



One Health Practices in Bangladesh: Ideas to Action

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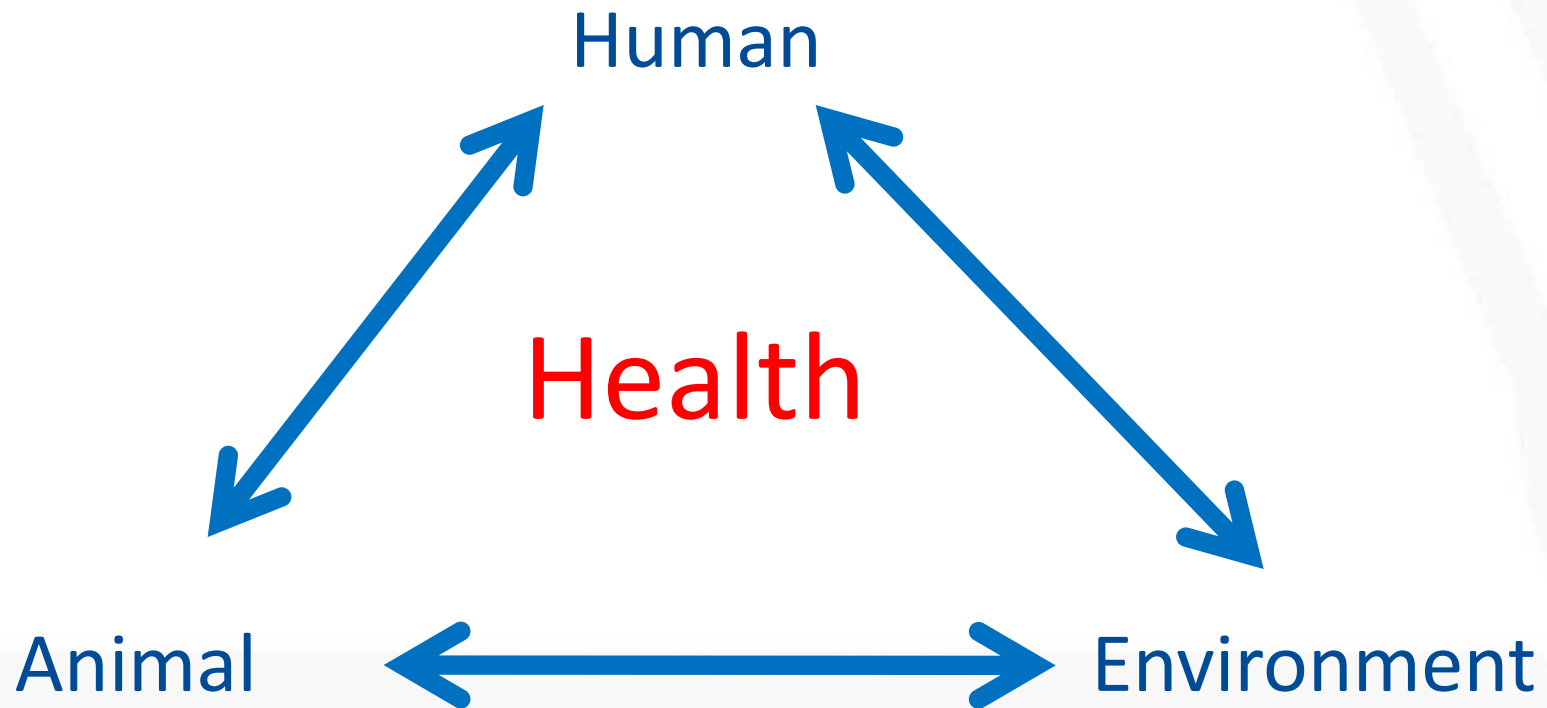


Objectives of the Presentation

- *Sharing the Progression of One Health Movement in Bangladesh.*
- *Presenting ongoing activities*
- *Way forward*



*Our Definition of One Health:
Harnessing the creative power of diversity*



Groups of diverse problem solvers can outperform groups of high-ability problem solvers

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We introduce a general framework for modeling functionally diverse problem-solving agents. In this framework, problem-solving agents possess representations of problems and algorithms that they use to locate solutions. We use this framework to establish a result relevant to group composition. We find that when selecting a problem-solving team from a diverse population of intelligent agents, a team of randomly selected agents outperforms a team comprised of the best-performing agents. This result relies on the intuition that, as the initial pool of problem solvers becomes large, the best-performing agents necessarily become similar in the space of problem solvers. Their relatively greater ability is more than offset by their lack of problem-solving diversity.

equal ability, functionally diverse groups outperform homogeneous groups. It has also been shown that functionally diverse groups tend to outperform the best individual agents, provided that agents in the group are nearly as good (1). These results leave open an important question: Can a functionally diverse group whose members have less ability outperform a group of people with high ability who may themselves be diverse? The main result of our paper addresses exactly this question.

Consider the following scenario: An organization wants to hire people to solve a hard problem. To make a more informed decision, the organization administers a test to 1,000 applicants that is designed to reflect their individual abilities in solving s

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The best-performing agents necessarily become similar in the space of problem solvers. Their relatively greater ability is more than offset by their lack of problem-solving diversity.”



TOP MANAGEMENT AND INNOVATIONS IN BANKING: DOES THE COMPOSITION OF THE TOP TEAM MAKE A DIFFERENCE?

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The relationship between the social composition of top management teams and innovation adoptions was examined in a sample of 199 banks. The following characteristics of top management teams were examined: average age, average tenure in the firm, education level, and heterogeneity with respect to age, tenure, educational background, and functional background. In addition, the effects of bank size, location (state of operation), and team size were assessed. Results indicate that more innovative banks are managed by more educated teams who are diverse with respect to their functional areas of expertise. These relationships remain significant when organizational size, team size, and location are controlled for.

“Innovative banks are managed by teams who are diverse with respect to their functional areas of expertise”

Where One Health is applicable?

**STRATEGIC FRAMEWORK
ONE HEALTH BANGLADESH**



FOOD SAFETY

KEY THEMES	Human Health	Animal Health	Environment	Agriculture	INTERFAC E AREAS
	<div data-bbox="879 1163 1072 1292" data-label="Text"> <p>INFECTIOUS DISEASES</p> </div>				

MEDIUM AND LONG-TERM GOALS

One Health International Thinking



- One World One Health Symposium in 2004 in New York- Manhathan Principles
- 3rd IMCAPI in New Delhi in 2007
- 4th IMCAPI in Sharm-el-Shiek in 2008
- 5th IMCAPI in Hanoi in 2010
- Tripartite concept Note of FAO-OIE-WHO
- Stone Mountain meeting by CDC
- 1st One Health Congress in Melbourne in 2011

Beginning of One Health Thinking in Bangladesh



- Informal discussion on One Health approach began at Chittagong Veterinary & Animal Sciences University (CVASU) in 2007 at the emergence of HPAI
- Looking for relevant partners to move forward.
- IEDCR and ICDDR,B showed keen interest as human health partners.
- Positive responses from professionals working in Livestock, Agriculture and Forestry sector.
- Civil society-BAPA, NGO-BRAC, Academia-BAU, DU & BSMRMU and Research-BLRI, IFRB etc. got involved

Why One Health for Bangladesh?



- Highest population density in the world
- Hot spots for EIDs and rEIDs
- Vulnerable food security and safety
- Most fragile ecosystems
- 50% of the tube wells exceed WHO standard for arsenic
- People are exceptionally close to animal

Formation of One Health Bangladesh

- Representatives from 12 national and international organizations got together to form a professional organization called One Health Bangladesh in December 2007.
- Formed a National Coordination Committee to work for promoting One Health concept in Bangladesh.
- Membership criteria: Physicians, vets, agriculturists, environmentalists, wildlife experts, ecologists, anthropologists, economists, allied scientists and practitioners, activists.
- Currently nearly 200 active members.

One Health Bangladesh: A New Professional Movement



- One Health Bangladesh emerged as professional body:
 - Adopted a constitution and Chittagong Declaration to project its vision for Bangladesh
 - Bringing diverse professionals together to promote health and welfare of all species
 - Initiate a new culture of cross-professional work, dialogue, collaboration and integration
- One Health Advocacy and Connectivity:
 - Organizing seminar, conference, consultation
 - Disseminating one health success stories to a wide-ranging audience.
 - National, regional and global Networking
- Advocate and garner Govt. support for One Health
- Promote One Health through existing programmes

Areas of One Health Practices



- Communication, Advocacy & Networking
- Research Collaboration
- Educational & Training
- Collaborative Practices
- One Health Country Strategy

Advocacy and Communication



- CVASU & One Health Bangladesh had three conferences jointly:
 - Change towards One World One Health-2008
 - One Health Approach for Attaining Food Security-2009
 - Networking for promoting change towards One Health-2010
- ICDDR,B and One Health Bangladesh had three joint conferences:
 - One Health Approach for Controlling HPAI and other EIDs-2008
 - One Health Approach for Outbreak Investigations-2009
 - Networking for One Health in South Asia-2010
- Regular complementary meetings, seminars and workshops on putting One Health to work.
- IEDCR works as Secretariat of One Health Bangladesh

One Health Bangladesh & Networking



- Networking with Ecohealth Alliance & Rockefeller Foundation for creating One Health Alliance of South Asia (OHASA) Nov. 2009.
- Joint initiative of CDC & One Health Bangladesh for organizing meeting with CVOs and CMOs of South Asian countries in April 2010.
- Formation of South Asia Veterinary Education Network (SAVE Network) to influence veterinary academia for One Health in Sept. 2010.
- Working with UN systems including FAO, WHO & UNICEF towards a One UN system for preparing One Health Country Strategy-2011
- Partnering with Directorate of Health, Livestock, Local Govts, WHO, FAO, WSPA, NGOs for developing Rabies control programme.
- Facilitating EID communication tools prepared by FAO and UNICEF- 2011
- Initiative for creating a Bangladesh Laboratory Response Network- 2011

Outbreak Investigation & Response



- Pesticide Poisoning
 - Avian influenza
 - Nipah virus
 - Anthrax
 - Rabies

A collaborative investigation team

- Department of Livestock Services
- Institute of Epidemiology, Disease Control and Research (IEDCR)
- ICDDR B
 - Epidemiologists
 - Clinicians
 - Veterinarians
 - Anthropologists



icddr,b

KNOWLEDGE FOR GLOBAL LIFESAVING SOLUTIONS



Lesson Learned from Joint Outbreak Investigation



- Multidisciplinary team visiting outbreak sites
- Joint Reporting & Consultation
- Sharing laboratory findings
- Joint response to national EID outbreaks
- A new professional culture is emerging

Bangladesh Lab. Response Network(BLRN)



- *BLRN has been created with a **Vision** of fostering nation's lab. capacity to promote **One Health** strategy*
- *As **Mission** -it integrates nation's animal and human health laboratories at the local, regional, and national levels into a network.*
- *It enables to respond to emergencies involving biological, chemical, or radiological agents threat to animal, human & environmental health.*
- *It has begun with veterinary and public health laboratories.*
- *As a long term goal- it will integrate nation's food- testing labs. and biohazard assessing labs. into BLRN.*

One Health Institute at CVASU, 2012



Broad Objectives

- Statutes of One Health Institute approved through:
 - Academic Council followed by
 - University Syndicate



One Health Young Voice, Bangladesh

www.ohyvb.org



Mission

- To develop collaborations between students of diverse background including medical, veterinary, wildlife and environment disciplines;

Vision

Creating a new generation for one health with innovative, self motivated education and learning to enhance the multidisciplinary collaboration.

Present Activities

- Rabies control program in Chittagong City Corporation (CCC) area
- EID and Zoonotic diseases awareness campaigns in educational institution
- Mass awareness program in EID and Zoonotic disease in outbreak area

Future Plan

- To form a bridge between One Health professionals and students of health related discipline
- To build multidisciplinary team with graduate and undergraduate students in different educational institutions



One Health Training: A Joint Initiative of FAO & GOB.

- Build One Health professional capacity for veterinarians, medical officers, wildlife and environmental experts at the field level.
- Increase knowledge, understanding, skills, and buy-in related to human-livestock-wildlife-environment interface issues.
- Initiate and encourage One Health networking and collaboration among field-level professionals.
- Use problem-based learning, didactic and field visit approaches to demonstrate human-livestock-wildlife-environment interface issues.
- A cohort 30 participants having medical, veterinary and wildlife background undertook this training during 19-30 Sept. 2012

Field Epidemiology Training Program



- Modeled after CDC's Epidemic Intelligence Service
- Two-year, full-time postgraduate training program
- Closely supervised, on-the-job, competency-based training
- About 25% class work, 75% field placement
- Trainees assigned to positions that provide epidemiologic service to human health and animal health
- Trainees will be physicians, vets and wildlife experts
- Collaborating partners: CDC, Govt. of Bangladesh & iccdr,b
- Commencing in December 2012

2012: National Workshop on One Health Strategy



- One Health Bangladesh partnered with UN organizations-FAO, WHO & UNICEF to promote One Health in Bangladesh.
- UN system and One Health Bangladesh raised united voice to Ministries of Health, Livestock & Fisheries and Forestry & Environment for a One Health Strategy.
- Director Generals of Department of Health, Livestock and Forestry signed agreement to hold workshop on developing national strategy on One Health.



Multi-sectoral and multi-disciplinary
partnership
One Health Workshop for Infectious Diseases

Attributes



- ✓ Vision to improve health outcomes for the people of Bangladesh
- ✓ Recognition of the interplay between factors related to people, animals and the environment in determining disease outcomes
- ✓ Application of a multi-disciplinary prediction, prevention and response focus
- ✓ Promotion of multi-sectoral collaboration and communication to engage partners and stakeholders, including communities
- ✓ Emphasis on equitable partnerships and recognition of the partners
- ✓ Establishing the institutional mechanisms to effectively deliver the outputs
- ✓ Incorporation of processes to correct capacity deficits for collaborating partners
- ✓ Recognition that success depends on long term engagement and commitment
- ✓ A framework that is adaptive and responsive to change



Vision

*The consequences of emerging, re-emerging and high impact infectious diseases are minimized through institutionalizing the **One Health Approach**, so contributing to food security, food safety and a healthy population in thriving ecosystems*



Goals

- ✓ Establishment of the necessary institutional arrangements to enable effective collaboration between sectors involved
- ✓ Development of necessary capacity and technical procedures to prevent and control targeted emerging infectious diseases
- ✓ Application of sound environmental principles when ecosystems with potential disease/health interfaces with humans and animals are involved in control strategies





Validation Workshop: (7-8 Sept. 2012)

- Strategic Framework for A One Health Approach to Infectious Diseases in Bangladesh has been validated.
- A Five-Year Action Plan has been developed.
- Government and Development Partners have shown keen interest to implement the action plan.
- Commitment of Government and UN agencies, professional and civil societies has been reinforced.
- Road Map is in place



Challenges for One Health

- As an emerging field, one health is still an amorphous entity, currently in a state of flux.
- Agreement is yet to emerge which underpins its educational and research base.
- It is yet to fix the relationship between the different disciplines which inform its knowledge base.
- Collaborative practices are still evolving and doing so at different rates, in varying ways in different parts of the world.

Difficulties with diverse teams



Dissent and disagreement
arouse negative
feelings



Social networks
tend to be
homogenous



Diverse teams
have less
cohesion and
longevity



Professional and Institutional Barriers

- Different Ministries
 - Ministry of Health and Family Welfare
 - Ministry of Fisheries and Livestock
 - Ministry of Agriculture
 - Ministry of Environment and Forests
- Different objectives
- Different lines of authority
- Different professional backgrounds
 - Separate personal backgrounds



Challenge of Institutionalization

- Political will and commitment
- Proof of success
- Economic benefit
- Cultural Change



Way Forward

- Implementation of One Health action plan & strategy.
- Transforming One Health Bangladesh as a think tank for OH
- Continuing advocacy for intersectoral collaboration, cooperation, coordination and integration.
- Ensure One Health practices at community level.
- Transform One Health as a Whole- Of- A -Society Movement



Impact of One Health

	Before H5N1	Since H5N1	
	Zoonoses	H5N1	Other zoonoses
Communication	-	+++	+/-
↓			
Coordination	-	++	+/-
↓			
Collaboration	+/-	++	+
↓			
Integration	-	+	-



***Coming together is a beginning, staying
together is progress and working
together is success.***

.....Henry Ford