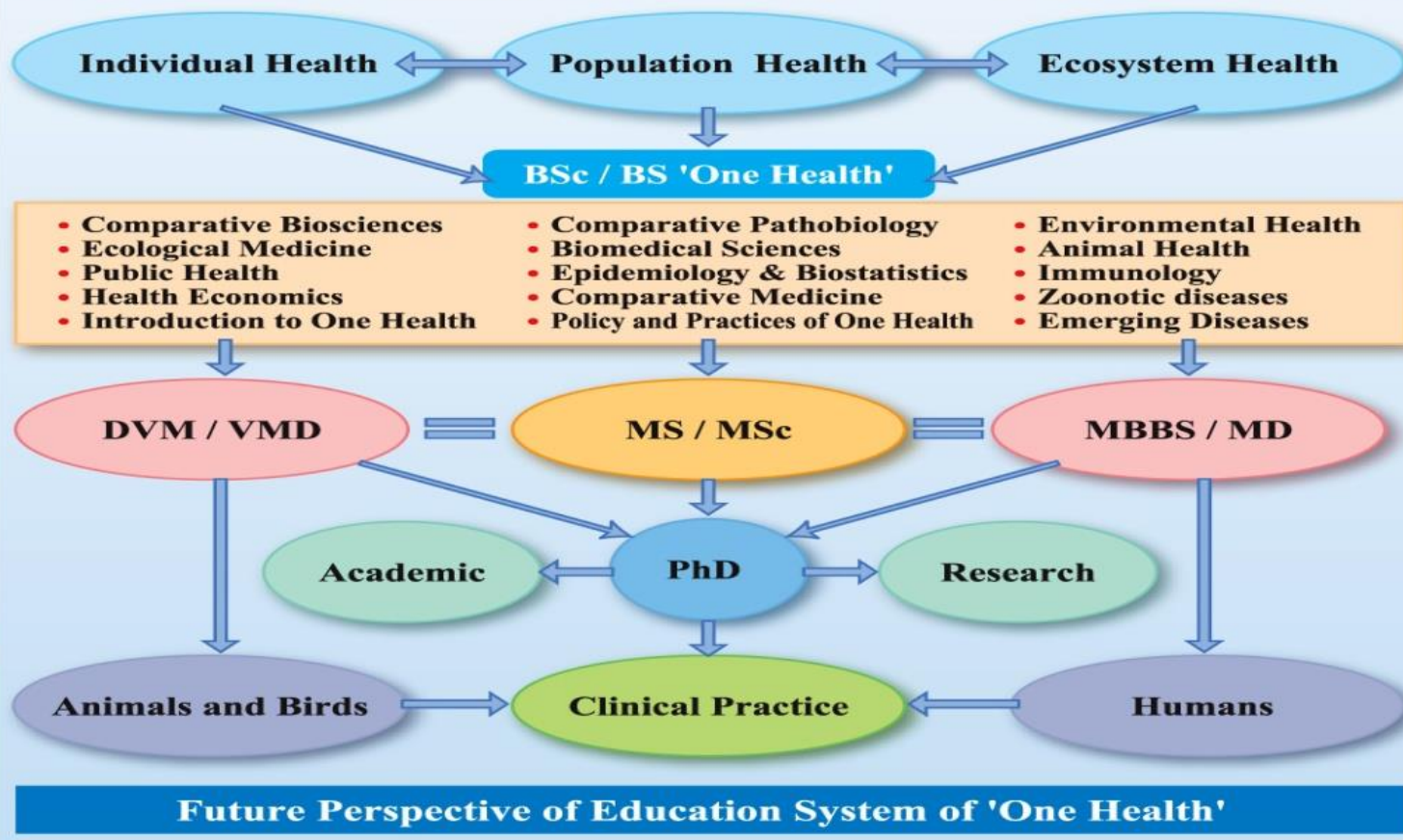
ROLE OF VETS IN ONE HEALTH

Veterinary & Medical Degree in the World

SN	Degree	Colleges / Faculty / University
01	MBBS / MD	MBBS in BD / MD in USA & others countries
02	DVM	DVM in both BD & USA
3	MPH	BD (PU,DU), India, USA & others
04	MS/MSc-VPH	Most of the Veterinary Faculty in BD, India
05	MS/MSc-VE&PH	BD, India
05	DVM-MPH	Most of the Universities in USA
06	MSc OH	Jointly by the London SH &TM + RVC
07	Mphil / PhD	OH (Vet), OH (Medical), University of Liverpool
08	MSc in Z &OH	University Autonoma Barceloma. Spain
09	PG, PGC, PGD	Kerala Veterinary & Animal Sciences University
10	BS in BMS	Table (Not in Bangladesh)

- These degrees are traditionally focus on either human or animals health & diseases, not both humans & animals

Future Prospective of Education System of OH



Thanks!

