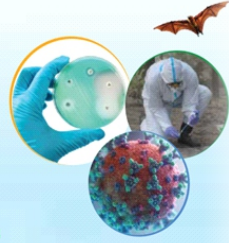




**One Health Approach for Tackling Antimicrobial Resistance and Pandemics**



# Bangladesh AMR Newsletter

## One Health Bangladesh Conference

The 11th One Health Bangladesh Conference was held on 12-14 June 2023 at the Hotel Radisson Blu, Dhaka with the theme "One Health approach for tackling antimicrobial resistance and pandemics." This multidisciplinary conference gathered professionals and institutes from different parts of Bangladesh and abroad, to discuss the interconnectedness, interdependence and ever changing dynamics of relationships between human, animal, and environmental health, aiming to promote collaboration and coordination, to address the challenges related to pandemic preparedness, antimicrobial resistance, food safety, food and nutrition security, wildlife, environment and eco system, emerging infectious diseases including zoonotic diseases, and spillover risks in Bangladesh and in the Globe.

### Inaugural Session

Mr. S M Rezaul Karim, Minister of Fisheries and Livestock chaired the inaugural session of the Conference. Mr. Md Shahab Uddin, Minister of Environment, Forest and Climate Change was present as the Inauguration Speaker. Along with other dignitaries, Director Generals of the Directorate General of Health Services and the Department of Livestock Services, Chief Conservator of the Bangladesh Forest Department, WHO and UNICEF Representatives to Bangladesh were present in the inaugural session of the conference to make remarks. Prof Dr Nitish Debnath, National Coordinator of One Health Bangladesh & Team Lead, Fleming Fund Country Grant to Bangladesh (FFCGB) provided the welcome

address and Prof Tahmina Shirin, Director, IEDCR gave the vote of thanks.



### Editorial



The recent epidemics and pandemics, in particular COVID-19, have made it unmistakably clear that human, animal, plant, and environmental health cannot be dealt with separately, but need to be addressed in a 'One Health' approach. Their interdependencies need to be better acknowledged and require work at the interfaces in a multisectoral, transdisciplinary and an integrated approach. This is even more relevant to antimicrobial resistance (AMR). AMR was very much highlighted in the recently concluded One Health Bangladesh Conference on 12-14 June 2023, especially by the high officials from relevant ministries including the Honorable Ministers from the Ministry of Fisheries and Livestock Services, and from the Ministry of Forestry, Environment and Climate Change, and also by the Director General of the Directorate General of Health Services (DGHS).

The Conference provided important technical and operational guidance that will be very useful for future implementation of the National AMR Containment Program.

**Prof Dr Md. Nazmul Islam**

Chief Editor, Director, Disease Control and Line Director, CDC

**"One Health services need to be extended to remote areas to prevent infectious disease"... SM Rezaul Karim, Minister of Fisheries and Livestock**



Speaking as the chairperson of the opening session, SM Rezaul Karim MP, Hon Minister for Fisheries and Livestock, said "Around 70 percent of infectious diseases of human beings are animal borne. This underscores the imperative for collaborative action, as diseases affecting animals hold implications not only for their well-being but also for human health."

"Ensuring medical care for animals is also urgent for the sake of humans," he added. To reap the benefit of one health concept, he stressed upon working at the grassroots. For this, he highlighted collaborative approach among all ministries concerned. "One Health" is a holistic approach that seeks to safeguard the welfare of all by harmoniously balancing the relationship among human beings, animals, and nature.

**Minister for Environment, Forest and Climate Change emphasizes the crucial role of Environment in One Health**

Md Shahab Uddin MP, Hon Minister for Environment, Forest and Climate Change, speaking as the inauguration speaker in the inaugural session highlighted the role of balanced environment for contributing to human and animal health. "It is also the most dynamic pillar of the One Health Approach. Without having a healthy and balanced environment, it is not possible to enjoy ecological services, sustainable economic growth and biological security, and a stable society with prosperity," he said. As one of the major partners of the One Health program in Bangladesh, the Ministry of Environment, Forest and Climate Change is collaborating with the government and non-government partners, he mentioned while stressing upon the One Health Approach to ensure sustainable development.



During the session, Professor Dr ABM Khurshid Alam, Director General of the Directorate General of the Health Services, said, "The health of humans, animals, and the environment are inextricably connected. All of the elements comprise world health and human health". He mentioned that the one health platform is operating with this concept at its core. He stressed upon the need for establishing an effective surveillance system for monitoring antimicrobial resistance, based on which policies and principles for antimicrobial containment should be planned and implemented.



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Dr Md Emdadul Haque Talukder, Director General (DG) of the Department of Livestock Services (DLS) in his speech reiterated the importance of biosafety and biosecurity and on the need for judicious use of antimicrobials in livestock production system. He underlined the interdependence of the environment, animal, and human health the need for further collaboration and coordination in the sphere of One Health in Bangladesh.

Md Amir Hosain Chowdhury, Chief Conservator of Forests of Bangladesh stressed that a healthy and balanced environment is a fundamental component of the One Health Triad; in promoting human and animal health, a balance environment is very important.

The leading UN agency representatives in Bangladesh including Sheldon Yett from UNICEF and Dr Bardan Jung Rana from WHO spoke in the session underscoring the collaborative efforts and various activities supported by

their respective organizations around One Health in Bangladesh.



Prof Tahmina Shirin, Director Institute of Epidemiology, Disease Control and Research (IEDCR) extended a vote of thanks on behalf of the conference organizers.

## Scientific Sessions

The scientific sessions conducted in the 11<sup>th</sup> One Health Bangladesh Conference consisted of 5 plenary sessions and 8 open paper sessions. Open paper sessions were held in two groups simultaneously, allowing opportunities for sharing more topics and research works with the audience. In addition, an exhibition of posters was organized for the entire duration of the Conference in the hotel lobby. These posters were prepared to share

findings of various research projects, which could not be included in the open paper sharing sessions.

Plenary sessions were organized to discuss the important topics of public health concern around One Health, those required special attention of the scientific community, policymakers and program managers, and warranted immediate actions for containing and/or controlling of the problem.

The plenary sessions were organized thematically. The 5 themes were:

1. Pandemic Preparedness,
2. Biodiversity, Environment and Health,
3. Antimicrobial Resistance and Food safety,
4. Continuing Education and Networking in One Health, and
5. One Health Institutionalization



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Each of the plenary sessions consisted of 1-3 keynote lectures presented by national and international experts and was followed by discussion by a panel of experts representing different stakeholders.

The link to all presentations of the conference is given here-

<https://drive.google.com/drive/folders/1OiwCOGWHG9BB3AHOF30lp0jN11RPK4oz?usp=sharing>



## Open Paper Sessions (Oral Presentation)

During the conference, eight open paper sessions were organized for oral presentations on different topics, covering seven thematic areas. The thematic areas were:

1. Pandemic Preparedness, Containment and Mitigation
2. One Health Institutionalization, Workforce and Policy
3. Antimicrobial Resistance (AMR) and its' Mitigation- (2 Sessions)
4. Food Safety, Food and Nutrition Security
5. Wildlife, Environment and Ecosystem
6. Emerging infectious diseases (EID), Vaccines and Non-communicable diseases (NCD) (human health)
7. EID and Vaccines (animal health)

Each of the sessions were conducted by two co-chairs, who represented the subject matter specialists of the thematic area covered during the session. In each session on average 6 topics (range 5-7) were presented. Most of the topics were research papers and a few were related to program review. Each presentation was followed by a quick question and answer session.

Full list of the papers presented is available at the website of the One Health Bangladesh Conference.

Link:

[https://onehealthbd.org/wp-content/uploads/2023/06/Program\\_schedule.pdf](https://onehealthbd.org/wp-content/uploads/2023/06/Program_schedule.pdf).



## Poster Presentation

The One Health Bangladesh Conference 2023 had organized a poster presentation in lobby of the hotel for the entire duration of the conference. More than 100

posters were on exhibition representing summary results/abstracts of the research conducted in the thematic areas mentioned in the earlier section.

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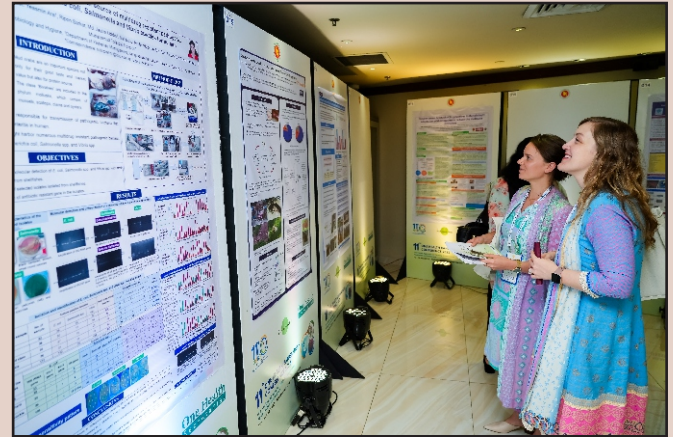


Full list of the posters may be found in the “Abstract Book, 11th One Health Bangladesh Conference, 12-14 June 2023, Dhaka, Bangladesh”.

A group of juries assigned by the scientific committee of Health Bangladesh conference reviewed the posters and selected 10 best posters judging by the relevance,



originality, importance, applicability of the findings and quality of presentation. The ten winners were awarded with a memento. The juries judged the poster by Sanzila Hossain Sigma et al. on their original research titled “Cockroaches: a suitable source of multidrug resistant pathogenic enteric bacteria for human” as the best poster presented in the Conference.



## Annual General Meeting

Annual General Meeting of the One Health Bangladesh (OHB) was held on 14 June 2023 with Prof Nitish Debnath, National Coordinator in the chair. Outgoing General Secretary Dr Salim Uzzaman provided the annual report on behalf of the National Coordination Committee, which was followed by a financial report by the treasurer Dr Abul Kalam Azad. Both the reports were accepted by the members.

The existing National Coordination Committee of the

OHB was then dissolved and a new 37 National Coordination Committee with Prof Nitish Chandra Debnath as the National Coordinator and Dr Mahbubur Rahman as the General Secretary was elected.

Dignitaries including Prof Mahmudur Rahman, Prof Sabrina Flora, Dr Abu Sufian, Dr Salim Uzzaman, the outgoing General Secretary and Dr Mahbubur Rahman, the newly elected General Secretary spoke on the occasion.

## Concluding Session

Following the end of the Annual General Meeting the Conference reached the Concluding Session, which was chaired by Prof Nitish Chandra Debnath, the National Coordinator of One Health Bangladesh. Dr Nahid Rashid, Secretary Ministry of Fisheries and Livestock services was the chief guest of the session while other dignitaries including Prof Mahmudur Rahman, Prof Sabrina Flora, Prof Tahmina Shirin, Dr Abul Kalam Azad, Dr Abu Sufian and Dr Salim Uzzaman were present in the dais.

Prof Nitish Chandra Debnath provided the vote of thanks to all participants from home and abroad for their active participation in the conference and their high level of engagement in the One Health activities in Bangladesh and declared the closure of the conference.



## Other News Items

### CDC organized orientation workshop on Antimicrobial Stewardship (AMS)

The Communicable Disease Control (CDC), DGHS organized series of orientation workshops for public Health Managers on Antimicrobial Stewardship (AMS), where they oriented around 470 Upazila Health and Family Planning Officers (UHFPO) and 64 civil surgeons and more than 40 superintendents of district hospital about the AMS program.

The basic concept of AMS was presented and contents of the AMS national guideline including conducting and monitoring of AMC and PPS surveys, usage of pre-authorization forms, prescription auditing forms etc. Use of available diagnostic services and of national AMR data, especially the antibiograms to guide rational use of antimicrobials was highlighted in the discussions.

Renowned national specialists were presented as resource persons.



### DGDA Empowers Physicians with AWARe Poster to Combat Antibiotic Resistance

The Directorate General of Drug Administration (DGDA) in Bangladesh organized an awareness program in Chittagong to address antibiotic resistance, introducing healthcare professionals to the WHO AWARe classification system. This system categorizes antibiotics into three groups based on their effectiveness and importance in treating specific infections, promoting informed decisions to minimize resistance and preserve antibiotic efficacy.

During the program, Major General Mohammad Yousuf inaugurated an AWARe poster publication endorsed by the WHO. This poster promotes the use of effective and accessible antibiotics (Access group) while discouraging the unnecessary use of last-resort antibiotics (Reserve group) to combat resistance.

Esteemed professionals, including Prof. Dr. Md. Ismail Khan, Vice Chancellor of Chittagong Medical University; Professor Shahena Akter, Principal of Chittagong Medical College; Brigadier General Md. Shamim Ahsan from Chittagong Medical College Hospital; Prof. M A Faiz, Ex-DG of DGHS; and Dr. Md. Aninda Rahman, Deputy Program Manager of Antimicrobial Resistance, Viral Hepatitis, Diarrheal Diseases Control, and Communicable Disease Control (CDC) from DGHS, participated in this workshop.

The program emphasized the importance of accurate diagnosis before prescribing antibiotics to prevent misuse. Healthcare professionals play a crucial role in safeguarding public health and fighting antibiotic

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resistance. The AWaRe classification supports antibiotic stewardship programs, enabling standardized antibiotic selection and promoting coordination among healthcare providers, pharmacists, and policymakers. This initiative equips physicians with the knowledge and tools necessary for informed decision-making, contributing to the preservation of antibiotic effectiveness and public health.



Link:

[http://www.dgda.gov.bd/sites/default/files/files/dgda.portal.gov.bd/files/7ed84f7b\\_5aa0\\_41c9\\_a820\\_0d18dbbd638e/2023-06-11-12-33-c7f2a925470fd38a5edc1a3895ec0e3a.jpg](http://www.dgda.gov.bd/sites/default/files/files/dgda.portal.gov.bd/files/7ed84f7b_5aa0_41c9_a820_0d18dbbd638e/2023-06-11-12-33-c7f2a925470fd38a5edc1a3895ec0e3a.jpg)

### Fin Fish Biosecurity Training Module Development

A joint team consisting of experts from UK's FAO Reference Centre for AMR, Worldfish and FAO Bangladesh along with professionals from Department of Fisheries (DoF), Fish Inspection and Quality Control (FIQC) lab and Bangladesh Fisheries Research Institute (BFRI) is working together to develop a participatory training design including modules on biosecurity for finfish farmers of the country following U2C approach for poultry farmers developed by FAO and Department of Livestock Services (DLS).



For that purpose, the joint team visited different places of Mymensingh to learn how and why U2C (Upazila 2 Community) poultry initiative works better and based on which the same team visited finfish farmers to learn about their perspectives. The team prepared a draft training module for fin fish farmers like U2C II farm efficiency training for poultry farmers. The main objective in this initiative is to develop a participatory training module on biosecurity for finfish farmers of Bangladesh.

### 3-day Continuing Professional Development (CPD) expansion training on AMU/AMR for professionals

FAO, in close collaboration with WHO, DGHS-CDC, and DLS, organized a participatory workshop in January 2018 for the BARA community to finalize the AMU guidelines -- BARA Manush for human health and BARA Murgi for poultry practitioners. A user-friendly smartphone app was

also developed to make the guidelines readily available to BARA practitioners. Over a series of 32 in-service continuing professional development trainings, more than 600 animal and human health professionals from

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across the country have been trained on principles of AMR and responsible AMU under One Health approach and become members of the BARA community of practice.

FAO conducted the 33rd batch of the “3-day CPD expansion training on AMU/AMR for professionals” on 14-16 March 2023 at BRAC CDM Rajendrapur, Gazipur with human and animal health practitioners and academics

### Standard Treatment Guidelines (STGs) for large animal in Bangladesh

FAO ECTAD along with the government human health and animal health counterparts working together since 2016, during which, three AMU guidelines; BARA “Manus” for human health, BARA “Murgi” for poultry practitioners and BARA “Maach” for fin fish treatment have been developed. BARA “Murgi” has already been endorsed by DLS.

Recently, FAO and DLS has jointly taken an initiative of developing Standard Treatment Guidelines (STGs) for large animals. A workshop for development of “Standard

from different government and private institutions focused on revised BARA AMU guidelines in 2021. The main objective of this training was capacity building and sensitization on rational antimicrobial usages as a part of Continuing Professional Development (CPD) for Bangladeshi human and animal health practitioners.

Treatment Guidelines (STGs) for large animal in Bangladesh” was held on 25 January 2023 in Dhaka. The participants of the workshop reviewed and discussed thoroughly on the draft of the standard treatment guidelines that was shared to finalize the STGs for large animal in Bangladesh and for seeking the government endorsement

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