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## Major General Mohammad Yousuf

**Director General**

*Directorate General of Drug Administration*

DGDA's steadfast commitment since November 2022 has significantly impacted AMR awareness. Notably, the organization conducted a crucial roundtable meeting in October 2023 to integrate AMR education into secondary textbooks. Subsequently, during World AMR Awareness Week 2023, a nationwide campaign was launched to emphasize the importance of AMR education.

Equally noteworthy is the Bangladesh National Veterinary Formulary (BDNVF), which addresses AMR in animal health. Expert endorsements highlight its pivotal role in rationalizing veterinary drug use. Together, we reinforce awareness and promote responsible practices for a healthier and more resilient future.

## Md. Mostafizur Rahman

**Director (CC)**

*Directorate General of  
Drug Administration &  
National Focal of AMC surveillance  
in Bangladesh*



DGDA, in collaboration with WHO-Bangladesh, led a compelling initiative during World AMR Awareness Week 2023. An animated version of "Tinu-Minu and Super Bug" with a theme song was introduced and broadcast on Channel I, Independent TV, and Duronto TV. DGDA's initiative was further amplified through WHO social media platforms, facilitating the wide dissemination

of the animation. Additionally, DGDA's commitment extends to developing educational materials for school children, endorsed by the Directorate of Secondary and Higher Education Bangladesh. This collaborative effort ensures widespread awareness and education on AMR among our youth.

# SPEECH



Round Table Meeting

# Steps to Integrate the AMR Issue into Secondary Educational Curriculum

From November, 2022 DGDA has taken initiative to create awareness regarding Antimicrobial Resistance (AMR) among school going children by developing different awareness materials like- comics book “Tinu Minu and Super Bug”, coloring book “The invention of penicillin”, comics poster etc. Conducted awareness program and art competition on AMR in Cox’s Bazar Model High School, Viqarunnisa Noon School & College, Dhaka and Chattogram



Cantonment Public College. During the school-level AMR awareness program at Chattogram Cantonment Public College, DGDA conducted an experimental study

organized a roundtable discussion on 29 October, 2023, chaired by Major General Mohammad Yousuf, DG-DGDA, delved into the pressing issue of antimicrobial resistance

titled "Assessing the Impact of Antimicrobial Resistance Awareness Interventions among School Children in Selected Districts/Upazilas of Bangladesh: A Pilot Study" among students in classes VIII to X. DGDA with the technical and financial assistance from WHO,



(AMR). The dissemination of the study revealed that safeguarding future generations from the forthcoming crisis of this pandemic demands awareness. They must spread awareness, not only within themselves but also among family, relatives, neighbors, and their communities.

There were representatives from the CDC-DGHS, NIPSOM, IEDCR, Chittagong Medical University, BSMMU, Directorate of Secondary and Higher Education, Jahangirnagar University, BRAC University, the Ex ADG-DGHS, the National Curriculum and Textbook Board (NCTB), and Better Health in Bangladesh.

WHO and DGDA's educational initiatives, including the distribution of comic books, coloring books, comic posters and organizing awareness programs, were highlighted as proactive measures. From November, 2022 DGDA has taken initiative to create awareness regarding Antimicrobial Resistance (AMR) among school going children by developing different awareness materials like- comics book "Tinu Minu and Super Bug", coloring book "The invention of penicillin", comics poster etc. Conducted awareness program and art competition on AMR in Cox's Bazar Model High School, Viqarunnisa Noon School & College, Dhaka and Chattogram Cantonment Public College.

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Major General Mohammad Yousuf, DG-DGDA proposed a comprehensive approach by integrating AMR into secondary education textbooks. He emphasized collaboration with organizations like WHO, FAO, USAID, and the Fleming Fund. He also outlined the recent "Drug and Cosmetics Act, 2023," incorporating fines for antibiotic sales without prescriptions.

Experts underscored the significance of education in combating AMR, proposing curriculum inclusion, teacher training, and media involvement. The NCTB chairman supported this, noting recent curriculum changes to introduce concepts about bacteria, viruses, and antibiotics. The importance of integrating AMR content into textbooks was stressed, with training for teachers to ensure effective delivery.

Representative from the Directorate of Secondary and Higher Education, echoed the sentiment, emphasizing the need to prepare

healthy students. Professor Sayedur Rahman, from Bangabandhu Sheikh Mujib Medical University, advocated for the inclusion of AMR in primary education as well.

Experts highlighted the global necessity to raise awareness about AMR, focusing on rational medicine use. They praised DGDA's initiatives but emphasized the importance of curriculum changes to reach a wider audience. There were also media personnel present who actively participated in Q&A session and asked various burning questions regarding the topic. Later the whole roundtable meeting was featured in a full page of Daily Samakal as well as different other media visibilities were there.

The meeting stressed the importance of incorporating AMR issues into the secondary educational curriculum, with all participants, including MOHFW, showing a good understanding. Following the roundtable, on December 13, 2023, MOHFW officially requested NCTB to include AMR issues in the secondary educational curriculum.



*Pic : Dissemination of AMR school campaign findings in Roundtable discussion on Incorporation of AMR issues in the secondary school curriculum*





# AMR Advocacy and Awareness Campaign for World Antimicrobial Resistance (AMR) Awareness Week 2023 at the Divisional Level

The Directorate General of Drug Administration (DGDA) in collaboration with WHO Bangladesh conducted 7 divisional AMR advocacy workshops and rally on the World AMR Awareness Week from 18 to 24 November 2023 in Rajshahi, Chattogram, Sylhet, Rangpur, Khulna, Mymensingh, and Barishal. In order to engage the policymakers and Govt relevant departments, representative were present from the District Commissioner, Civil Surgeon, Police Superintendents, Divisional Medical College and Hospitals, Bangladesh Chemists and Druggists Samity, Pharmaceutical industry, Department of Livestock Services (DLS), Department of Fisheries, Upazila Nirbahi Officer, Press Club Secretary, District Agriculture

officer, Consumers Right Protection, Bangladesh Standards and Testing Institution, Civil Aviation Authority of Bangladesh, and Academicians. Along with the government and private stakeholders, the target audience was 70 pharmacy retailers in each division. To raise AMR awareness and engage with the audience, various materials such as 10 types of awareness

posters, presentation, t-shirt and caps etc. were distributed. Followed by the WAAW-2023 rally, a fruitful discussion meeting took place right after the rally in each division where various questions were answered by the key resource persons as well as the target audiences were oriented with AMR information and recent approved law of “Drug and Cosmetics Act 2023”. In Section 40(d) of this Act, DGDA introduced strict measures, including fines of up to 20,000 BDT for the sale of antibiotics or any other medicine without a prescription from a registered doctor. This step is crucial in ensuring responsible antibiotic use and curbing the misuse of these life-saving drugs.



Pic : WAAW 2023 Celebration in Mymensingh division





Pic : WAAW 2023 Celebration in Rajshahi division



Pic : WAAW 2023 Celebration in Khulna division



Pic : WAAW 2023 Celebration in Sylhet division





Pic : WAAW 2023 Celebration in Chattogram division



Pic : WAAW 2023 Celebration in Rangpur division



Pic : WAAW 2023 Celebration in Barishal division

CAMPAIGN

# AMR advocacy and awareness campaign on World AMR Awareness Week-2023 in DGDA HQ Dhaka

DGDA with the technical and financial assistance from WHO, organized an AMR advocacy and awareness campaign on World AMR Awareness Week-2023 in DGDA HQ Dhaka, chaired by Major General Mohammad Yousuf, DG-DGDA. Major General Mohammad Yousuf,

the Director General of DGDA, delivered the opening speech, setting the tone for the event. The AMR Animation, a unique initiative supported by WHO and the Sweden Embassy, was inaugurated by the chair of the event, Director General of DGDA, Major General Yousuf. The

animation, titled "Tinu Minu and Super Bug," aimed to raise awareness about antimicrobial resistance among the younger generation. The responsibility of chairing the event was transferred to Prof. Dr. Md. Ismail Khan, who serves as the Vice Chancellor of Chittagong Medical University.



WAAW 2023 Celebration in DGDA HQ Dhaka





A recorded video message from Dr. Malin Grape, Ambassador on AMR from the Embassy of Sweden, expressed commitment to the cause. Insights on the event were shared by Dr. Murad Sultan, NPO, WHO Bangladesh, and a technical presentation on critical aspects of antimicrobial resistance was delivered by Ms. S.M. Sabrina Yesmin, Asst Director of DGDA AMR Cell. In the presentation, the AMC surveillance report from 2015-2022 was disseminated which raised concern of increasing antibiotic consumption pattern in Bangladesh. The DGDA AMR cell activities were highlighted as well as the recent regulation on selling antibiotics from the newly approved law of "Drug and Cosmetics Act 2023" was emphasized. In Section 40(d) of this Act, DGDA introduced strict measures, including fines of up to 20,000 BDT for the sale of antibiotics or any other medicine without a prescription from a registered doctor. This is indeed a crucial step to prevent OTC sell of antibiotics in Bangladesh.

Representative from Directorate of Secondary & Higher Education, Mr. Md. Khalid Shifullah, Assistant Director (Special Education), provided insights into the role of education in the fight against antimicrobial resistance and committed to assist in the incorporation of AMR topic in secondary school curriculum of Bangladesh.

Representatives from the Department of Livestock Services, and the Department of Fisheries were present and shared their visions and perspective regarding this crucial concern AMR. Various distinguished speakers from academic institutions and health organizations, such as Prof. Md. Sayedur Rahman, Chairman, Department of Pharmacology, BSMMU, Prof. Dr. Meerjady Sabrina Flora, Director, NIPSOM, Prof. Dr. Tahmina Shirin, Director, IEDCR, Prof. Dr. Md. Nazmul Islam, Director, CDC-DGHS, and Prof. Sitesh Chandra Bachar, Department of Pharmacy, University of Dhaka provided valuable perspectives. Representatives from the Embassy of Sweden, including Dr Daniel Novak, First secretary/Program Specialist Health Sector, and Eva-Charlotte Roos, Senior Health Advisor, SIDA, Sweden, expressed their thoughts on the event.

Representatives from various development partners, including Flemming Fund Country Grant, World Organization for Animal Health, USAID-MTaPS program, Better Health Bangladesh, and USP-PQM+, shared insights as well.

Prof. Dr. Md. Ismail Khan, Vice Chancellor of Chittagong Medical University, delivered the closing



remarks, expressing gratitude to all participants. The Master of Ceremony, Umme Habiba, WHO National Consultant-AMR, DGDA extended thanks to the distinguished speakers, development partners, and the audience. T-shirts and caps were distributed with a view to comply with WHO Go Blue Campaign. Various awareness posters created by DGDA and WHO BAN were displayed as well for better outreach. The event concluded with a call for continued collaboration to combat antimicrobial resistance with a One Health Approach.

During World AMR Awareness Week 2023, DGDA distributed 20,000 awareness posters among pharmacy retailers, 20,000 comic books titled "Tinu Minu and Super Bug," coloring books titled "The Invention of Penicillin," and 20,000 comic posters among various schools. Additionally, 20,000 WHO-AWaRe posters were distributed to all hospitals in Bangladesh in collaboration with CDC and DGHS.

# Engaging TV media to create mass awareness on AMR

DGDA, with the support of WHO-Bangladesh, has taken steps to create a more effective approach by introducing an animated version of "Tinu-Minu and Super Bug,"

accompanied by a theme song. This initiative was inaugurated during the World AMR Awareness Week in 2023. This animation was broadcasted in 3 national TV

channels of Bangladesh: Channel I, Independent TV and Duronto TV with the technical and financial support from WHO.



On occasion of World AMR Awareness Week (WAAW) from 18-24 November 2023 below was the time schedule of broadcasting:



**Duronto TV**  
05:00 to 05:30 PM



**INDEPENDENT**

**Independent TV**  
06:10 to 6:30 pm  
04:10 to 4:30pm



**Channel i**  
06:40 pm



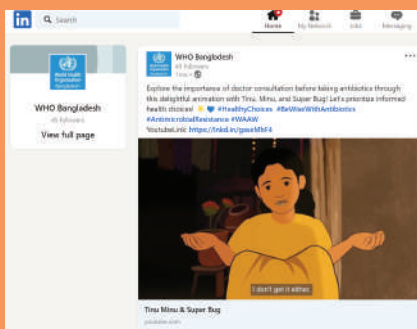
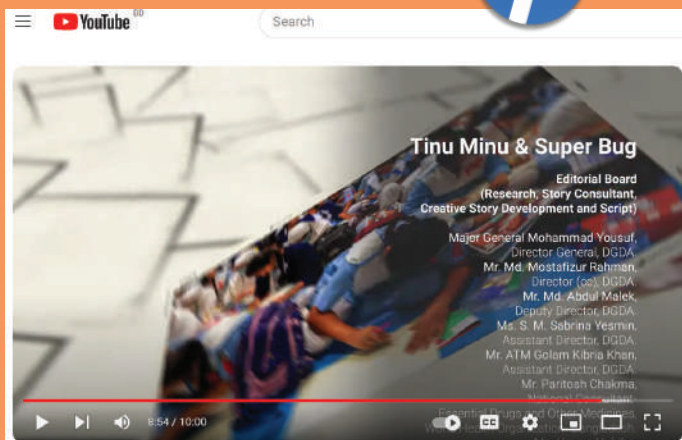
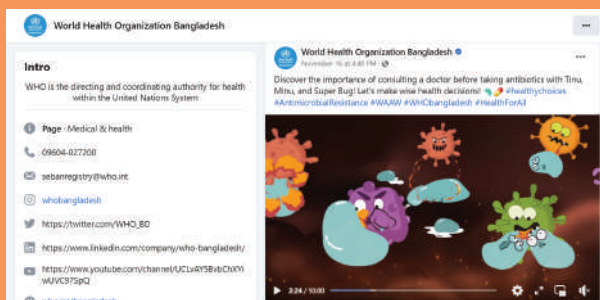




SOCIAL MEDIA



# DGDA's AMR animation "Tinu Minu and Super Bug" in WHO Social Media Platforms



DGDA's AMR animation "Tinu Minu and Super Bug" was published in various social media platforms of WHO Bangladesh on the occasion of World AMR Awareness Week (WAAW) which started from 18-24 November 2023. This initiative has significantly enhanced the reach of the campaign, fostering widespread awareness about antimicrobial resistance. By leveraging the power of social media, the "Tinu Minu and Super Bug" animation has effectively engaged a broader audience and contributed to the broader goals of World AMR Awareness Week.

DGDA has taken the initiative to create several awareness and educational materials for school going children with the technical and financial support from WHO Bangladesh. To show solidarity with

this initiative, the Directorate of Secondary and Higher Education Bangladesh has granted DGDA to distribute AMR awareness materials, which include the comics book "Tinu-Minu & Super Bug," the

Antibiotic Coloring Book "Invention of Penicillin," and the comics poster, to all secondary-level schools under the jurisdiction of the Directorate of Secondary and Higher Education Bangladesh.

Dissemination of AMR

# Dissemination of AMR Educational materials in various schools in Bangladesh



Pic : St. Joseph Higher Secondary School

Bangladesh is the first country in Southeast Asia to prioritize AMR issues and take the initiative to educate school-going children about Antimicrobial Resistance. DGDA aims to distribute AMR awareness materials, including the comic book "Tinu-Minu & Super Bug," the Antibiotic Coloring Book "Invention of Penicillin," and the

comic poster to all secondary-level schools. In continuation of this, with permission from DSHE, DGDA and WHO Bangladesh have started disseminating the awareness materials in 12 schools in Dhaka, including Ideal School and College, Motijheel, Ideal School and College, Banasree; Motijheel Govt Girls' High School, Motijheel Govt Boys' High

School, St. Joseph Higher Secondary School; Ganabhaban Government High School, Mohammadpur Girls' High School; Mohammadpur Government High School, Mohammadpur Model School & College, Udayan Uchha Madhyamik Bidyalaya, Government Laboratory High School, Dhaka and Dhaka Residential Model College.



Pic : Ideal School and College, Motijheel



Pic : Government Laboratory High School, Dhaka



Book

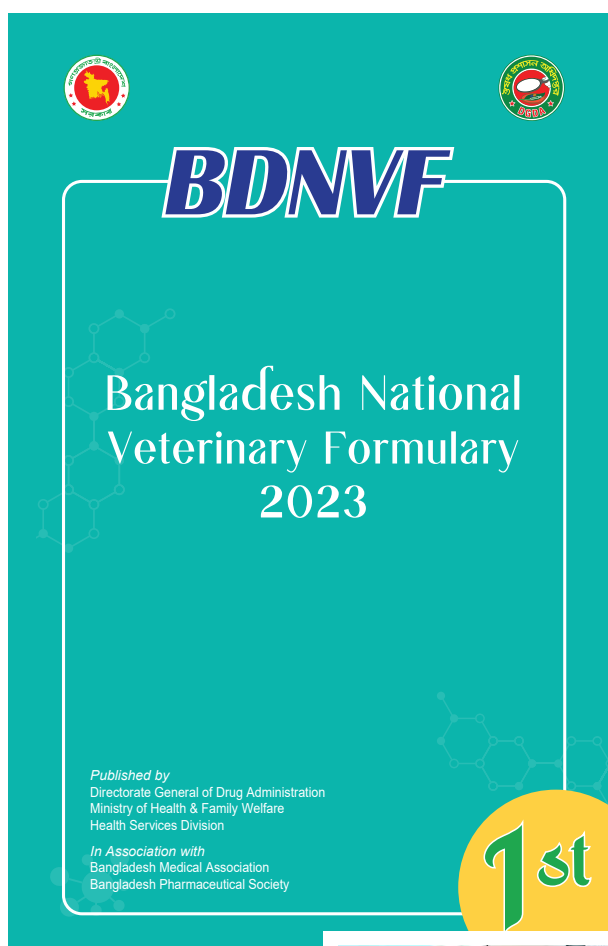
# Bangladesh National Veterinary Formulary (BDNVF)

The rational use of quality-assured medical products is crucial for both human and animal health from a one-health perspective. Collaboration among regulators, healthcare professionals, manufacturers, and the public is essential to improve access and mitigate challenges in the treatment and supply chain. The Directorate General of Drug Administration (DGDA) in Bangladesh oversees the regulation of medical products for both humans and animals to ensure quality, safety, efficacy, and reliability.

Antimicrobial resistance (AMR) is a growing concern, and the government has a committed National Action Plan (NAP) involving multi-sectoral stakeholders. The DGDA plays a key role in controlling AMR by implementing harmonized regulatory systems and monitoring antibiotic consumption through the WHO AWaRe classification.

In response to the need for evidence-based and economically rational use of medical products for animal health, the DGDA initiated the Bangladesh National Veterinary Formulary (BDNVF). The BDNVF, developed with support from the USAID-funded PQM+ Program led by USP, serves as an official

publication providing up-to-date information for veterinary professionals. Committees comprising experts were formed to facilitate the development and implementation of the BDNVF.



The BDNVF offers sound information on the cost-effective selection, prescribing, dispensing, and administration of veterinary drugs available in the local market. It includes details on drug properties, presentation, dosage, side effects, cautions, indications, contraindications, proprietary preparations, and prices. The BDNVF is intended to be a national reference guide for veterinary professionals, aiding them in staying informed and updating their knowledge in line with the latest developments.

Pic: BDNVF



Pic: Editorial and Advisory Committee meeting of BDNVF (20 August, 2023)

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**Preventing Antimicrobial Resistance Together**