



# 10<sup>th</sup> International Public Health Conference 2024

Theme

Leveraging Innovation for a Resilient Health System

Venue : TMSS Medical College, Bogura, Bangladesh.  
Date : 6<sup>th</sup>-7<sup>th</sup> December, 2024

Jointly Organized by  
**Public Health Foundation, Bangladesh**  
[www.publichealthfoundation.org.bd](http://www.publichealthfoundation.org.bd)  
&  
**TMSS Medical College, Bogura, Bangladesh**  
[www.tmssmedicalcollege.com](http://www.tmssmedicalcollege.com)



# 10<sup>th</sup> International Public Health Conference, 2024 (Hybrid)

1<sup>st</sup> Announcement

## Leveraging Innovation for a Resilient Health System

Venue: TMSS, Bogura, Bangladesh  
Date: 6-7 December, 2024

Follow us for further information:

-  <https://www.facebook.com/publichealthfoundationbd>
-  <https://www.youtube.com/@publichealthfoundationbd>
-  <https://rb.gy/dioben>

-  Cell: +8801329647969  
(Mohasin Kabir Bhuyan)
- Cell: +8801716007832  
(Md. Kaoser Bin Siddique)



# Editorial and Publishing Committee

## **Chief Editor**

Prof. Dr. Anwarul Azim Majumder

## **Executive Editors**

Prof. Dr. Sharmeen Yasmeen

Md. Aminur Rahman, PhD

Dr. Shegufta Mohammed

Rtn. Dr. Md. Matiur Rahman

## **Assistant Editor**

Md. Kaoser Bin Siddique

## **Members**

Monaemul Islam Sizear

Dr. Tasdik Hasan

Dr. Azizun Nahar

Saquib Ahmad Khan

Md. Shahriar Ali

Dr. Golam Kabir

Dr. Md Khurshid Alam Hyder

Md. Noman Khan

Dr. Mohammad Abul Bashar

## **Designed by**

Mst. Laily Khatun Lily

Md. Sirajul Islam

## **Printed by**

TMSS Printing Press

International Public Health  
Conference, (Hybrid) 2024

# 10<sup>th</sup> International Public Health Conference, (Hybrid) 2024

Date:  
6-7 December, 2024

Venue:  
TMSS Medical College  
Bogura  
Bangladesh

## THEME:

Leveraging Innovation  
for a  
Resilient Health System

## SUB-THEMES:

- Health Systems Financing towards achieving Universal Health Coverage
- Reproductive and Child Health
- Emerging and Reemerging Diseases and Antimicrobial Resistance
- Non-communicable Disease
- Mental Health and Wellbeing
- Public Health Nutrition
- Environmental Health and Climate Change
- Urban Health
- Oral Health
- Health Science Ethics
- Public Health Literacy
- Graceful Aging and Geriatric Health Care
- Digital Health and Innovation
- Health Policy, Governance and Management

### Registration

Registration Category	Registration Fee	Deadline
Early Bird	BDT 2000	10 October, 2024
Regular	BDT 3000	30 November, 2024
Student	BDT 1000	30 November, 2024
Local Virtual Participant	BDT 500	30 November, 2024
International Virtual Participant	USD 90	30 November, 2024

### Abstract Submission

Deadline of Submission:  
15th October, 2024  
[www.phfbd.com.bd](http://www.phfbd.com.bd)

### Contact

Call: +880132964796P  
(Wahidul Kabir Bhuiyan)  
Call: +8801716007802  
(Md. Kamrul Hossain Siddique)

## Contents

1	Committee and Ambassadors	06
2	Messages	14
3	Tribute to Public Health Leaders	38
4	Acknowledgement	39
5	Pre-Conference Program Schedule	40
6	Conference Program Schedule	41
7	Keynote Abstracts	63
8	Plenary Abstracts	66
9	Special Session Abstract	67
10	Oral Abstracts	68
11	Poster Abstracts	183
12	Photo Gallery	260

# Organizing Committee

## 10th International Public Health Conference 2024 (Hybrid)

### Advisors:



**Prof. M Muzaherul Huq**  
Founding Chairman,  
Public Health Foundation  
Bangladesh (PHFBD)



**Prof. Dr. Hosne-Ara Begum**  
Executive Director, TMSS & Chairman,  
TMSS Medical College



**Prof. Mahfuzar Rahman**  
Professor & Former Head of  
the Department of Community  
Medicine, Anower Khan Modern  
Medical College,  
Life Member, PHFBD



**Prof. Dr. M. S. A. Mansur Ahmed**  
Professor and Advisor,  
Bangladesh University of Health  
Sciences, &  
Vice Chairperson, PHFBD



**Prof Dr. Zakir Hossain**  
Principal, TMSS Medical College



**Prof. Fatema Ashraf**  
Former Chairperson,  
PHFBD & Former Head  
of the dept. of Gynae &  
Obstetrics,  
ShSMC, Dhaka



**Dr. Taufique Joarder,**  
Vice-chairperson, PHFBD



**Dr. Kapil Ahmed**  
Executive Committee Mem-  
ber, PHFBD



**Prof. Anwarul Azim Mazumder**  
Director, Medical Education  
Faculty of Medical Science  
The University of the West Indies  
Cave Hill Campus  
Barbados

## Conference Executive Committee:



**Dr. Aftab Uddin**  
Chair



**Prof. Sharmeen Yasmeen**  
Co-Chair



**Dr. M Islam Bulbul**  
General Secretary



**Rtn. Dr. Md. Matiur Rahman**  
Operational Coordinator



**Prof. Hafiza Arzuman**  
Certificate Coordinator



**Monaemul Islam Sizear**  
Organizing Secretary



**Md. Kaoser Bin Siddique**  
Joint Organizing Secretary



**Dr. Shegufta Mohammad**  
International Coordinator



**Dr. M Tasdik Hasan**  
Abstract Review Coordinator



**Mahmuda Muhsina Bushra**  
Volunteer Coordinator



**Dr. Sharmila Huda**  
Registration Coordinator



**Md. Golam Rabbani**  
Finance Coordinator

## Conference Committee:



**Prof. Dr. M.H Alamgir Pavel**  
Chair



**Prof. Sharmeen Yasmeen**  
Co-Chair



**Rtn. Dr. Md. Matiur Rahman**  
Member



**Prof. Dr. Md. Zakir Hossain**  
Member



**Prof. Hafiza Arzuman**  
Member



**Prof. Fatema Ashraf**  
Member



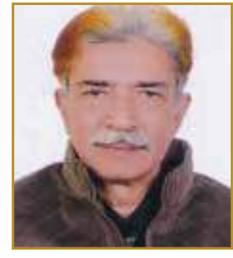
**Prof. Dr. Md. Anup Rahman**  
Chowdhury  
Member



**Brig. Gen. (Retd)  
Dr. Md. Jamilur Rahman**  
Member



**Prof. Dr. Md. Azfarul Habib**  
Member



**Dr. Shamim Ahmed Choudhury**  
Member



**Monaemul Islam Sizar**  
Member



**Dr. M Tasdik Hasan**  
Member



**Mahmuda Muhsina Bushra**  
Member



**Dr. Sharmila Huda**  
Member



**Md. Golam Rabbani**  
Member



**Md. Shahadat Hossain**  
Member



**Md. Mohasin Kabir Bhuyan**  
Member



**Md. Kaoser Bin Siddique**  
Member Secretary

# Sub-Committee of the 10th International Public Health Conference 2024:

---

## **Preconference Committee:**

**Convenor:** Monaemul Islam Sizear

**Co-convenor:** Dr. DM Arifur Rahman

**Member:**

Dr. Ahmed Al Montasir

Md. Golam Rabbani

Md. Mohasin Kabir Bhuyan

Md. Kaoser Bin Siddique

## **1. Coordination Committee:**

**Convenor:** Monaemul Islam Sizear

**Co-Convenor:** Rtn. Dr. Md. Matiur Rahman

**Members:**

Dr. M Islam Bulbul

Dr. Shegufta Mohammad

Dr. Tasdik Hasan

Md. Kaoser Bin Siddique

Md. Mohasin Kabir Bhuyan

## **2. Scientific Committee:**

**Convenor:** Prof. Sharmeen Yasmeen

**Co-Convenor:** Dr. Shegufta Mohammad  
& Dr. Tasdik Hasan

**Members:**

Prof. Dr. Anwarul Azim Majumder

Prof. Hafiza Arzuman

Prof. Fatema Ashraf

Prof. Hasnat Alamgir

Rtn. Dr. Md. Matiur Rahman

Md. Kaoser Bin Siddique

Dr. Mohammad Jahid Hasan

Dr. Akhiruzzaman

Saquib Ahmad Khan

Dr. Md. Rakibul Hasan Khan

Dr. Sabrina Ahmed Judy

Md. Shahadat Hossain

Dr. Md. Khurshid Alam Hyder

Prof. Dr. Md. Azfarul Habib

Dr. Aminur Rahman

Dr. Azizun Nahar

Dr. Farzana Islam

S M Murshid Hasan

Dr Saiful Islam

Dr. Moomtahina Fatima

### **3. Fund Raising & Finance Committee:**

**Convenor:** Prof. Dr. Md. Zakir Hossain

**Co-Convenor:** Md. Golam Rabbani

**Members:**

Prof. Dr. Md. Majibar Rahman

Prof. Dr. Md. Nazrul Islam

Prof. Dr. Naresh Kumar Roy

Prof. Dr. Sultana Razia

Dr. Md. Nazibullah

Dr. Md. Saiduzaman

Prof. Fatema Ashraf

Dr. Md. Mahfuzul Islam

Dr. M Islam Bulbul

Dr. M Tasdik Hassan

Md. Shahadat Hossain

Md. Aminul Islam, TMSS

Dr. Nuruzzaman Ahmed

Md. Hasanul Tarek

### **4. Registration Committee:**

**Convenor:** Dr. Sharmila Huda

**Co-Convenor:** Dr. Md. Akhiruzzaman

**Members:**

Prof. Dr. SM Rowshan Alam

Dr. Rakib Hasan Khan

Mahmuda Muhsina Bushra

Dr. Tahsina Nasrin

Binu Adhikary

Dr. Shanjida Huda

Dr. Md. Farhan Azad

Md. Rajvee Hasan

### **5. Publication Committee:**

**Convenor:** Prof. Dr. Anwarul Azim Majumder

**Co-Convenor:** Dr. Shegufta Mohammad

**Members:**

Prof. Sharmeen Yasmeen

Dr. Aminur Rahman, PhD

Monaemul Islam Sizear

Md. Kaoser Bin Siddique

Dr. Tasdik Hasan

Dr. Azizun Nahar

Saquib Ahmad Khan

Md. Shahriar Ali

Dr Golam Kabir

Dr. Md Khurshid Alam Hyder

Md. Noman Khan

Dr. Mohammad Abul Bashar

### **6. Refreshment Committee:**

**Convenor:** Dr. Md. Mamun Al Mujahid

**Co-convenor:** Md. Rafiqul Islam

**Member:**

Dr. Ahmed Sharif

Dr. S. M Mejba Ul Hoque

Dr. Sharmila Huda

Mahmuda Muhsina Bushra

Md. Sabbir Hasan

### **7. Certificate Awarding Committee:**

**Convenor:** Prof. Hafiza Arzuman

**Co-Convenor:** Dr. Sharmila Huda

**Members:**

Md. Sojebur Rahman

Md. Mohasin Kabir Bhuyan

Mahmuda Muhsina Bushra

Md. Noman Khan

### **8. Crest Committee:**

**Convenor:** Monaemul Islam Sizear

**Co-Convenor:** Md. Sojebur Rahman

**Members:**

Dr. Sharmila Huda

Md. Mohasin Kabir Bhuyan

Mahmuda Muhsina Bushra

Md. Noman Khan

### **9. Reception Committee:**

**Convenor:** Prof. Sharmeen Yasmeen

**Co-Convenor:** Mst. Nilufar Yesmen

**Members:**

Prof. Fatema Ashraf

Dr. M Islam Bulbul

Dr. Shegufta Mohammad  
Rita Rani Paul  
Prof. Nurul Gani  
Dr. Yeasmin Jahan  
Nutritionist Tamanna Sharmin  
Dr. Farzana Islam  
Dr. S M Murshid Hasan  
Md. Shahadat Hossain  
Dr. Zannat Nur

### **10. Venue Management Committee:**

**Convenor:** Md. Sojebur Rahman  
**Co-Convenor:** Monaemul Islam Sizear

**Members:**

Mst. Nilufar Yesmen  
Md. Kaoser Bin Siddique  
Md. Shahadat Hossain  
Shah Alam Md. Najmul Kabir  
Md. Mohasin Kabir Bhuyan  
Md. Golam Rabbani  
Mahmuda Muhsina Bushra  
Nutritionist Tamanna Sharmin

### **11. Media, Press, Documentation and Publicity Committee:**

**Convenor:** Dr. Shamim Ahmed Choudhury  
**Co-Convenor:** Dr. M Tasdik Hassan

**Members:**

Rtn. Dr. Md. Matiur Rahman  
Dr. Bulbul M Islam  
Dr. Sharmila Huda  
Md. Shahriar Ali  
Md. Aminul Islam  
Dr. Nabhira Aftabi Binte Islam  
Nutritionist Tamanna Sharmin  
Ms. Jebun Nessa Rahman  
Md. Shahadat Hossain  
Dr. Md Zohirul Alam  
Dr. Zubair Shams  
Md. Zahangir Alam  
Md. Noman Khan

### **12. Volunteer Management Committee:**

**Convenor:** Mahmuda Muhsina Bushra  
**Co-Convenor:** Md. Kaoser Bin Siddique

**Members:**

Nutritionist Tamanna Sharmin  
Md. Sojebur Rahman  
Dr. Samia Rashna Ahmed  
Md. Mohasin Kabir Bhuyan  
Dr. Olin-A-Bupasha Rahman  
Ms.Hosna Akter  
Mr. Saeed Ahsan Khalid  
Dr. Nasrin Parvin  
Dr. Tanjina Ahmed Chaklader  
Gazi Golam Mehdi  
Abul Hasan Md. Khaza Baki Billah  
Dr. Mahjabin Shawly  
Dipak Chandra Das  
Tapan Kumar Fuzder  
Anik Singha  
Sayem Ahmed  
Mohammad Najmul Quader  
Dr. Nayan Ray  
Md. Saiful Islam  
Dr. Syed Mohaimenul Quddus  
Dr. Umme Jamila Akther Manni

### **13. Cultural & Entertainment Committee:**

**Convenor:** Prof. Dr. Md. Azfarul Habib  
**Co-Convenor:** Dr. Mostary Zannath

**Members:**

Dr. Nabhira Aftabi Binte Islam  
Mst. Nilufar Yesmen  
Dr. Sharmila Huda

#### **14. Transport Committee:**

**Convenor:** Prof. Dr. Md. Azfarul Habib

**Co-convenor:** Shah Alam Md. Najmul Kabir

**Member:**

Md. Shahadath Hossain

Md. Golam Rabbani

Md. Mohasin Kabir Bhuyan

Md. Sazzad Hossain

Md. Nahid Islam (Sumon)

Md. Sabbir Hasan

#### **15. Accommodation Committee:**

**Convenor:** Prof. Dr. Md. Anup Rahman Chowdhury

**Co-convenor:** Md. Sojebur Rahman

**Member:**

Dr. Md. Mamun Al Mujahid

Md. Monemul Islam Sizear

Md. Golam Rabbani

Nutritionist Tamanna Sharmin

Rita Rani Paul

Mst. Nilufar Yesmen

Binu Adhikary

Md. Rafiqul Islam

Md. Khalekul Bari

Md. Sabbir Hasan

#### **16. IT Support Committee:**

**Convenor:** Dr. Md. Mahbub Ur Rahim

**Co-convenor:** Md. Ibrahim Khalil

**Member:**

Md. Sazzad Hossain

Sajid Hasan

Md Tanvir Hasan

Dr. Ashrafur Rahman Mahadi

#### **17. List of Ambassadors:**

1. MD. MOSARAF HOSSAIN

Email: hmosarof33@gmail.com

Contact: +8801774650142

Dept. of Public Health & Informatics,

Jahangirnagar University.

2. MERAJ HOSSAIN

Email: merajhossainmamun@gmail.com

Contact : +880 1792958637

Dept. of Public Health & Informatics,

Jahangirnagar University.

3. FAKHRUL ALAM NEON

Email: fakhrulnion56@gmail.com

Contact: +880 1556355049

BMSS.

4. MUZIBUL HAQUE LIMON

Email: muzibulhaque11@gmail.com

Contact: +880 1521781290

Dept. of Public Health & Informatics,

Jahangirnagar University.

5. RAZIUL ISLAM

Email : rajeul608@gmail.com

Contact: +880 1559015620

IFMSA Bangladesh.

6. TAMIM IKRAM

Email : tamim.ikram2001@gmail.com

Mobile: +880 1756015621

Dept. of Public Health & Informatics,

Jahangirnagar University.

7. PROGGA PARMITA ROY

Email: parmiprogora@gmail.com

Contact: +880 1841933884

IFMSA Bangladesh.

8. MUHAMMAD AL AMIN DEWAN

Email : alaminbijoy543026@gmail.com

Contact: +880 1846103342

Dept. of Public Health & Informatics,

Jahangirnagar University.

9. SADIA MIRZA

Email : mirzasadia2019@gmail.com

Contact: +880 1521535979

BMSS

10. MD. TAMJID SHAHARIAR SAJJAD

Email: sajjadhimel96@gmail.com

Contact: +880 1404176229

BMSS

11. MD. AKIFUR RAHMAN FARHAN

Email: akifurfarhan@gmail.com

Contact: +880 1856126970  
IFMSA Bangladesh.  
12. NAWSHIN NAWAR  
Email: nawshin.nawar.zihan@gmail.com  
Contact: +880 1796392015  
BMSS  
13. SHARIAR RAHMAN ANIK  
Email: sranik1149@gmail.com  
Contact: +880 1886903257  
BMSS  
14. RIDWAN UL ISLAM  
Email: ridwanislamme@gmail.com  
Contact: +880 1982-205408  
BMSS  
15. MUSAB RAHMAN  
Email: musabrahman1998@gmail.com  
Contact: +880 1313392858  
BMSS  
16. SUMAIYA SIDDIQUE  
Email: sumaiyasiddique043@gmail.com  
Contact: +880 1312402017  
BMSS  
17. SUNDAS FAZILI SHAH  
Email: sundasfazili23@gmail.com  
Contact: +880 1893944789  
BMSS  
18. ROMANA AKTER  
Email: romanaakter008@gmail.com  
Contact: +880 1724720008  
TMSS Nursing College  
19. SWEETY RANI  
Email: sweetyrani.tt@gmail.com  
Contact: +880 1714913110  
TMSS Nursing College  
20. SAKHAWAT HOSSAIN  
Email: sakhawatislam127@gmail.com  
Contact: +880 1786171118  
TMSS Nursing College  
21. SRABONI ISLAM  
Email: sraboniislam323@gmail.com  
Contact: +880 1727107198  
TMSS Nursing College

22. MST. SADIYA AKTHER SHABNUR  
Email: sadiyaaktar585@gmail.com  
Contact: +880 1784449186  
TMSS Nursing College  
23. Dr. FABIA BENTA FARUQUE  
Email: fabiafaruque041@gmail.com  
Contact: +880 1714454634  
Intern, TMSS Medical College Hospital  
24. Dr. OVI SHARMA  
Email: ovisharma1000@gmail.com  
Contact: +880 1792499302  
Intern, TMSS Medical College Hospital  
25. Md. Faisal Ahmmed  
Email: tmfaisalahmmed@gmail.com  
Contact: +880 1636-062843  
TMSS Medical College  
26. Mst. Rokesana Pervin  
Email: rokesanapervinbristy@gmail.com  
Contact: +880 1844-921246  
TMSS Medical College  
27. Zerine Tasnim  
Email: jerin11tasnim@gmail.com  
Contact: +880 1797-780120  
TMSS Medical College  
28. Bharathraj S A  
Email: sabharathraj19@gmail.com  
Contact: +880 1893 944692  
TMSS Medical College  
29. Jenisha Khadka  
Email: jenishakhadka2001@gmail.com  
Contact: +880 1893 944170  
TMSS Medical College  
30. Ramadani Tutan  
Contact: +880 1752223518



## Message

### Chief Guest

It is a great pleasure and honor for me to be invited at the 10<sup>th</sup> International Public Health Conference 2024. Special thanks to the organizers, the Public Health Foundation, Bangladesh (PHFBD), and Thengamara Mohila Sabuj Sangha (TMSS) for considering me as Guest of this gracious event. I am impressed by the theme of the conference, “Leveraging Innovation for a Resilient Health System”, which reflects the insight and concern of the organizers to redress the pressing current public health challenges.

The resilience of our health systems has become extremely critical as we need to navigate through difficult, complex and rapidly changing context. This conference will provide a platform to collaborate among the brilliant and dedicated public health professionals around the globe, particularly of this region to explore the potential of innovation in transforming health system towards better equity, accessibility and sustainability.

The sub-themes of this event - spanning universal health coverage, climate change, mental health, digital innovation are widespread areas involving the intersectional linkage of the challenges those we generally encounter. Through this conference, you will be able to share knowledge, innovate new approaches, and build partnerships, which will enlighten and empower us to respond to the current as well as future demands.

I applaud the Public Health Foundation, Bangladesh, for its unwavering dedication to advancing public health knowledge and practice in this region, and Thengamara Mohila Sabuj Sangha (TMSS) for its invaluable collaboration in making this event a reality. I am optimistic in believing that the insights and collaborations built here will have a significant footprint on the public health landscape.

Let this conference be an occasion to inspire exchange of innovative ideas in order to formulate resilient and inclusive health systems. I look forward to the meaningful discussions and high-yielding outcomes of this conference.

Thank you, and I wish you all a productive and enriching conference.

#### **Prof. Md Sayedur Rahman**

Special Assistant (State-minister)

Ministry of Health & Family Welfare

Government of the People’s Republic of Bangladesh



# Message

Special Guest

It is an honor to join the 10th International Public Health Conference, 2024, organized by the Public Health Foundation of Bangladesh (PHFBD) and TMSS Medical College, Bogura. This prestigious event, with the theme "Leveraging Innovation for a Resilient Health System," is a timely and vital platform for addressing the challenges and opportunities in public health today.

The COVID-19 pandemic underscored the importance of resilience and innovation in health systems worldwide. As we recover and rebuild, it is imperative to explore innovative strategies, technologies, and policies that enhance our ability to respond effectively to public health crises, while ensuring equitable access to healthcare for all.

This conference brings together a diverse group of experts, researchers, and policymakers from around the globe to share insights, experiences, and groundbreaking ideas. Such collaborations are essential for advancing public health initiatives and fostering sustainable solutions to pressing health challenges.

I commend PHFBD and TMSS Medical College for their vision and dedication to organizing this hybrid event, which transcends geographical boundaries and facilitates meaningful dialogue. I am confident that the discussions and outcomes of this conference will contribute significantly to the global discourse on health system resilience and innovation.

As a higher education leader, I am particularly encouraged to see academic institutions playing a pivotal role in driving public health innovation. Let us continue to invest in research, capacity building, and partnerships to create a healthier, more resilient future.

I wish the conference great success and look forward to engaging in fruitful deliberations that inspire impactful action.

**Dr. Md. Kamrul Islam**

Vice-Chancellor

Jahangirnagar University, Bangladesh

## Inaugural Ceremony



## Message

### Special Guest

I am extremely honored to participate the 10th International Public Health Conference as a Special Guest, jointly organized by the Public Health Foundation Bangladesh (PHFBD) and TMSS Medical College (TMC). I would like to express my sincere thank and gratitude to the organizing committee for inviting me.

I highly appreciate this year's public health theme, "Leveraging Innovation for a Resilient Health System," which is time demanding. It emphasizes the importance of adopting innovative and sustainable strategies to strengthen health systems, ensuring resilience not only during crises but also in adapting long-term challenges. By embracing technology, data-driven insights, and collaborative approaches, we can build a equitable and accessible health system for all.

I strongly believe that this conference offers a unique platform for public health professionals from national and international arena both emerging and experienced to share knowledge, build networks, and explore transformative ideas. Such interactions of public health experts are essential for driving progress towards a resilient and inclusive global health system.

PHFBD and TMC have taken a commendable and impactful initiative for the sustainable progress of the discipline and creating opportunities that inspire meaningful collaborations. I look forward to the success of the conference that will spark innovation and contribute in building healthier and more compassionate communities worldwide.

I wish a grand success of the 10th International Public Health Conference.

**Professor Dr. Md. Jawadul Haque**

Vice-Chancellor

Rajshahi Medical University



# Message

**Prof. Dr. Bettina Borisch**

CEO

World Federation of Public Health Associations

The main theme of the Conference: “Leveraging Innovation for a Resilient Health System” is both a national and an international global theme. There is no health system in the world that is not challenged by the demands they all are confronted with.

The challenges themselves may differ from country to country, but the pressure on health systems is ubiquitous. The necessity for universal coverage with access to quality care also needs to respond to climate change, population movements, civil unrest and many others.

Innovation is barely needed. There are technological advances – such as digitalization including AI- that may help, in addition we need important social innovation. We are in constant, but now accelerated, societal change. There are interactions between humans, technology, society and our physical environment. Like digitalization today, all major societal transformations have had significant health impact and have provided an opportunity to develop and innovate public health. The 10<sup>th</sup> international Public Health conference will be a place for finding solutions together.

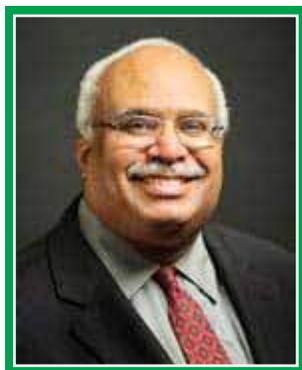
Geneva, November 29, 2024

**Prof. Dr. Bettina Borisch, MD, MPH, FRCPath**

CEO, World Federation of Public Health Associations

Institute of Global Health, University of Geneva, Switzerland

## Inaugural Ceremony



## Message

**Georges Benjamin**  
Executive Director  
American Public Health Association  
Washington DC

"I want to bring a message of greetings and good will to the many public health professionals there in Bangladesh. Your work is important as you address many health challenges in your nation. I want to wish you a wondrous and prosperous meeting. I wish I could be there with you. But I know that you will learn and share and network and have a wonderful time. Congratulations "

*A video message shared by Georges Benjamin*



**Georges Benjamin**  
Executive Director  
American Public Health Association, Washington DC



# Message

## Founding Chairperson

Public Health Foundation  
Bangladesh

*Dear Esteemed Colleagues and friends,*

Warm greetings to all of you who are involved in the noble mission of promoting the Public Health. As we gather for the upcoming international conference in partnership with TMSS, Bogra, Bangladesh; we acknowledge the tremendous challenges facing Bangladesh and the countries of the region due to their constrained resources in providing healthcare to our sizable population. Delivering effective healthcare to all the citizens remains a significant challenge, exacerbated by the realities of high out-of-pocket health expenditures that often force families to sacrifice basic needs such as

nutrition, housing, and education. Limited health budget even limits our capacity too.

Despite these challenges, we are committed to addressing the pressing health issues that many face. The establishment of our organization was no small feat; which has now transformed into a dynamic entity under capable and dedicated leadership.

We believe in promoting a disease-free and healthy lifestyle for all, recognizing that public health, with its focus on prevention, delivering primary care, and ultimate rehabilitation, can substantially reduce health costs and alleviate suffering in our communities.

The Public Health Foundation is proud to be partner with government health sector activities and both national and international entities, including our collaborations with the World Federation of Public Health Associations (WFPHA) in Geneva. These partnerships enhance our efforts in driving meaningful change and sharing our insights at regional & international meetings and conferences.

As we embark on this conference, I would like to congratulate all fellow leaders, members, and public health professionals as well as other allied professionals including interested students who are involved in organizing such an important event. Your dedication and commitment inspire me & others too, I have no doubt that collectively, we can accomplish remarkable feats if we remain true to our purpose.

I extend my heartfelt thanks and gratitude to each of you, believing that with your sincere efforts, our mission will ultimately be achieved. Health and humanity are inseparable, and together, we can make a profound impact.

May Allah, the almighty bless us with strength and guidance in our endeavors for the betterment health & humanity in Bangladesh & everywhere.

### **Prof. M. Muzaherul Huq**

Former Senior Adviser  
World Federation for Medical Education (WFME)  
Former Regional Adviser  
WHO, South East Asia Region (SEARO)



## Message

**Chief Patron**

*Dear Distinguished Participants and Healthcare Professionals,*

As the Executive Director of TMSS, I am delighted to welcome you to our 10th International Public Health Conference 2024, Jointly Organized by Public Health Foundation, Bangladesh & TMSS Medical College. This is the 1<sup>st</sup> time this prestigious gathering organizing at TMSS Medical College, Bogura represents our unwavering commitment to advancing healthcare excellence and innovation in Bangladesh and beyond.

Since TMSS's inception, we have dedicated ourselves to empowering communities and strengthening healthcare systems through innovative approaches. Our journey from a grassroots organization to a comprehensive healthcare provider has taught us the vital importance of resilience and adaptability in healthcare delivery – principles that deeply resonate with this year's conference theme.

The theme "Leveraging Innovation for a Resilient Health System" reflects not only global healthcare priorities but also Public Health Foundation, Bangladesh and TMSS's vision of integrating cutting-edge solutions with community-centered approaches. We believe, strengthening the public health system, alongside achieving universal healthcare coverage, is essential for improving community well-being and advancing the Sustainable Development Goals (SDGs) Our organization's experience in serving diverse populations across Bangladesh has shown us that true innovation lies in creating sustainable, accessible, and equitable healthcare solutions for all.

This conference brings together an extraordinary assembly of minds – from pioneering researchers and dedicated clinicians to visionary policymakers and healthcare innovators. We are particularly proud to host this hybrid event, which breaks geographical barriers and enables global participation, truly embodying our commitment to inclusive healthcare dialogue.

At this conference, we believe that building resilient health systems requires a collaborative approach that combines technological advancement with deep understanding of community needs. This conference provides an ideal platform for sharing such experiences, fostering partnerships, and developing practical solutions for healthcare challenges.

I encourage all participants to engage actively, share your valuable insights, and explore potential collaborations. Let us work together to transform our healthcare systems and create a more resilient and equitable health future for all.

With my best wishes for a productive and inspiring conference.

Sincerely,

**Prof. Dr. Hosne-Ara Begum**

Executive Director, TMSS &  
Chairperson, TMSS Medical College  
Bogura, Bangladesh



# Message

Advisor  
Conference Committee

Dear Respected Colleagues, Healthcare Professionals, and Participants,  
As the Principal of TMSS Medical College, Bogura, it brings me great pride to welcome you to the 10th International Public Health Conference 2024, Jointly Organized by Public Health Foundation, Bangladesh & TMSS Medical College. Our institution, located in the heart of northern Bangladesh, has consistently strived to be at the forefront of medical education and healthcare innovation.

The theme "**Leveraging Innovation for a Resilient Health System**" deeply resonates with our institutional mission of nurturing healthcare professionals who are not only clinically competent but also adaptable to evolving healthcare challenges. At TMSS Medical College, we have witnessed firsthand how innovation in medical education and healthcare delivery can transform medical graduates, patient outcomes and strengthen community health systems.

Our role as hosts of this prestigious conference reflects our commitment to fostering academic excellence and promoting evidence-based healthcare practices. We are particularly excited to showcase how regional medical institutions like ours can contribute to building resilient health systems through innovative teaching methodologies, research initiatives, and community engagement programs.

The hybrid format of this conference exemplifies our adaptation to modern educational needs, allowing us to connect with healthcare professionals and experts globally while maintaining the warmth and hospitality that Bogura is known for. Our faculty and students have worked tirelessly to ensure that both in-person and virtual participants have an enriching conference experience.

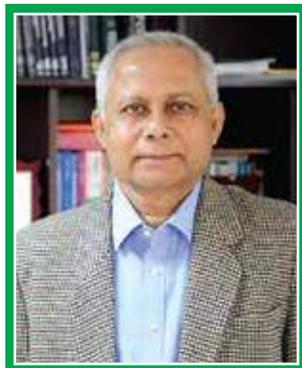
I am particularly proud that this conference will feature research work from our own faculty and students alongside international presentations, demonstrating our commitment to contributing to the global healthcare knowledge base. The scientific sessions, workshops, and networking opportunities have been carefully designed to promote meaningful dialogue and practical learning.

As we gather for this significant event, I encourage all participants to engage actively, share your experiences, and build lasting professional relationships. Let us use this platform to collectively work towards our shared goal of creating more resilient and innovative healthcare systems.

Looking forward to welcoming you to TMSS Medical College, Bogura, whether virtually or in person.

Best regards,

**Prof Dr. Zakir Hossain**  
Principal, TMSS Medical College,  
Bogura, Bangladesh



## Message

### Public Health Awardee

It is encouraging to see the Public Health Foundation Bangladesh (PHFBD) consistently organizing impactful conferences in Bangladesh. The 10th conference marks a significant milestone for a civil society organization like PHFBD, and I am honored to be recognized as a public health awardee in this event.

This conference offers a valuable opportunity to engage with dedicated public health professionals and exchange ideas that enhance our shared knowledge and drive our passion forward. The networks formed, resources gathered, and lessons learned at this international conference can elevate the public health agenda, helping to prevent future outbreaks and build a stronger, more compassionate health system.

This year's theme, "Leveraging Innovation for a Resilient Health System," highlights the importance of exploring innovative approaches to strengthen health systems in today's complex world. Resilience now demands proactive, sustainable solutions that not only address immediate crises but also adapt to long-term changes. By embracing new technologies, data-driven insights, and partnerships, we can ensure health systems are robust, equitable, and prepared for the future.

I believe, public health is a collective responsibility and everyone's business. Together, we can work toward achieving our national health goals. I am grateful to the Public Health Foundation Bangladesh and the Organizing Committee for convening this impactful event. I hope the discussions and collaborations here inspire transformative ideas and connections that will advance our efforts toward building resilient, healthy communities worldwide.

I wish the 10th International Public Health Conference all success.

**Dr. Tahmeed Ahmed**

Executive Director

International Centre for Diarrheal Disease Research, Bangladesh (icddr,b)



# Message

## Public Health Awardee

I consider this an absolute honor to be recognized as a Public Health Awardee by the Public Health Foundation Bangladesh (PHFBD). I extend my sincere gratitude to the Organizing Committee of PHFBD for this.

This year's conference is significant for several reasons. Holding it outside of Dhaka, the capital, is very well thought-out, which will facilitate the participation of many more delegates from the districts. The theme of the conference, "Leveraging Innovation for a Resilient Health System," is also very timely. It highlights the critical need for innovative strategies that reinforce our health systems' resilience and adaptability in a rapidly changing global landscape. Resilience in health care extends beyond crisis response—it involves creating sustainable solutions that endure through various challenges. By leveraging technology, data-driven insights, and collaborative approaches, we can build systems that are not only robust but also equitable, ensuring quality care for every citizen. Thirdly, the conference is being hosted by TMSS, one of the largest and well-known NGOs in Bangladesh, which is a recognition of the role of civil society in health matters.

The Conference is being held at a time when Bangladesh's healthcare system is at a crossroad. We have done relatively well in recent times in achieving many of the health-related goals but achieving any further milestones including the targets under the Sustainable Development Goals will require new and innovative ideas and their successful implementation. We have seen a sense of complacency in the national health leadership but we have a long way to go for which we need to prepare ourselves.

The conference presents an invaluable opportunity for emerging and established public health professionals, particularly from Bangladesh, to enhance their skills, expand their networks, and engage in meaningful exchanges. It fosters a collective effort toward a shared vision of a resilient, innovative, and inclusive health system.

Once again, I express my gratitude for this exceptional honor that has been bestowed upon me. I commend the Public Health Foundation Bangladesh for their important work and for creating a platform to addressing the health concerns that the people of Bangladesh are struggling with. I look forward to engaging in insightful discussions and exploring together the transformative paths that innovation can create for a healthier and resilient world.

I wish PHFBD godspeed and the Conference a grand success.

### **Ahmed Mushtaque Raza Chowdhury, PhD**

Clinical Professor of Population and Family Health, Columbia University New York and  
Founding Dean, BRAC James P Grant School of Public Health



## Message

### Chief Guest

I am deeply honored to participate as a Chief Guest and Panelist at the 10<sup>th</sup> International Public Health Conference during the Scientific Session. This remarkable event, organized by the Public Health Foundation of Bangladesh (PHFBD) and Thengamara Mohila Sabuj Sangha (TMSS), reflects their unwavering commitment to advancing public health in Bangladesh and beyond. I extend my heartfelt gratitude to the Organizing Committee for their tireless efforts in this vital field.

As a former Health Secretary of the Government of Bangladesh, I find the conference theme, "Leveraging Innovation for a Resilient Health System," both timely and strategically aligned with our nation's health objectives. Addressing today's complex public health challenges requires continuous and impactful innovation. Digital tools, in particular, have immense potential to strengthen our health systems, making it more robust and adaptable. Additionally, fostering collaborative approaches is essential for building equitable and accessible healthcare systems-an imperative for Universal Health Coverage.

This conference serves as a powerful platform for meaningful dialogue and collaboration among government entities, academia, researchers, and the private sector. It presents a critical opportunity for policymakers to engage partnerships and cooperation, and to ensure a more integrated approach to public health priorities.

I commend PHFBD for its visionary leadership and its initiatives for creating opportunities to inspire transformative collaborations.

I wish the 10th International Public Health Conference a great success.

### **Md Ashadul Islam**

Former Senior Secretary  
Planning Division, Ministry of Planning  
Government of the People's Republic of Bangladesh



# Message

## Special Guest

On the occasion of the 10th International Public Health Conference jointly organized by the Public Health Foundation of Bangladesh and TMSS Medical College, Bogura, I, on behalf of DGFP extend our heartfelt congratulations on the successful organization of this landmark event. This is the first time the conference is being held outside Dhaka, in the vibrant city of Bogura, marking a significant milestone in public health advocacy. We are proud to be part of this important gathering that brings together experts, practitioners, and policymakers to discuss critical issues in health systems strengthening.

With a focus on leveraging innovation, DG Family Planning continues to lead efforts towards achieving Universal Health Coverage, ensuring healthier futures for all. In this context we welcome the innovation and commitment of public Health foundation Bangladesh, especially their contributions in improving maternal and child health.

At DGFP, we remain steadfast in our commitment to improving maternal and child health. Our efforts to integrate digital health solutions are transforming reproductive and child health services, addressing critical issues like emerging diseases, antimicrobial resistance, mental health and so on and contributing to the achievement of Universal Health Coverage.

We believe that this conference provides a unique platform for researchers, public health experts, policymakers, clinicians, and media personalities to come together, fostering a rich environment for the sharing and exchange of scientific knowledge. Embracing such a diverse range of voices will create valuable opportunities for collaboration and innovation in the field of public health.

DGFP looks forward to continued partnership in our shared mission to ensure a healthier future for all. We are confident that this program will be a grand success and will contribute significantly to advancing the health and well-being of our communities.

### **Md. Saifullahil Azam**

Director General (Grade-1)

Directorate General of Family Planning



## Message

### Special Guest

*Dear TMSS Visionary Team, Medical and Public Health Professionals, and Distinguished Guests*

I'm very much honored and lucky to be a part of this International Public Health Conference 2024 during my short visit to my country. I congratulate the joint organizers Public Health Foundation, Bangladesh, and TMSS Medical College for this remarkable effort to organize such a prestigious International event in Bangladesh for the 10th time. The theme of this conference "**Leveraging Innovation for a Resilient Health System**" is very relevant to the present time context for ensuring the Universal Health Coverage (UHC) by 2030 called by the United Nations.

As a member of the Global Health Team of Kyushu University, Japan, I had an opportunity to directly participate in the development and implementation of an innovative tele-healthcare system using Japanese Technologies called Portable Health Clinic (PHC) with the collaboration of Grameen Communications, Bangladesh for reaching the healthcare services to the unreached communities of the developing world. We could successfully develop and test this system in Bangladesh as a model for developing countries. Later, we replicated this system in many developing countries through our partners including Cambodia, India, Indonesia, Liberia Malaysia, Pakistan, Thailand, and Zambia.

Bangladesh government has established a unique concept of community clinics for ensuring healthcare coverage to every corner of the country. Similarly, I have learned that TMSS also provides healthcare services to rural communities through their community health centers. I believe that the innovative concept of PHC would be a perfect match with these community health centers/clinics and complement the missing parts for ensuring completeness in the healthcare service delivery process. I look forward to working with TMSS with our PHC system and contributing to the mission of fulfillment of the SDGs at home and abroad.

I would like to cordially express my thanks and gratitude to TMSS for inviting me to this prestigious event to be a part of this historic 10th event of this series. I wish you all the success of this conference.

With sincere regards,

**Rafiqul Islam Maruf, PhD (Dr.Eng.)**

Associate Professor

Div. of Healthcare Digital Transformation, Dept. of Data-Driven Innovation Initiative  
Kyushu University, Japan

**Director**

Global Communication Center, Grameen Communications  
Bangladesh

**Chief Executive Officer**

SocialTech Japan Co. Ltd.  
Japan



## Message

**Chairperson  
Conference Executive Committee**

*Dear Esteemed Colleagues and Participants,*

As the Chairperson of the Public Health Foundation, Bangladesh, I am honored to welcome you to the 10th International Public Health Conference, scheduled for December 6-7, 2024. This milestone event serves as a platform for us to come together, share knowledge, and explore the pressing issues facing public health today.

In our rapidly evolving world, the importance of innovation in developing resilience within public health systems cannot be overstated. The challenges we encounter—ranging from emerging infectious diseases to the impacts of climate change—demand that we rethink our approaches and embrace new technologies and methodologies.

Innovations in public health can take many forms, from advanced data analytics and telemedicine to community-driven health initiatives and policy reforms. These advancements not only enhance our ability to respond to crises but also empower communities to take charge of their health. By fostering a culture of innovation, we can build systems that are not only reactive but also proactive, ensuring that we are better prepared for future challenges.

This conference will provide an invaluable opportunity to discuss and showcase innovative practices that have the potential to transform public health. I encourage all participants to engage actively, share your insights, and collaborate on solutions that can strengthen our collective resilience.

Together, let us pave the way for a healthier future, where innovation is at the forefront of our public health strategies.

Looking forward to fruitful discussions and collaborations.

Warm regards,

**Dr. Aftab Uddin**

Chairperson

Public Health Foundation, Bangladesh



## Message

**Chairperson  
Conference Committee**

*Dear Esteemed Colleagues and Healthcare Leaders,*

On behalf of the Conference Committee, I extend a heartfelt welcome to the 10th International Public Health Conference 2024. This milestone event marks a decade of our commitment to advancing public health discourse and practice globally.

As we gather under the theme "**Leveraging Innovation for a Resilient Health System,**" we find ourselves at a pivotal moment in healthcare history. The past few years have demonstrated that innovation is not just about technological advancement – it's about creating sustainable, adaptable, and inclusive health systems that can withstand future challenges while serving all segments of society.

The hybrid format in this year reflects our dedication to accessibility and inclusion, enabling participation from healthcare professionals from home and abroad. We have carefully curated a program featuring keynote addresses from world-renowned experts, panel discussions on cutting-edge topics, and interactive sessions showcasing innovative healthcare solutions from across the globe.

This conference will explore crucial areas including digital health transformation, innovative healthcare financing models, community-based healthcare initiatives, and emerging technologies in public health. Special emphasis will be placed on solutions that bridge healthcare disparities and strengthen healthcare systems in resource-limited settings.

I am particularly excited about our young researchers' forum, where the next generation of healthcare innovators will present their groundbreaking work. Additionally, our industry exhibition will showcase the latest advancements in healthcare technology and solutions.

Let us use this platform to forge new partnerships, share best practices, and develop actionable strategies that can be implemented in our respective healthcare systems. Your participation and insights are invaluable in shaping the future of global public health.

In closing, may this conference and its proceedings inspire, inform, and invigorate each one of us to play our part in building a healthier, more equitable world. Here's to forging new paths, discovering novel solutions.

Looking forward to engaging with you all in this enriching scientific dialogue.

Best regards,

**Prof. Moudud Hossain Alamgir**

Chairman, Conference Committee  
10<sup>th</sup> International Public Health Conference 2024 &  
Executive Consultant, TMSS Health Sector  
Bogura, Bangladesh



## Message

Co-Chair, Conference Committee  
and Former Chairperson, PHFBD

*Dear Esteemed Guests and Participants,*

With great enthusiasm and immense pride, I extend my warmest welcome and thanks to all on the eve of 10th International Public Health Conference, jointly organized by Public Health Foundation, Bangladesh (PHFBD) and TMSS Medical College, where we have been able to manage an incredible gathering from different corners of the world. This milestone gathering is a testament to the shared vision of public health practitioners, researchers, policy makers and other multidisciplinary professionals.

This year, the conference theme is “Leveraging innovation for a resilient health system”. The challenges faced by global and national health systems have underscored the need for resilience and adaptability in recent years. The present world that continues to face evolving challenges from pandemic to environmental health crises has exposed vulnerabilities in our healthcare systems and highlighted the need for better preparedness and coordination across borders. This theme of innovation toward a resilient health system seeks to spotlight its transformative role whether technological, policy-driven or operational in creating robust systems capable of withstanding and responding to future public health crises.

In this Hybrid conference, there is scope to reflect, learn, and networking on the lessons learned. This is a platform for sharing innovative ideas, evidence-based practices and cutting-edge research findings. Our distinguished speakers and panelists will provide insights and expertise that promise to inspire and inform. This 10th conference has created another extraordinary credential of bondage between two organizations (PHFBD & TMSS Medical College). We could predict very potential upcoming public health talented leaders in the preparatory phase.

The remarkable participation of young professionals highlights the growing importance of empowering the next generation to spearhead transformative solutions. Your passion, creativity and commitment inspire hope for a healthier and more equitable future. I encourage all participants to actively engage in discussions, ask questions and network with fellow participants.

Let this event be a space to ignite conversations, spark collaborations and sow the seeds of impactful innovations that will shape public health for years to come. It recognizes your univocal solidarity towards a resilient health system.

Lastly, thank you all for your dedication and commitment to the field of public health and I wish you a productive and enlightening conference.

**Prof. Dr. Sharmeen Yasmeen**

Professor and Head  
Dept. of Community Medicine and Public Health  
Bangladesh Medical College  
Chairperson, Autism Welfare Foundation



## Message

**Former Chairperson  
Public Health Foundation, Bangladesh**

On behalf of the organizing committee, it is my privilege to extend a warm welcome to all participants of the 10th International Public Health Conference jointly organized by Public Health Foundation, Bangladesh (PHFBD) and TMSS Medical College. This year, we have assembled together under the theme, "Leveraging Innovation for a Resilient Health System," a topic of critical relevance in today's dynamic and ever-evolving global health landscape.

This milestone event marks a significant transition, as the conference ventures outside Dhaka for the first time to TMSS, Bogura which will be the most fascinating experience for the participants and also for PHFD personnel. This shift is indicative of our commitment to inclusivity and decentralization in fostering a resilient and equitable health system for everyone.

The theme reminds us of the transformative power of innovation—whether in technology, policy, or community engagement—in shaping robust healthcare systems capable of withstanding challenges. From the lessons learned during the COVID-19 pandemic to the ongoing global challenges of accessibility, affordability, and sustainability, we gather here to exchange ideas, share experiences, and chart pathways for a healthier future.

Our partnership with TMSS signifies the value of joint collaboration in bridging gaps in public health and benefitting both sided capacity building. As a center of excellence in the northern region, TMSS's involvement exemplifies the need to address health disparities at the grassroots level while embracing innovative practices.

I extend my heartfelt gratitude to all the dignitaries, keynote speakers, researchers, practitioners, and participants who have come together to make this event successful. Your dedication and insights are the cornerstone of this conference, and I am confident that our discussions will pave the way for meaningful advancements in public health.

Let us use this platform to inspire change, nurture resilience, and build a health system that serves all—leaving no one behind.

Wishing the conference great success!

**Professor Dr. Fatema Ashraf**  
Research Secretary, OGSB  
Former Head,  
Dept. of Obstetrics and Gynae, ShSMCH  
Former Chairperson, PHFBD



## Message

Executive Director  
Public Health Foundation, Bangladesh

It is with immense pleasure and gratitude that I extend my warmest greetings to each of you during this prestigious 10th International Public Health Conference 2024. It is a momentous occasion to celebrate the strides we have taken in advancing public health, fostering collaboration, and driving positive change in our communities.

I am happy to be informed that Public Health Foundation, Bangladesh and TMSS for the 10th International Public Health Conference 2024, which will capture all important deliberations and take-home messages related to priorities to effectively address the innovations to strengthen health system, are publishing an e-booklet jointly.

This conference serves as a testament to our collective dedication to the pursuit of knowledge, innovation, and excellence in the field of public health. The diversity of perspectives, the richness of discussions, and the exchange of ideas among participants from various corners of the globe underscore the truly global nature of our commitment to public health.

In the face of unprecedented challenges, the importance of our shared mission has never been more evident. The impact of our efforts extends beyond borders, transcending cultural and geographical boundaries. By coming together in forums like this, we strengthen our resolve to address the pressing health issues of our time and work towards a healthier, more equitable world for all.

This souvenir encapsulates not just the proceedings of this conference but also the spirit of collaboration, learning, and progress that defines our collective journey in public health. It stands as a tangible reminder of the commitment and passion that each of you brings to this vital field.

I express my heartfelt gratitude to the organizing committee, sponsors, speakers, and participants for contributing to the success of this conference. Your dedication is the driving force behind the positive impact we aspire to make on public health outcomes globally.

May this conference be a source of inspiration, fostering new connections, sparking innovative ideas, and propelling us forward on our shared mission. As we reflect on the wealth of knowledge exchanged and the bonds forged, let us carry the spirit of collaboration and commitment back to our respective communities, knowing that together, we can build a healthier future for generations to come.

Thank you for being a part of this transformative journey in public health.  
Sincerely,

**Dr Md M Islam Bulbul**

Executive Director

Public Health Foundation, Bangladesh

Chairperson, Public Health Foundation, Bangladesh



## Message

**Convenor  
Publication Committee**

It is my great honor to welcome you to the 10th International Public Health Conference, jointly organized by the Public Health Foundation of Bangladesh (PHFBD) and TMSS Medical College, Bogura. This landmark event, scheduled for December 6th and 7th, 2024, brings together a diverse array of experts, researchers, practitioners, and policymakers to explore the theme: "Leveraging Innovation for a Resilient Health System."

The theme resonates with the global need to transform health systems in the face of evolving challenges such as pandemics, climate change, and health inequities. Innovation serves as a beacon of hope, enabling us to reimagine and reshape public health systems to become more adaptable, inclusive, and robust.

As the Chair of the Publication Subcommittee, I take pride in presenting this conference booklet, which serves as a comprehensive guide to the proceedings, featuring essential information, program schedules, and abstracts of the invaluable contributions from our distinguished speakers and participants. This booklet reflects the collaborative efforts of our dedicated team and underscores the commitment of PHFBD and TMSS Medical College to advancing public health knowledge and practice.

I extend my heartfelt gratitude to all authors, reviewers, and editorial team members for their tireless efforts in ensuring the highest quality of publications. I am confident that the insights and innovations shared during this conference will inspire meaningful action and foster collaborations that transcend borders.

On behalf of the Publication Subcommittee, I wish you a fruitful and engaging conference experience. Let us work together to harness innovation for building resilient health systems that prioritize equity, accessibility, and sustainability.

### **Dr. Md Anwarul Azim Majumder**

Director of Medical Education, Faculty of Medical Sciences  
The University of the West Indies, Cave Hill Campus  
Chief Editor, South East Asian Journal of Public Health (SEAJPH)



## Message

Member, Conference Committee

*Dear Distinguished Colleagues, Healthcare Professionals, and Public Health Enthusiasts,*

It gives me immense pleasure to welcome you to the 10th International Public Health Conference 2024, Jointly Organized by Public Health Foundation, Bangladesh & TMSS Medical College. This year's theme, "**Leveraging Innovation for a Resilient Health System**" could not be more pertinent as we navigate the evolving landscape of global healthcare.

In recent years, our healthcare systems have faced unprecedented challenges, highlighting the critical need for resilience and adaptability. Innovation has emerged not just as a buzzword, but as our fundamental tool for strengthening healthcare delivery, improving patient outcomes, and ensuring health equity across populations.

This hybrid conference serves as a crucial platform where minds from diverse backgrounds – academicians, clinicians, researchers, policymakers, and policy makers – can converge to share insights, challenge conventional thinking, and forge collaborative pathways toward more robust health systems. Whether you're joining us in person or virtually, you'll be part of dynamic discussions on communicable, non-communicable diseases, reproductive health, public health literacy, health policy and management, artificial intelligence in healthcare, data-driven decision-making, and sustainable healthcare solutions.

We believe that innovation in healthcare is not merely about adopting new technologies; it's about reimagining how we can better serve our communities while preparing for future challenges. Through this conference, we aim to catalyze meaningful dialogues that will translate into actionable strategies for building more resilient health systems worldwide.

I encourage all participants to actively engage in the various sessions, workshops, and networking opportunities. Let us harness our collective expertise to shape the future of public health. Together, we can build healthcare systems that are not only technologically advanced but also equitable, accessible, and prepared for tomorrow's challenges.

Looking forward to enriching discussions and transformative outcomes.

Warm regards,

**Rtn. Dr. Md. Matiur Rahman**

*MBBS, MPH, PhD*

Chief of Health Sector & Deputy Executive Director, TMSS



## Message

Member  
Conference Committee

*Dear Healthcare Professionals, Educators, and Distinguished Participants,*

As the Domain Head of Medical Education at TMSS Grand Health Sector, I am delighted to welcome you to the 10th International Public Health Conference 2024. This conference represents a crucial intersection between medical education and innovative healthcare delivery – a junction that has never been more important than it is today.

In our role overseeing medical education within TMSS's comprehensive healthcare framework, we have witnessed firsthand how innovation transforms not just healthcare delivery but also the way we educate and prepare future healthcare professionals. Our theme, "Leveraging Innovation for a Resilient Health System," perfectly encapsulates the dual challenge we face: building resilient healthcare systems while simultaneously evolving our educational approaches to prepare healthcare professionals for tomorrow's challenges.

At TMSS's Grand Health Sector, we have pioneered innovative medical education programs that bridge traditional teaching methods with modern technological advancements. Our experience has shown that resilient health systems begin with resilient medical education – education that adapts to changing healthcare needs while maintaining high standards of clinical excellence.

This conference offers several unique tracks focusing on medical education innovation: Integration of digital learning platforms in medical education, Community-oriented medical education programs, Competency-based curriculum development and Integration of public health principles in medical education.

We are particularly excited about our pre-conference session on career in public health and scientific article publication in peer reviewed journals.

I encourage all participants, especially those involved in medical education, to engage actively in these discussions. Your experiences and insights will be invaluable in shaping the future of medical education and, by extension, our health systems.

Together, let us explore how we can revolutionize medical education to create more resilient and responsive healthcare systems.

With warm regards,

**Prof. Dr. Md. Anup Rahman Chowdhury**

Domain Head, Medical Education  
Grand Health Sector, TMSS, Bogura,



## Message

Co-Convenor  
Scientific & Publication Committee

*Dear Colleagues and Participants,*

It is a distinct honor and privilege to contribute this message to the abstract book of the 10th International Public Health Conference 2024, jointly organized by the Public Health Foundation, Bangladesh (PHFBD) and TMSS Medical College. This milestone event celebrates a decade of collaboration, innovation, and dedication to advancing public health. This marks the first time PHFBD has partnered to organize a conference, highlighting the remarkable strength and impact of collaboration. I extend my heartfelt gratitude to my colleagues from TMSS for their unwavering support and exceptional dedication to public health. We are truly honored to have you as our joint organizer for this significant event. Furthermore, this year's conference sets a new precedent by being held outside Dhaka, capturing the essence of public health practice. Moving forward, we are eager to broaden our horizons and extend our efforts to other regions of Bangladesh, fostering greater inclusivity and engagement in the future.

As the Co-Convenor of the Scientific and Publication Committees, I am proud to see this abstract book serve as a testament to the intellectual rigor and innovative thinking that this conference embodies. Within these pages, you will find a diverse array of research, ideas, and experiences that reflect the theme of this year's conference: "Leveraging Innovation for a Resilient Health System."

The abstracts included here represent the hard work and dedication of public health professionals, researchers, and students from around the world. They address critical challenges and present solutions to strengthen health systems and promote equity and sustainability in healthcare delivery. By highlighting the intersections of technology, policy, and practice, these contributions pave the way for meaningful progress in creating resilient health systems.

I extend my deepest gratitude to the contributors, reviewers, and members of the Publication Committee for their efforts in producing this valuable resource. Together, we are fostering a vibrant community of public health practitioners and researchers dedicated to building a healthier, more equitable future.

I wish you all a productive and inspiring conference experience.

Warm regards,

**Dr. Shegufta Mohammad**

Health Education, L&D specialist,  
Empower Me First College, Switzerland  
Adjunct Associate professor, Mandy Dental College  
Dhaka, Bangladesh



## Message

Organizing Secretary

Hosting the 10th Public Health International Conference marks a significant milestone for the Public Health Foundation Bangladesh (PHFBD). As Organizing Secretary, it is both a privilege and a responsibility to uphold the event's standards.

This year's conference is particularly special. For the first time, PHFBD is collaborating a reputed organization like Thengamara Mohila Sabuj Sangha (TMSS), and the event is set in a regional area of Bangladesh. These choices have expanded the conference's reach, quality, and diversity, elevating its scale and impact. A large team of dedicated organizers and volunteers have worked tirelessly, taking full ownership to ensure the event's success.

We prioritized program quality, focusing on accepting only high-standard scientific papers for oral and poster presentations. Additionally, we organized keynote sessions, a public health quiz, and pre-conference sessions with career discussions and publications for emerging professionals.

As Organizing Secretary, I extend my heartfelt appreciation to all the comrades whose dedication made this event possible. I also congratulate all participants for their enthusiasm, contributions, and presentations. I show my gratitude to all delegates, resources persons and guests for making their time and contribution.

Finally, I am deeply grateful to all individuals, organizations, and institutions that provided technical support, expertise, and sponsorship.

Together, let's continue building a healthy and happy nation!

### **Monaemul Islam Sizar**

Organizing Secretary

Public Health Foundation, Bangladesh;

Technical Advisor, Open Development/USAID Health System for TB;

Founder, Health Systems Matter



## Message

Member Secretary  
10<sup>th</sup> International Public Health  
Conference (Hybrid) 2024

*Dear Esteemed Colleague and Healthcare Professionals,*

As the Member Secretary of the 10th International Public Health Conference (Hybrid) 2024, I am thrilled to extend this invitation to what promises to be a groundbreaking gathering of healthcare innovators, practitioners, and thought leaders.

This conference marks a significant milestone in our journey to reimagine healthcare systems through innovation. With our theme "Leveraging Innovation for a Resilient Health System," we have curated an exceptional program that addresses the most pressing challenges and opportunities in modern healthcare delivery.

Let me highlight some compelling features of this year's conference:

- Pre-conference seminar and workshop on public health career and scientific writing
- Keynote addresses by world-renowned experts in digital health, epidemiology, and healthcare resilience
- Over 50 scientific sessions covering innovative healthcare solutions, from AI-driven diagnostics to community health initiatives
- Interactive workshops on public health literacy, reproductive health, health informatics, and emergency preparedness
- A dedicated Young Researchers' Forum showcasing emerging talent and fresh perspectives
- Physical and Virtual poster presentations enabling global participation
- Networking opportunities with healthcare leaders from home and abroad
- Public Health Celebrity Awards for influential and iconic public health leaders
- Opportunity for publishing peer reviewed journal

Our hybrid format ensures that whether you join us in person at TMSS Medical College, Bogura, or virtually from anywhere in the world, you'll have full access to all sessions and networking opportunities. The conference platform features state-of-the-art technology for seamless interaction between in-person and virtual participants.

I strongly urge you to be part of this transformative event that will shape the future of public health. Your participation will contribute to meaningful discussions and help build stronger, more resilient healthcare

Looking forward to your active participation and valuable contributions.

Warm regards,

**Md. Kaoser Bin Siddique**

Coordinator, Research & Training

Grand Health Sector, TMSS, Bogura, Bangladesh

Coordinator, IRB, Public Health Foundation, Bangladesh

Assistant Editor, South East Asian Journal of Public Health (SEAJPH)

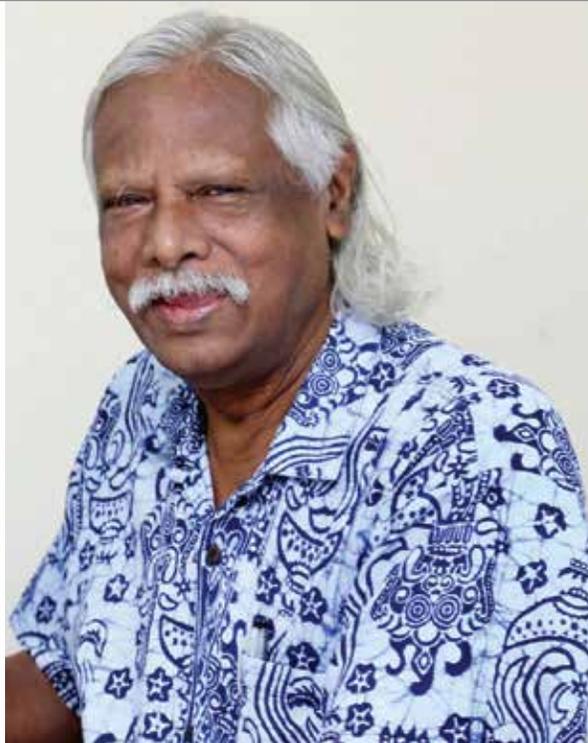
# Tribute to Public Health Leaders

## **Dr. Zafrullah Chowdhury**

Founder, Gonoshasthaya Kendra  
Member, Bangladesh Drug Policy 1988

Born: 27 December 1941

Died: 11 April 2023



## **Dr. Richard Cash**

Senior Lecturer, Global Health  
and Population Harvard University  
and

Visiting Faculty

James P Grant School of Public Health  
BRAC University

Born: 9 June 1941

Died: 22 October 2024

# Acknowledgement

## Knowledge Partner



## Colaborating Partner



Public Health Association  
AUSTRALIA

## Supporting Partner



## Media Partner



**Pre-Conference Session on  
Career in Public Health and Publications for Beginners  
Program Schedule**

**3:00 pm to 7:00 pm, 05 December 2024**

Dr. Masudur Rahman Hall, TMSS Medical College, Bogura, Bangladesh

Time (BD)	Event/Session	Resource Persons	Remarks
<b>Session 1: Building a Global Career in Public Health</b>			
Moderator: <b>Dr. Sheguftha Mohammad</b> , International Coordinator, Public Health Foundation Bangladesh			
3:00 – 3:20 (20 mins)	Defining a promising career	<b>Monaemul Islam Sizear</b> , MSS, MPH, MSc Public Health Activist and Technical Advisor, Health System for TB and Founder, Health Systems Matter (HSM)	In-person
3:20 – 3:40 (20 mins)	Career Talk with the Global Public Health Expert	<b>Shafi U. Bhuiyan</b> , MBBS, MPH, MBA, PhD Global Public Health Expert and Associate Professor, School of Public Health, University of Memphis, Canada	Online recording session
3:40 – 4:00 (20 mins)	Career Talk with the Global Public Health Experts Expert	<b>Andrea Poling</b> Global Public Health Expert and Chief Programs Officer, Open Development, USA	
4:00 – 4:10 (10 mins)	A Journey from Bagura, Bangladesh to Mount Sinai Medical Center, Florida, USA	<b>Dr. Vivek Podder</b> Post Doctoral Research Assistant Mount Sinai Medical Center, Florida, USA	
4:10 – 4:30 (20 mins)	Prospect of Bangladeshi Doctors in Australia	<b>Dr. Hasan Sarwar</b> Project Manager, AUSSIE BANGLA SMILE Rotary Australia World Community Service	In-person
4:30 – 4:35 (5 mins)	Closing remarks	<b>Dr. Aftab Uddin</b> Chairperson, Public Health Foundation Bangladesh	
4:35: 4:50 (15 mins)	<b>Health break</b>		
<b>Session 2: How to Write and Publish Your First Scientific Paper</b>			
Moderator: <b>Dr. DM Arifur Rahman</b> , Associate Professor, Histopathology, TMSS Medical College and Director, Biomolecular Lab			
4:50 – 5:05 (15 mins)	Importance of scientific publication	<b>Md. Kaoser Bin Siddique</b> , MPH, MSS, BPT Coordinator (Research & Training), Research, Planning & Development, Grand Health Sector, TMSS	In-person
5:05 – 5:25 (20 mins)	Exploring Public Health Basics on Academic Publications for Aspiring Professionals	<b>Wing Commander Prof. Md. Mahmudul Hasan</b> Dept. of Development Studies, Faculty of Arts and Science, Bangladesh University of Professionals	
5:25 – 6:05 (40 mins)	- Introduction to Scientific Publishing: Tips for Early Career Researchers - Q&A	<b>Dr. Md. Golam Hossain</b> Professor, Department of Statistics University of Rajshahi	
6:05 – 6:30 (25 mins)	- Stepwise roadmap to publish a scientific article - Q&A	<b>Prof. Dr. Dhananjaya Sharma</b> MBBS, MS, PhD, DSc Former Head, Department of Surgery, NSCB Government Medical College, India	Online
6:30 – 6:55 (25 mins)	- Selecting the suitable journal - Publishing your article in an Open Access Journal: opportunities and challenges - Q&A	<b>Dr. Md. Anwarul Azim Majumder</b> Faculty of Medical Sciences and Director, Medical Education, Faculty of Medical Sciences, Cave Hill, The University of the West	
6:55 – 7:00 (5 mins)	Closing remarks	<b>Prof. Dr. Alamgir Pavel</b> Prof. of Surgery, TMSS Medical College, Bogura, Bangladesh	In-person
<b>End of the Pre-conference session</b>			

Events	Time (BD)	Session Details	Venue	Remarks
Registration	8:00 – 9:00 (1 hr)	<b>Signing in and conference kit distribution</b> <b>Coordinated by:</b> ✚ Sharmila Huda, Md. Akhiruzzaman and volunteers		
Keynote Session	9:00 am – 9:50 am (50 mins)	Keynote Speech-1 <b>Topic: Sustainable Learning in Healthcare</b> <b>Speaker: Dr. Badrul Khan</b> , E-learning & Instructional Design Professional, Springfield, Virginia, United States ✚ Chair: <b>Dr. Aftab Uddin</b> , Chairperson, PHFBD ✚ Moderator: <b>Md. Kaoser Bin Siddique</b> , Coordinator, Research & Training, Grand Health Sector, TMSS and Coordinator, IRB, PHFBD	Prof. Dr. A.K.M Masudur Rahman Hall	Following Q&A session
Scientific Session	9:50– 11:05 am (1 hr 15 min)	Parallel Session 1: <b>Mental Health &amp; Wellbeing- 1</b> ✚ Chair: <b>Prof. Dr. Md. Zakir Hossain</b> , Principal and Professor of Medicine, TMSS Medical College, Bogura ✚ Chair: <b>Dr. Tasdik Hasan Dip</b> , PhD Fellow, Faculty of Information Technology, Monash University, Australia (Online) <b>Topic and Speakers</b> 1. Adolescent drug abuse and delinquency in Bangladesh: Exploring the roles of socioeconomic factors, educational barriers, and family neglect Speaker: <b>Dr. Shamim Ahmed Choudhury</b> 2. Prevalence of depression, loneliness and associated factors among the medical students in Bangladesh Speaker: <b>Zarin Tasnim Maliha</b> 3. Understanding the prevalence and determinants of diabetes distress, perceived stress, and depression in young and middle-aged adults with early-onset Type 2 Diabetes: A cross-sectional study Speaker: <b>Sree Shib Shankar Devnath Debu</b> 4. Mental health status among healthcare professionals in academic platform: A cross-sectional study in Bangladesh context Speaker: <b>Dr Bilkis Banu</b> 5. Assessing anxiety levels of “left behind” families of people working or living abroad from Bangladesh Speaker: <b>Md. Jahangir Hossain</b> 6. Depression among married female adolescents in Bangladesh: the toll of marriage, pregnancy, and violence Speaker: <b>Md. Mahabubur Rahman</b> 7. The Learning style and thinking of Generation Z: A Cross-sectional study among Medical Students Speaker: <b>Ovi Sharma Devjoty</b> 8. A review of Bangladesh’s current Mental Health Laws from a therapeutic perspective Speaker: <b>Rakiba Nabi</b>	Prof. Dr. A.K.M Masudur Rahman Hall	

Events	Time (BD)	Session Details	Venue	Remarks
		<ul style="list-style-type: none"> <li>✦ Moderator: <b>Dr. Sharmila Huda</b>, Ex-Treasurer, PHFBD &amp; Associate Professor of Pharmacology, Bangladesh Medical College</li> </ul>		
		<p>Parallel Session 2: <b>Oral Health</b></p> <ul style="list-style-type: none"> <li>✦ Chair: <b>Dr. Anwar Sadat</b>, Maxillofacial Surgeon, Dhaka Dental College and Hospital and Square Hospital, Dhaka</li> <li>✦ Chair: <b>Dr. Shegufta Mohammad</b>, Dental Surgeon and Medical Educationist, International Coordinator, PHFBD</li> </ul> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. Passive Smoking and pediatric dental caries: An emerging public health concern Speaker: <b>Sirajam Munira</b></li> <li>2. Malocclusion prevalence and public health: Exploring causes, impacts and treatment challenges Speaker: <b>Faria Tabassum Tanni</b></li> <li>3. Prevalence of periodontal diseases among diabetic patients attending Swasthosheba Hospital, Bogura Speaker: <b>Aesha Rizwana</b></li> <li>4. Clinico-pathological variations of Paediatric Oral and Maxillofacial malignancies and their treatment outcome in a tertiary level hospital of Bangladesh Speaker: <b>Md. Badruddoza</b></li> <li>5. Knowledge regarding service-seeking behavior towards safe dental care services among Bangladeshi patients Speaker: <b>Fatema Afrin</b></li> <li>6. Prevalence of antimicrobial resistance and the spectrum of pathogens in dental and oral-maxillofacial infections at a tertiary level hospital in Chattogram Speaker: <b>H M Shahriar Rubel</b></li> <li>7. The association between low serum vitamin D level and periodontal disease in Bangladeshi population- An Observational study Speaker: <b>Dr. Shaikh Ahmed Rinku</b></li> </ol> <ul style="list-style-type: none"> <li>✦ Moderator: <b>Dr. Md. Rakibul Hasan Khan</b>, Assistant Professor, Dental Public Health, TMC, TGHS</li> </ul>	Lecture gallery 2	
		<p>Parallel Session 3: <b>Digital Health &amp; Innovation</b></p> <ul style="list-style-type: none"> <li>Chair: <b>Dr. Fatema Ashraf</b>, Former Chairperson, PHFBD and Chairperson, Smart Healthcare &amp; Research Ltd</li> <li>✦ Chair: <b>Prof. Dr. Sonu Goel</b>, Professor, School of Public Health, PGIMER, Chandigarh, India</li> </ul> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. Ethical issues in the use of Artificial Intelligence in healthcare in Bangladesh Speaker: <b>Shaikh Shohag Hossain</b></li> </ol>	Lecture gallery 3	

Events	Time (BD)	Session Details	Venue	Remarks
		<ol style="list-style-type: none"> <li>2. Digital dependence &amp; myopia: Assessing the impact of devices addiction among Bangladeshi University students Speaker: <b>MD Sazid Islam</b></li> <li>3. Smartphone applications to prevent Type 2 Diabetes: A systematic review and meta-analysis Speaker: <b>Esrat Jahan</b></li> <li>4. A study of AI-based early detection and personalized nutrition for obesity prevention Speaker: <b>S.M. Nazmul Ahasan</b></li> <li>5. Interpretable machine learning and spatial regression methods to predict vector-borne diseases in Bangladesh with climatic drivers Speaker: <b>Md. Siddikur Rahman</b></li> <li>6. Research engagement and career aspirations among public health graduate students: experiences from a developing country (12#147) Speaker: <b>Dr Mohammad Jahid Hasan</b></li> <li>7. Socioeconomic determinants and patient experience in an AI-Based diabetic retinopathy screening program Speaker: Md. Sajidul Huq Moderator: <b>Dr. Mohammad Mahub Ur Rahim</b>, Principal Admin Officer, TGHS and Adjunct Researcher, TMSS Health Research Foundation</li> </ol>		
<b>Health Break and Networking 11:05 – 11:25 (20mins)</b>				
Scientific Session	11:25am – 12:40pm (1 hr 15 mins)	<p>Parallel Session 4: <b>Reproductive &amp; Child Health-1</b></p> <p>Chair: <b>Brig. Gen. (Retd.) Dr. Md. Jamilur Rahman</b>, Director, TMC &amp; RCH, TGHS</p> <p>Chair: <b>Dr. Fariha Haseen, PhD</b>, Associate Professor, Dept. of Public Health and Informatics, Head, Division of RCH, Director, Centre for Gender and Women's Health Research, BSMMU</p> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. The association between cumulative social risk and adolescent obesity: Differences by race/ethnicity and Income Speaker: <b>Helal Uddin</b></li> <li>2. Exclusive breastfeeding practices and policy landscape analysis in Bangladesh: Where we stand? Speaker: <b>Kinkar Ghosh</b></li> <li>3. Symptomatic urinary tract infection during pregnancy and beyond: a cross-sectional study in Baliakandi Upazila of Bangladesh Speaker: <b>Esrat Jahan</b></li> </ol>	Prof. Dr. A.K.M Masudur Rahman Hall	

Events	Time (BD)	Session Details	Venue	Remarks
		<p>5. Navigating maternal health: Insights into pregnancy and postpartum care in Northern Bangladesh Speaker: <b>Farhana Yasmin</b></p> <p>6. Addressing rising cesarean section rates in Lower-Middle-Income Countries: A case study of Bangladesh Speaker: <b>Monaemul Islam Sizear</b></p> <p>7. Exploring socioeconomic dimensions of obstetric fistula in Bangladesh: An SDG-centric statistical approach Speaker: <b>Sadia Afrin</b></p> <p>8. Breaking sociocultural barriers: A holistic approach to advancing sexual and reproductive health and rights education for adolescents in Bangladesh (4#252) Speaker: <b>Debjyoti Sarkar</b></p> <p>9. Knowledge and Awareness of Safe Motherhood (Antenatal and Postnatal Care) among Newly Married Rural Women in Bangladesh1 (4#30) Speaker: <b>Biplab Halder</b></p> <p>Moderator: Ms. Salome A. Rahim, Lecturer, TMSS Nursing College</p>		
		<p>Parallel Session 5: <b>Public Health Literacy</b></p> <p>📌 <b>Prof. Hafiza Arzuman</b>, Professor, Community Medicine &amp; Public Health, TMC, TGHS, TMSS</p> <p>📌 <b>Prof. Dr. Md. Anwarul Azim Majumder</b> Faculty of Medical Sciences and Director, Medical Education, Faculty of Medical Sciences, Cave Hill, The University of the West Indies (online)</p> <p><b>Topic and Speakers</b></p> <p>1. Assessment of pregnant women's level of knowledge and practices about pregnancy and prenatal care attending a tertiary care hospital Speaker: <b>Aeysha Begum</b></p> <p>2. Knowledge of Neonatal Resuscitation Among Service Providers in Primary and Secondary Healthcare Facilities of Narayanganj District Speaker: <b>Jannatul Mehjabin Juhy</b></p> <p>3. Hygiene knowledge and behaviour among female garment workers of Bangladesh: a cross-sectional study in Urban setting Speaker: <b>Joynal Abedin Khan</b></p> <p>4. Cognitive Testing and Piloting of the Bangla Version of the Washington Group Short Set Questionnaire on Functioning among Adolescent Girls and Women with Disabilities in Selected Sub-districts of Bangladesh Speaker: <b>Munzur E Murshid</b></p> <p>5. Knowledge of neonatal danger signs among spouses of primigravida women Speaker: <b>Ashrafun Nahar</b></p> <p>6. Knowledge about selected aspects of Type 2 Diabetes Mellitus among the adult patients attending outpatient departments of Adhunik Zilla Hospital, Joypurhat, Bangladesh Speaker: <b>Abdullah Al Mahfuz Ansari</b></p> <p>7. Knowledge and Awareness of Safe Motherhood (Antenatal and Postnatal Care) among Newly Married Rural Women in Bangladesh Speaker: <b>Biplab Halder</b></p>	Lecture gallery 2	

Events	Time (BD)	Session Details	Venue	Remarks
		<p>8. Knowledge about Management of Type 2 Diabetes Mellitus and Status of Random Blood Sugar among the adult patients attending outpatients of District Hospital, Joypurhat, Bangladesh Speaker: <b>S. M Mejba Ul Hoque</b></p> <p>✚ Moderator: <b>Dr. Md. Akhiruzzaman</b>, Associate Professor, Dept of Community Medicine, TMSS Medical College</p>		
		<p>Parallel Session 6: <b>Mental Health &amp; Wellbeing - 2</b></p> <p>✚ Chair: <b>Dr Mithilesh Dronavalli</b>, Co-Convenor, Mental Health Special Interest Group (SIG), Public Health Association, Australia</p> <p>✚ Chair: <b>Prof. Dr. Rakesh Biswas</b>, Kamineni Institute of Medical Science Narketpally, Hyderabad, India</p> <p><b>Topic and Speakers</b></p> <p>1. Eating attitude and its associated mental health problems among the adolescents in Dhaka City, Bangladesh Speaker: <b>Mst. Mahfuza Akter</b></p> <p>2. Stress-Related Factors at Workplace among Health Care Providers in Bangladesh Speaker: <b>Kazi Rakibul Islam</b></p> <p>3. Gender Differences in Mental Health Help-Seeking Behavior in Bangladesh: Findings from an Online Survey Speaker: <b>Zunayed Al Azdi</b></p> <p>4. Impact and precautions of Polycystic Ovary Syndrome among Bangladeshi women Speaker: <b>Sanjida Jahan Shifa</b></p> <p>5. Vaping and mental health: A Cross-sectional study among university students in Bangladesh Speaker: <b>Farah Sabrina</b></p> <p>6. Factors Influencing the Suicidal Ideation and Attempt to Suicide among Medical Professionals: A Cross-Sectional Study Speaker: <b>Maskura Benzir</b></p> <p>7. Prevalence of emotional and behavioral problems among adolescent offspring of female sex Workers and residents of urban slum, Bangladesh: A comparative study Speaker: <b>Afia Mahmuda Khan</b></p> <p>8. Effectiveness of Mental Health Day Centre and Community-based Rehabilitation for persons with persons with mental health needs Speaker: <b>Md. Rabiul Hasan</b></p> <p>✚ Moderator: <b>Mahmuda Muhsina Bushra</b>, Psychologist and EC member, PHFBD</p>	Lecture gallery 3	
<b>Prayer and Lunch 12:40 – 2:10 pm (1hr 30min)</b>				
Scientific Session	2:10 – 3:25 pm (1 hr 15)	<p>Parallel Session 7: <b>Public Health Nutrition</b></p> <p>✚ Chair: <b>Dr. M I Bulbul</b>, Executive Director, PHFBD</p>	Lecture gallery 2	

Events	Time (BD)	Session Details	Venue	Remarks
	mins)	<p>✚ Chair: <b>Dr. Tauhid Islam</b>, Team Lead, People Centered Care and Community Empowerment, Global TB Programme, WHO, Geneva, Switzerland (Online)</p> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>Exploring the risk factors of acute malnutrition in under-five children in Bangladesh: A Multi-hospital study Speaker: <b>Mst. Shabnaz Aktar</b></li> <li>Nutritional Status and Dietary Diversity among Adolescent Girls in Rohingya Refugee Camp in Cox's Bazar Speaker: <b>Mst. Jami Parvin</b></li> <li>Proportion of low bone mineral density among the Bangladeshi public health professionals Speaker: <b>Nusrat Jahan Nipa</b></li> <li>Management of Malnutrition through the CINI Method: Insights from Rural and Urban Parts of Eastern India Speaker: <b>Mithun Mondal</b></li> <li>Assessment of knowledge and awareness on iron deficiency anaemia among the BSc Nursing Students in Manikgonj College, Bangladesh Speaker: <b>Biplab Halder</b></li> <li>Assessing the Nutritional Impact of Rising Food Prices on University Students in Bangladesh: A Cross-Sectional Study Speaker: <b>Farjana Nur Naly</b></li> <li>Perception and Factors Influencing Fast Food and Junk Food Consumption of High School Students of Bogura Town, Bangladesh Speaker: <b>Sammak Nabila</b></li> <li>Study on correlation of vitamin D level with prediabetes status Speaker: <b>Zilkar Naim</b></li> </ol> <p>✚ Moderator: Nutritionist <b>Tamanna Sharmin</b>, Joint Secretary, PHFBD</p>		
		<p>Parallel Session 8: <b>Urban health</b></p> <p>✚ Chair: <b>Dr. Syed Hasan Abdullah</b>, Country Director, SafetyNet Bangladesh</p> <p>✚ Chair: <b>Professor Dr. Mohammad Sohrab Hossain</b>, Executive Director, Centre for Rehabilitation of the Paralyzed (CRP)</p> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>Prevalence of dissatisfaction regarding transport facilities and its association with academic Issues and mental health among university students in Dhaka, Bangladesh Speaker: <b>Sabiha Binta Siraj</b></li> <li>Air pollution, outdoor physical activity and health: A study on middle-class adults in Delhi and Noida in National Capital Region Speaker: <b>Tulika Sanadhya</b> (Online)</li> </ol>	Prof. Dr. A.K.M Masudur Rahman Hall	

Events	Time (BD)	Session Details	Venue	Remarks
		<p>3. Post-Covid-19 Syndrome among the Symptomatic COVID-19 patients in some selected Urban Communities of Bangladesh Speaker: <b>Dr. Shamima Parveen</b></p> <p>4. Prevalence of Viral Hepatitis B and C and the associated risk factors for transmission in Kolkata slums – A situation analysis from 5 wards of Kolkata Municipal Corporation Speaker: <b>Swati Chakraborty</b> (Online)</p> <p>5. Influence of a pilot urban primary healthcare model on the healthcare-seeking patterns of slum populations from medically trained providers (MTPs) for the management of acute illness in Bangladesh Speaker: <b>Md. Golam Rabbani</b></p> <p>6. Understanding Adolescent health outcome in Urban India Speaker: <b>Dr. Arpita Banerjee</b> (Online)</p> <p>7. Urban Slum Dweller Mothers Experiences of Exclusive Breastfeeding (EBF): A Phenomenology Qualitative Study Speaker: <b>Farhana Islam Prema</b></p> <p>8. Opportunities and Challenges of Implementing an Urban Primary Health Care Delivery Model: Lessons from Aalo Clinic, Bangladesh Speaker: <b>Khadija Islam Tisha</b></p> <p>✚ Moderator: <b>Saquib Ahmad Khan</b>, Senior Lecturer, Dept. of Environmental Science and Management, Independent University- Bangladesh</p>		
		<p>Parallel Session 9: <b>Reproductive &amp; Child Health-2</b></p> <p>✚ <b>Prof. Dr. Golam Hossain</b>, Department of Statistics, University of Rajshahi</p> <p>✚ Chair: <b>Md. Shadhat Hossain</b>, Former Director, DGFP and Life Member, PHFBD</p> <p><b>Topic and Speakers</b></p> <p>1. Navigating Pregnancy Challenges in Garment Industries: Addressing Health and Gender Issues in Relation to SDG-3 and SDG-5 Speaker: <b>Sheikh Mahmood Hasan</b></p> <p>2. Gestational Diabetes Mellitus: Its relations with the early development of childhood obesity Speaker: <b>Sajib Paul</b></p> <p>3. Evaluating IMCI Service Delivery for Outdoor Childhood Pneumonia Management in Union Sub-Centers of Bangladesh Speaker: <b>Sadman Sowmik Sarkar</b></p> <p>4. Facility-Based Assessment of Kangaroo Mother Care Services at Upazila Health Complexes in Bangladesh Speaker: <b>Sabit Saad Shafiq</b></p> <p>5. Assessing Refractive Errors and Visual Health in School Children through Vision Corner Initiative Speaker: <b>Md. Sajidul Huq</b></p>	Lecture gallery 3	

Events	Time (BD)	Session Details	Venue	Remarks
		<p>6. Sexual and Reproductive Health Care-Seeking Practices among Female Garment Workers in Dhaka, Bangladesh (24#88)</p> <p><b>Speaker:</b> Rokhsana Yasmin; Email: ryasmin@unfpa.org</p> <p>✚ Moderator: <b>Nilufar Yesmen</b>, Assistant Professor (Psychology), TMSS Nursing College</p>		
Keynote Session	3:25 – 4:15 pm (50 mins)	<p>Keynote Speech 2:</p> <p>✚ <b>Prof. Bettina Borisch</b>, CEO, World Federation of Public Health Associations: WFPHA, Geneva, Switzerland</p> <p>✚ Chair: <b>Dr. Mushtaque Raza Chowdhury</b>, Clinical Professor of Population and Family Health, Columbia University, New York, USA and Founding Dean, BRAC University James P Grant School of Public Health BRAC University, Bangladesh</p> <p>✚ Moderator: <b>Dr. Shegufta Mohammad, International Coordinator</b>, PHFBD</p>	Prof. Dr. A.K.M Masudur Rahman Hall	Following Q&A session
Quiz	4:15 – 4:30 pm (15 mins)	<p><b>Public Health Knowledge Check</b></p> <p>✚ Host: <b>Monaemul Islam Sizar</b>, Founder, Health Systems Matter (HSM)</p>	Prof. Dr. A.K.M Masudur Rahman Hall	Sponsored by Health Systems Matter (HSM)
<b>Health Break and Explore the City 4:30 – 5:45 (1h 15m)</b>				
Tribute to Public Health Leaders	5:45 – 6:15 pm (30 mins)	<p><b>Tribute Session to the Memory of</b></p> <p>✚ <b>Dr. Zafrullah Chowdhury</b>, Founder, Gonoshasthaya Kendra and Member, Bangladesh Drug Policy Committee 1988</p> <p>✚ <b>Dr. Richard Cash</b>, Senior Lecturer, Global Health and Population, Harvard University, USA and Visiting Faculty, James P Grant School of Public Health, BRAC University, Bangladesh</p> <p><b>Discussants:</b></p> <p>✚ <b>Dr. Mushtaque Raza Chowdhury</b>, Clinical Professor of Population and Family Health, Columbia University, New York, USA and Founding Dean, BRAC University James P Grant School of Public Health BRAC University, Bangladesh</p> <p>✚ <b>Prof. Dr. Md. Sayedur Rahman</b>, Special Health Assistant (State Minister), MOHFW, Interim Government, Bangladesh</p> <p>✚ Moderator: <b>Monaemul Islam Sizar</b>, Public Health Activist and Organizing Secretary, PHFBD and Alumni, BRAC James P Grant School of Public Health</p> <p>✚ Coordinator: <b>Md. Kaoser Bin Siddique</b>, Coordinator, Research &amp; Training, Grand Health Sector, TMSS, Alumni BRAC James P Grant School of Public Health &amp; Gonoshasthaya Samaj Vittik Medical College</p>	Momo Inn	

Events	Time (BD)	Session Details	Venue	Remarks
Inaugural ceremony	6:15 – 7:30 pm (1hr 15 mins)	<b>Welcome Speech</b> 🚩 <b>Dr. Aftab Uddin</b> , Chairperson, PHFBD	Momo Inn	
		Speech by <b>Dr. Md. Zakir Hossain</b> , Principal, TMSS Medical College, Bogura Speech by Special Guests: 🚩 <b>Dr. Hosne Ara Begum</b> , Executive Director, TMSS 🚩 <b>Prof. Dr. Muzaherul Huq</b> , Founding Chairperson, PHFBD and Member of the Health Sector Reform Committee, Bangladesh 🚩 <b>Prof. Bettina Borisch</b> , Chief Executive Officer, World Federation of Public Health Association (WFPHA), Geneva, Switzerland 🚩 <b>Dr. Mohammad Kamrul Ahsan</b> , Vice-Chancellor, Jahangirnagar University 🚩 <b>Prof. Dr. Md. Jawadul Haque</b> , Vice-Chancellor, Rajshahi Medical University		
		<b>Distribution of Public Health Awards 2024</b> Remarks by Public Health Awardees: 🚩 <b>Dr. Tahmeed Ahmed</b> , Executive Director, International Centre for Diarrheal Disease Research, Bangladesh 🚩 <b>Dr. Mushtaque Raza Chowdhury</b> , Clinical Professor of Population and Family Health, Columbia University, New York, USA and Founding Dean, BRAC University, James P Grant School of Public Health, Bangladesh		
		Speech by Chief Guest: 🚩 <b>Prof. Dr. Md. Sayedur Rahman</b> , Special Health Assistant (State Minister), MOHFW, Interim Government, Bangladesh		
		<b>Award distribution to the guests</b> Vote of thanks 🚩 <b>Prof. Dr. Sharmeen Yasmeen</b> , Co-Chair, Conference Committee and Former Chairperson, PHFBD 🚩 <b>Dr. Md. Matiur Rahmanm</b> , Deputy Executive Director - 2, TMSS and Operational Coordinator, Conference Committee		
		Concluding Speech 🚩 <b>Prof. Dr. M.H. Alamgir Pavel</b> , Chairman, Conference Committee and Professor of Surgery, TMSS Medical College		
Festive and Fiesta	7:30 – 8:30pm (1 hr)	Cultural program	Momo Inn	
	8:30 pm	Gala Dinner	Momo Inn	
<b>End of the Day 1</b>				

**Day 2 – Saturday, December 07, 2024**

Event/Focus	Time (BD)	Session	Venue	Remarks
Keynote Session	8:30 – 9:15 am (45 mins)	<p>Keynote Session 3:</p> <ul style="list-style-type: none"> <li>✚ <b>Dr. Ziauddin Hyder</b>, Senior Health Specialist Health, Nutrition and Population Division, World Bank Group, Washington D.C (Online)</li> <li>✚ Chair: <b>Prof. Dr. Muzaherul Huq</b>, Founding Chairman, PHFBD and Member of the Health Sector Reform Committee, Bangladesh</li> <li>✚ Moderator: <b>Prof. Dr. Shamim Chaudhury</b>, Head of the Dept. of Community Medicine and Public Health, TMSS Medical College</li> </ul>	Prof. Dr. A.K.M Masudur Rahman Hall	Following Q&A session
Scientific session	9:15 – 10:45 am (1hr 30mins)	<p>Parallel Session 10: <b>Health system and financing towards achieving SDGs and UHC</b></p> <ul style="list-style-type: none"> <li>✚ Chair: <b>Shehrin Shaila Mahmood</b>, Associate Scientist and Lead, Health Economics and Financing, Health Systems and Population Studies Division, icddr,b (Online)</li> <li>✚ Chair: <b>Dr. Farzana Islam Rupa, PhD</b>, RMNCH and Health Systems &amp; Policy Expert, Consultant, Alo Bhubon Trust (AloBT)</li> </ul> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. From Healing to Hostility: Investigating Medical Negligence and the Surge in Violence Against Doctors in Bangladesh Speaker: <b>Debjyoti Sarkar</b></li> <li>2. Understanding of health status and utilization of health services among elderly people of ethnic community in a selected area of Bangladesh Speaker: <b>Fariha Haseen</b></li> <li>3. Comparison on Knowledge on Health Insurance between Urban and Rural Elderly People Speaker: <b>Fahmida Faizha Shama</b></li> <li>4. Gender Discrimination in Healthcare: A Barrier to Sustainable Development in Bangladesh Speaker: <b>Nusratun Nahar</b></li> <li>5. The Hidden Costs of Stroke Treatment in Bangladesh: Are Public Hospital Expenses Truly Nominal? Speaker: <b>Md. Anjim Macsud</b></li> <li>6. Cesarean Section Dynamics in Bangladesh: Tradition, Transition, and SDGs-Driven Progress Speaker: <b>Kousik Biswas Arko</b></li> <li>7. Barrier of medical terms and languages in receiving healthcare services: An exploratory study in Dhaka Medical College &amp; Hospital (8#263) Speaker: <b>Fazle Elahi Akbar</b> Speaker: <b>Mohammad Jahid Hasan</b></li> <li>8. Assessing preparedness and response of Skilled Birth Attendants in handling PPH and Emergency Obstetric Care in a Tertiary Hospital Speaker: <b>Biplab Halder</b></li> </ol> <ul style="list-style-type: none"> <li>✚ Moderator: <b>Golam Rabbani</b>, Treasurer, PHFBD and Technical Advisor, Health System for TB</li> </ul>	Prof. Dr. A.K.M Masudur Rahman Hall	

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>Parallel Session 11: <b>Non-communicable disease - 1</b></p> <p>✦ Chair: <b>Prof. Dr. MSA Mansur Ahmed</b>, Professor and Advisor, Bangladesh University of Health Sciences &amp; Vice Chairperson, PHFBD</p> <p>✦ Chair: <b>Prof. Rowshan Alam</b>, Head of the Dept. of Community Medicine and Public Health, Rangpur Medical College</p> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. Association of The Peroxisome Proliferator-Activated Receptor Gamma Gene Pro12Ala Polymorphism in the Pathogenesis of type 2 Diabetes Mellitus in a Bangladeshi Population Speaker: <b>Manisha Das</b></li> <li>2. Identification of AMPK Activators from Fenugreek and Oyster Mushroom for Treatment of Type-II Diabetes Speaker: <b>Sanaullah Mazumdar</b></li> <li>3. Advancing Sustainable Vegetable Production: "In Vitro Regeneration of Hybrid Squash (Cucurbita pepo L.) cv. First Runner from Cotyledonary Node Explants for Enhanced Nutritional Outcomes Speaker: <b>Narifa Nusrat</b></li> <li>4. Musculoskeletal Health Problems among the Loom Weavers of Sirajganj District, Bangladesh Speaker: <b>Ankan Sanyal</b></li> <li>5. Behavioral risk factors of noncommunicable diseases among adolescent girls of selected school and college of Manikgonj district, Bangladesh Speaker: <b>Tahmina Akhter</b></li> <li>6. Prevalence of Hypertension and Associated Risk Factors among the Patients with Stroke treated in a Tertiary Hospital in Bangladesh Speaker: <b>Mahabuba Afrin</b></li> <li>7. Frequency and causes of non-adherence to anti-diabetic drugs among type-2 diabetic patients attending the non-communicable disease (NCD) corner of Upazila Health complex Speaker: <b>Sabrina Jahan Mily</b></li> <li>8. Prevalence and Risk Factors of Chronic Kidney Disease (CKD) among Patients with Type 2 Diabetes Mellitus (T2DM) Speaker: <b>Afsana Meli</b></li> </ol> <p>✦ Moderator: <b>Dr. Farhad Ahmed</b>, Assistant Professor (Histopathology), TMSS Medical College</p>	Lecture gallery 2	
		<p>Parallel Session 12: <b>Emerging and reemerging diseases &amp; antimicrobial resistance</b></p> <p>✦ Chair: <b>Prof. Md. Mahfuzar Rahman</b>, Ex. Professor of Community Medicine, NIPSOM</p> <p>✦ Chair: <b>Dr. Shamim Ahmed Choudhury</b>, Associate Professor &amp; Head of Dept. Community Medicine &amp; Public Health, TMC</p>	Lecture gallery 3	

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. Microbiological Surveillance of Air and Environmental Samples in Operation Theatres in a Tertiary Care Hospital in Bangladesh Speaker: <b>Azizun Nahar</b></li> <li>2. Investigation of bio-film producing Methicillin-resistant Staphylococcus aureus in raw beef and ready to eat foods in Bangladesh: Public Health implications. Speaker: <b>Fahmida Jahan Fahim</b></li> <li>3. Rising Trends in Antimicrobial Resistance: A Five-Year Retrospective Analysis at a Tertiary Care Hospital in Bogura, Bangladesh Speaker: <b>Fahim Uddin Ahmad</b></li> <li>4. Impact of the COVID-19 on Medicine production, Export and Import: Bangladesh Speaker: <b>Priom Barua</b></li> <li>5. Rickettsial Fever as an Emerging Infectious Disease in Northern Region of Bangladesh Speaker: <b>Karma Dicky Sherpa</b></li> <li>6. Geospatial distribution of HIV seroprevalence among blood donors in South Asian countries: a systematic review, meta-analysis, and choropleth mapping Speaker: <b>Radwan Raquib</b></li> <li>7. Genetic Influence of Urinary Tract Infection: Progression and Prevention of Chronic Kidney Disease Speaker: <b>Chowdhury Md Navim Kabir</b></li> <li>8. Hepatitis B vaccination status and its uptake barriers among health science and allied health students in Dhaka city. Speaker: <b>Sumaya Khan Mifty</b></li> </ol> <p>✚ Moderator: <b>Dr. Ahmed Al Muntasir</b>, Resident Physician, Dept of Medicine, TMSS Medical College &amp; Rafatullah Community Hospital.</p>		
<b>Health Break and Networking 10:45 – 11: 00am (15 min)</b>				
Scientific session  (Special paper presentation on- One Health  And  Parallel Session)	11:00 – 12:30 am (1hr 30min)	<p>Parallel Session 13: <b>Health policy, governance &amp; management</b></p> <p>✚ Chair: <b>Dr. Mushtuq Hussain</b>, Advisor, IEDCR, Independent Consultant</p> <p>✚ Chair: <b>Dr. Md. Matiur Rahman</b>, Deputy Executive Director, TMSS</p> <p>✚ <b>Special paper presentation on- One Health</b> Topic: <b>One Health Strategic Framework Bangladesh 2024-2030 (Time: 15 min)</b> Invited Speaker: <b>Dr. Mohammad Mushtuq Husain</b>, Advisor, IEDCR (Independent Consultant)</p> <p><b>Topic and Speakers</b></p> <ol style="list-style-type: none"> <li>1. Epidemiology of Student Injuries During Anti-Quota Protests in Bangladesh Speaker: <b>Hasnat M Alamgir</b></li> </ol>	Prof. Dr. A.K.M Masudur Rahman Hall	

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>2. Workplace Facilities and Job Stress among Dental Surgeons between Public and Private Tertiary Hospitals Speaker: <b>Mimuna Ahmed</b></p> <p>3. Medical Negligence and Malpractice in Bangladesh: Issues and Legal Remedies Speaker: <b>Kaniz Tania Bint-E-Basar</b></p> <p>4. Barriers to Report Adverse Drug Reaction by Hospital Doctors in Dhaka, Bangladesh: A Cross-Sectional Study Speaker: <b>Sharmila Huda</b></p> <p>5. Status of Current Health Problems among the Selected Victims of Collapsed Rana Plaza Building Speaker: <b>Nazir Arifeen</b></p> <p>6. Local Government in Primary Health Care and Community engagement in Nepal Speaker: <b>Dr Md Khurshid Alam Hyder</b></p> <p>7. Medical Law and Professional Ethics in Bangladesh: Issues and Implications (10#123) Speaker: <b>Arman Hossain</b></p> <p>✚ Moderator: <b>Monaemul Islam Sizear</b>, Organizing Secretary, PHFBD and Technical Advisor, Health System for TB</p>		
		<p>Parallel Session 14: <b>Non-communicable disease - 2</b></p> <p>✚ Chair: <b>Prof. Dr. Azfarul Habib</b>, Dept of Community Medicine, TMSS Medical College</p> <p>✚ Chair: <b>Subhash Sinha</b>, Physical Rehabilitation, Project Manager, International Committee of the Red Cross Dhaka Delegation</p> <p><b>Topic and Speakers</b></p> <p>1. Health-Related Challenges and Quality of Life of Women with Spinal Cord Injury Speaker: <b>Dr. Banossree Saha</b></p> <p>2. Body Roundness Index and Metabolic Syndrome risks among Asian Indian adults of diverse geo-climatic setups Speaker: <b>Partha Sarathi Datta</b> (online)</p> <p>3. Diagnostic Accuracy of Visual Inspection with Acetic Acid (VIA) for Cervical Cancer and Precancerous Lesions Speaker: <b>Dr. Mst. Shohela Pervin</b></p> <p>4. Journey of Pulmonary Rehabilitation in Bangladesh Speaker: <b>Dr. SM Rowshan Alam</b></p> <p>5. Assessment of Quality of Life in hypertensive patients using the WHOQOL-BREF instrument in post-pandemic era: An analytical cross-sectional study Speaker: <b>Nasrin Akter</b></p> <p>6. Assessment of socio-demographic and clinical characteristics of stroke patients at a Tertiary</p>	Lecture gallery 2	

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>Hospital in Bangladesh Speaker: <b>Ryadul Alam</b></p> <p>7. Mutation in Exon 7 of BRCA1 Gene in Bangladeshi women with Triple Negative Breast Cancer Speaker: <b>Dr Prianka Saha</b></p> <p>8. Seven Days Monitoring of Systolic and Diastolic Blood Pressure: Preventive Perspective of Pseudo Hypertension Induced Anxiety Speaker: <b>Chowdhury Md Navim Kabir</b> ✦ Moderator: <b>Samia Rashna Ahmed</b>, Life Member, PHFBD</p>		
		<p>Parallel Session 15: <b>Environmental health &amp; climate change</b></p> <p>✦ Chair: <b>Prof. Dr. Md. Jawadul Haque</b>, Vice-Chancellor, Rajshahi Medical University</p> <p>✦ Chair: <b>Prof. Hasnat M Alamgir</b>, Professor and Director, Research &amp; Training, Southeast University, Dhaka</p> <p><b>Topic and Speakers</b></p> <p>1. Statistical Assessment of Air Quality Impact on Respiratory Health in Dhaka: A Study on Hospital Admission Trends Speaker: <b>Hasin Almas Sifat</b></p> <p>2. Occurrence of Allergic Rhinitis in association with Parthenium hysterophorus L. in and around Rajshahi City Speaker: <b>Zoha Mohammad Meherwar Hossain</b></p> <p>3. Knowledge Regarding Extreme Heat and Heat Related Illness among Outdoor Labourers at Bogura Sadar, Bogura Speaker: <b>Dr. Akhiruzzaman</b></p> <p>4. Exposure to Freeway Air Pollution and its Health impacts on Slum dwellers in Dhaka, Bangladesh ( Speaker: <b>Rezaul Karim Ripon</b></p> <p>5. Microbial Characteristics of Poultry Dressing Water in diverse Bangladeshi Regions (8#265) Speaker: <b>Md Khaleduzzaman</b></p> <p>6. Knowledge about Radiation Hazards and its Preventive Measures among the Nursing Students of TMSS Nursing College, Bogura, Bangladesh Speaker: <b>Mst. Nilufar Yesmen</b></p> <p>7. Dhaka's Water Savior: The Dasherbandi Sewage Treatment Plant Speaker: <b>Tahmid Rahman</b></p> <p>8. Assessment of Occupational Health Hazards Knowledge among Registered Nurses in Bangladesh (12#60) Speaker: <b>Dr. Biplab Halder, RN, PhD</b></p> <p>✦ Moderator: <b>Golam Rabbani</b>, Treasurer, PHFBD and Technical Advisor, Health System for TB</p>	Lecture gallery 3	
Poster presentation	<b>11:00 – 12:00 (1h)</b>	<b>Poster presentation and evaluation</b> <b>1. Theme: Mental Health and Wellbeing-1</b> Honorable Judges:	Conference balcony	

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>  <b>Mahmuda Muhsena Bushra</b>, EC member, PHFBD   <b>Dr. Md. Imran Ahmed</b>, Associate Professor, Department of Community Medicine &amp; Public Health, Rangpur Community Medical College, Rangpur. </p> <p><u>Topics &amp; Presenters:</u></p> <ol style="list-style-type: none"> <li>1. Key Drivers of Suicide in Bangladesh: A Study on Mental Health, Family Stress, and Economic Distress Presenter: <b>Saifa Naziat Nawmi</b></li> <li>2. Stress and Stressor among Nursing Students: A Cross-Sectional Study Presenter: <b>Sweety Rani</b></li> <li>3. Knowledge regarding Autism Spectrum Disorder among Nurses Presenter: <b>Md. Shawon Hossain</b></li> <li>4. Prevalence and factors associated with anxiety and depression among reproductive-aged women in Bangladesh Presenter: <b>Md Tazvir Amin</b></li> <li>5. Assessing the Level of Emotional Intelligence among Bangladeshi Youth Presenter: <b>Ashish Paul</b></li> <li>6. Depression and Menopausal Symptoms among Rural Women in a Selected District of Bangl Subtheme: Noncommunicable Disease Presenter: <b>Khadizatul Kobra,</b></li> </ol> <p><b>2.Theme: Mental Health and Wellbeing-2</b> Honorable Judges:</p> <p>  <b>Md. Shadhat Hossain</b>, Former Director, DGFP and Life Member, PHFBD   <b>Dr. S M Murshid Hasan</b>, UNICEF </p> <p><u>Topics &amp; Presenters:</u></p> <ol style="list-style-type: none"> <li>1. Online Psychological Management of Adolescent Depression: A Case Study from a Rural Area of Bangladesh Presenter: <b>Md. Jianur Kabir</b></li> <li>2. Dual Realities: Psychological and Physiological Outcomes of Migrant and Non-Migrant Students in Dhaka, Bangladesh Presenter: <b>Israt Jahan Labonno</b></li> <li>3. Insomnia Among University Students in Bangladesh: A Five-Year Study of Key Stressors Presenter: <b>Mohammad Naveed Ishtiaq</b></li> <li>4. Exploring the Psychological Battlefield: Post-Traumatic Stress Disorder in the Aftermath of Gun Violence in the 2024 Bangladesh Quota Reform Movement Presenter: <b>Oishee Sultana</b></li> <li>5. Happiness status of the slum population in Dhaka city, Bangladesh: a cross-sectional study Presenter: <b>Palash Chandra Banik</b></li> <li>6. Effect of vitamin D receptor Gene polymorphism in Autism Spectrum Disorder in Bangladeshi Children Presenter: <b>Md. Siddiqul Islam</b></li> </ol>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p><b>3.Theme: Oral Health and Digital Health &amp; Innovation</b>  Honorable Judges:  🚩 <b>Dr. Md. Rakibul Hasan Khan</b>, Assistant Prof., Dental Public Health, TMC, TGHS  🚩 <b>Dr. Feroz Kabir</b>, Chairman, Jashore University of Science and Technology</p> <p><u>Topics &amp; Presenters:</u></p> <ol style="list-style-type: none"> <li>1. Group Handwashing, Toothbrushing and Silver Diamine Fluoride Application for Rohingya School Children in Refugee Camps of Cox’s Bazar: a glimpse from baseline survey  Presenter: <b>Khaleda Zaheer</b></li> <li>2. Oral Health Status of Street Children of Rangpur City  Presenter: <b>Maknunnahar</b></li> <li>3. Association of Cervical Lymph Node Ratio with Clinico-pathological status of oral squamous cell carcinoma  Presenter: <b>H. M. Shahriar Rubel</b></li> <li>4. Blockchain Technology in Healthcare: Innovations in Data Security and Patient Privacy  Presenter: Tanjim Khan Nabil<sup>1</sup>Presenter: <b>Md. Jubayer Hossain</b></li> <li>5. Prevalence of Social Media Use among Secondary School Students  Presenter: <b>Md. Sabbir</b></li> <li>6. Telecommunication-Based Healthcare Education in Bangladesh  Presenter: <b>Nusratun Nahar</b></li> </ol> <p><b>4.Theme: Reproductive and Child Health- 1</b>  Honorable Judges:  🚩 <b>Dr. Anawarul Quader Nazim, PhD</b>  CEO, Enam Medical College, Dhaka  🚩 <b>Dr. Khadizatul Kobra</b>, Lecturer, Community Medicine, Rangpur Medical College</p> <p><u>Topics &amp; Presenters:</u></p> <ol style="list-style-type: none"> <li>1. A Glimpse on Obstetric Care Services in Northern Bangladesh: Way Forward  Presenter: <b>Md. Taufikuzzaman</b></li> <li>2. Measuring the readiness and functionality of health facilities to provide sexually transmitted infection (STI) services in Bangladesh: Evidence from Bangladesh Health Facility Survey (BHFS) 2014 and 2017  Presenter: <b>Jahan E</b></li> <li>3. Statistical Perspectives on Menstrual Health: Analyzing Irregular and Painful Periods in Bangladesh  Presenter: <b>Fatima</b></li> <li>4. Knowledge Regarding Pre-Marital Screening among Undergraduate Students: A Cross-Sectional Study  Presenter: <b>Mst. Rasheda Khatun</b></li> <li>5. Knowledge regarding Pubertal Change among Adolescent Girls of Bogura District  Presenter: <b>Rita Rani Paul</b></li> </ol>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>6. Ensuring Sexual and Reproductive Health and Rights (SRHR) in Indigenous Santal Community in Gaibandha District, Bangladesh through Empowering Santal Women to Study Midwifery and Establish Health Service Presenter: <b>Md. Shamsuzzaman</b></p> <p><b>5. Theme: Reproductive and Child Health- 2</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Dr. Aminur Rahman, PhD</b>, Director, THRF, TMSS</li> <li>✚ <b>Dr. Farhana Yasmin</b>, Associate Professor, Dept. of Community Medicine, SZMC</li> </ul> <u>Topics &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. Risk Factors, Screening and Vaccination status of Cervical Cancer Among Reproductive Age Women of Bangladesh Presenter: <b>Dr. Sabrina Monsur</b></li> <li>2. Accelerating Access to Sexual &amp; Reproductive Health Rights (SRHR) and A Movement on Empower Women and Girls Presenter: <b>Binu Adhikary</b></li> <li>3. Practices of water, sanitation, and hygiene and its association with diarrheal infection among under-5 children in Chattogram, Bangladesh Presenter: <b>Syed Billal Hossain</b></li> <li>4. Marital Coitus in Bangladesh in the 2010s: An Analysis of Three National Surveys to Study Sociodemographic Determinants and Changes Over Time Presenter: <b>Md Tazvir Amin</b></li> <li>5. Knowledge and Experience Regarding Pre and Post – Menopausal Symptoms among Women at Presenter: Tertiary Level Hospital, Bogura Presenter: <b>Nisat Tasnim</b></li> <li>6. Knowledge, Attitude and Perceptions of Cervical Cancer Among Climate Induced Migrants in Chattogram City, Bangladesh Presenter: <b>Hossain Al Mahub</b></li> </ol> <p><b>6. Theme: Public Health Literacy</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Md. Kaoser Bin Siddique</b>, TMSS</li> <li>✚ <b>Rita Rani Paul</b>, Principal, TMSS Nursing College.</li> </ul> <u>Topics &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. Assessment of academic learning environment of government medical college of Bangladesh Presenter: <b>Mohammad Kamruzzaman Khan</b></li> <li>2. Trends in Female Authorship and Editorial Roles in Bangladeshi Medical Journals) <i>Presenter: Dr. Tamanna Tabassum</i></li> <li>3. A survey on pet owners' understanding and deworming practices in Sylhet City Corporation) Presenter: <b>Saiful Islam</b></li> <li>4. Level of knowledge regarding breast cancer and breast self-examination among school and college-going girls in Bangladesh: a cross-sectional study Presenter: <b>Md. Fakrul Islam Maruf</b></li> <li>5. Knowledge Regarding Breast Cancer among Married Women: A Cross-Sectional Study</li> </ol> </p> </p>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>Presenter: <b>Romana Akter</b></p> <p>6. Knowledge Regarding Prevention of Communicable Disease among the Undergraduate Students at Bogura District</p> <p>Presenter: <b>Prianka Rani</b></p> <p><b>7.Theme: Public Health Nutrition</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Ajoy Kumar Roy</b>, Ex. Civil Surgeon &amp; Ex. Director, Rangpur Medical College Hospital, Rangpur.</li> <li>✚ <b>Nutritionist Tamanna Sharmin</b>, Joint Secretary, PHFBD</li> </ul> <u>Topics &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. Knowledge, Attitude, and Practices towards Functional Foods and Its Associated Factors among Adult Population in Bangladesh: A Cross-sectional Study <i>Presenter: <b>Sanaullah Mazumdar</b></i></li> <li>2. Impact of Dietary Habits and Lifestyle on Body Mass Index among the Medical Students of TMSS Medical College, Bangladesh <i>Presenter: <b>Dr. Maskura Benzir</b></i></li> <li>3. Nutritional status of children with neurodevelopmental disorders: a cross sectional study at a tertiary-level hospital in northern Bangladesh <i>Presenter: <b>Dr. Rabeya Khatun</b></i></li> <li>4. Nutrition knowledge and dietary practices as a driver of double burden malnutrition in urban slum areas of Chittagong city, Bangladesh: A cross-sectional study <i>Presenter: <b>Nargees Akter</b></i></li> <li>5. Dietary self-management among young adults: An exploratory qualitative inquiry of young adult's perspective and experiences <i>Presenter: <b>Mst. Sabrina Afroz</b></i></li> <li>6. Use of functional foods and its association to chronic and multimorbid conditions: A cross-sectional study among Bangladeshi people <i>Presenter: <b>Rehenuma Tarannum</b></i></li> </ol> <p><b>8.Theme: Health policy, governance and management and health system</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Wing Commander Prof. Md. Mahmudul Hasan</b> Dept. of Development Studies, Faculty of Arts and Science, Bangladesh University of Professionals</li> <li>✚ <b>Dr. Sharmin Akhter Zahan</b>, Global Health Law and Governance, Country Director, Serv Medical</li> </ul> <u>Topics &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. Legal Immunities for the Healthcare Providers: Strengthening Protection for the Medical Practitioners in Bangladesh through Global Insights <i>Presenter: <b>Sumaia Sultana Emu</b></i></li> <li>2. Climate Change and Its Effects on Child Health in Southern Bangladesh: Legal, Economic, and Social Aspects <i>Presenter: <b>Shaikh Shohag Hossain</b></i></li> <li>3. Use of patient data on Facebook by registered doctors of Bangladesh</li> </ol> </p> </p>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>Presenter: <b>Dr. Mir Susmita Zaman</b></p> <p>4. The Obligation of the State in Providing Maternal Health Benefits: A Legal and Human Rights Perspective Presenter: <b>Mumtahena Ferdousy</b></p> <p>5. Availability and Service provisions for the elderly population in Dhaka: A Qualitative Analysis Presenter: <b>Afrin Nur</b></p> <p>6. Barriers to healthcare access for the elderly population in rural Bangladesh. Presenter: <b>Priya Chaudhary</b></p> <p>7. Does Law Dictate What Is Ethically Right or Wrong in Health Science? Presenter: <b>Manha Tasnim Suha</b></p> <p><b>9.Theme: Environmental Health and Climate Change</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Saqib Ahmad Khan</b>, Senior Lecturer, IUB</li> <li>✚ <b>Dr. Monira Begum</b>, Assistant Prof, Dept. Of Community Medicine, Rangpur Medical College</li> </ul> <u>Topic &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. Strengthening Minimum Initial Service Package process in the flood and cyclone prone area: Experience and way forward Presenter: <b>Arif Khan</b></li> <li>2. Influence of Meteorological Variable on Hospital Based Monthly Dengue Infection in Dhaka Division from 2022 to 2024 Presenter: <b>Nishat Afrin Mim</b></li> <li>3. Temporal Trends, Autocorrelation, and Decomposition Analysis of Diarrhoea Prevalence Among Under-Five Children in Rangamati and Chittagong: A Comparative Study (2017-2023) Presenter: <b>Nargees Akter</b></li> <li>4. Situation Analysis for Health System Resilience to Climate Change in Bangladesh Presenter: <b>Mahbub Ul Alam, Saiful Hassan</b></li> <li>5. The pattern of illness among the flood survivors in a remotest place of Bangladesh: An experience from a health camp Presenter: <b>Dr. Sabrina Monsur</b></li> <li>6. Knowledge regarding management of domestic accident among mothers Presenter: <b>Sumaiya akter Tisha</b></li> </ol> <p><b>10.Theme: Emerging and reemerging Diseases and Antimicrobial Resistance</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Dr. Hasna Zahan</b>, Associate Professor, Army Medical College, Bogura</li> <li>✚ <b>Dr. Azizun Nahar</b>, Associate Profesor, Microbiology, BMC and Life Member, PHFBD</li> </ul> <u>Topics &amp; Presenters:</u> <ol style="list-style-type: none"> <li>1. What is Influencing Antibiotic Usage among University Students? An Explanatory Qualitative Inquiry of University Students in Urban Bangladesh <i>Presenter: <b>Raisa Mehzabeen</b></i></li> </ol> </p> </p>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>2. Pattern of Conjunctivitis and Its Associated Factors among the Patients Reporting In a Specialized Hospital In Dhaka Presenter: <b>Amatun Nur</b></p> <p>3. Knowledge and Practice on Zoonotic Disease among Physicians During COVID-19 Presenter: <b>Shajeda Azizi</b></p> <p>4. A Study on Knowledge Regarding Dengue Fever among Urban Mothers at Bogura District Presenter: <b>Mst.Amena Khatun</b></p> <p>5. Immunosuppressant-induced Strongyloides Stercoralis infection (in a COVID-19 patient) in Bangladesh Presenter: <b>Robin Sharma</b></p> <p>6. Effect of ABCC4 gene polymorphism on drug induced Allergic Reactions &amp; Diarrhea of Antiretroviral Therapy (ART) in Bangladeshi HIV patients Presenter: <b>Md. Siddiqul Islam</b></p> <p>7. Evaluation of Laboratory Parameters as Predictors of Severe Dengue in Hospitalized Presenter: <b>Dr Sabrina Alam</b></p> <p><b>11.Theme: Non-communicable diseases- 1</b> Honorable Judges:  <ul style="list-style-type: none"> <li>✚ <b>Dr. Mohammad Jahid Hasan</b>, Executive Director, Pi Research &amp; Development Center (PIRDC)</li> <li>✚ <b>Palash Chandra Banik</b>, Associate Professor, Dept. of Non-communicable Disease, Bangladesh University of Health Sciences</li> </ul> </p> <p><u>Topics &amp; Presenters:</u></p> <p>1. Diabetic foot ulcer among Diabetes Mellitus patients at a tertiary level hospital in Bangladesh: An experience of 172 cases Presenter: <b>Mita Rani Biswas</b></p> <p>2. Efficacy of Russian Stimulation in the case of Transverse Présenter : <b>Moriomun Nessa Ilma</b></p> <p>3. Revitalizing Skin: The efficacy of ultrasound therapy in treating hypopigmentation Presenter: <b>Moriomun Nessa Ilma</b></p> <p>4. Navigating Erb's Palsy: A Case Study on the Efficacy of Faradic and Russian Stimulation Presenter: <b>Farhana Tasnim</b></p> <p>5. Innovative Approaches to Wound Healing: A Case Study on Ultrasound Therapy and High-Voltage Pulsed Current Présenter : <b>Md. Asif Arsalan</b></p> <p>6. Enhancing Bone Healing: A Case Study on Low-Intensity Pulsed Ultrasound Therapy Presenter: <b>Md. Asif Arsalan</b></p> <p>7. A Case Study on Frequency Specific Microcurrent Therapy to Enhancing Recovery in Post-Surgical Contractures Presenter: <b>Md. Abu Obaida Maruf</b></p> <p><b>12.Theme: Non-communicable disease- 2</b> Honorable Judges:</p>		

Event/Focus	Time (BD)	Session	Venue	Remarks
		<p>✚ <b>Dr. Hashmot Ali</b>, Coordinator, Jibito Bangladesh, John Hopkins, USA</p> <p>✚ <b>Dr. Tahsina Nasrin</b>, Assistant Professor, TMSS Medical College</p> <p><b>Topics &amp; Presenters:</b></p> <ol style="list-style-type: none"> <li>Integrative and traditional Unani medicine in Lung Cancer and immune support: A review study Presenter: <b>Dr. Bilkis Afrose Shorna</b></li> <li>Diagnostic and Electrophysiological Features of Hirayama Disease in a Young Adult Male: A Case Report Presenter: <b>Md. Jubayer Hossain</b></li> <li>Study on Knowledge and Practice regarding Type 2 Diabetes Mellitus among the Patient attending Bogura Diabetic &amp; Swasthoseba Hospital, Bangladesh Presenter: <b>MST Mohasina Akter</b></li> <li>Effect of vitamin D receptor Gene polymorphism in Autism Spectrum Disorder in Bangladeshi Children Presenter: <b>Md. Siddiquil Islam</b></li> <li>Effects of ABCB1 gene polymorphism on toxicity of Taxene-based Chemotherapy in Bangladeshi Triple Negative Breast Cancer patients Presenter: <b>Md. Siddiquil Islam</b></li> <li>Lifestyles and the status of blood pressure among hypertensive attending in hypertension and research center, Rangpur Presenter: <b>Md Jahangir Kabir</b></li> <li>The Role of Breast Cancer Awareness and Screening Programs: A Review of Bangladesh Perspective Presenter: <b>Ropak Chandra Roy</b></li> <li>Health related condition of thyroid cancer patients Presenter: Mir Ishtiaque Ahmed</li> <li>Does Law Dictate What is Ethically Right or Wrong in Health Science? Presenter: <b>Manha Tasnim Suha</b></li> </ol>		
Health forum 12:15 – 1:15 (1h)		<p>Plenary Session on “<b>From awareness to action: Empowering patients in Gestational Diabetes Mellitus(GDM)management</b>”</p> <p>✚ Key Presenter: Prof. <b>Dr. Fatema Ashraf</b>, Former Chairperson, PHFBD and Former Head, Gynae &amp; Obstetrics, ShSMCH</p> <p>✚ Chair: <b>Prof. Tabassum Parveen</b>, Chairman, Feto-Maternal Dept, BSMMU</p> <p><b>Panelists:</b></p> <p>✚ <b>Md. Saifullahil Azam</b>, Director General (Grade-1), Office Directorate General of Family Planning</p> <p>✚ Brig. Gen. (Retd.) Dr. Md. Jamilur Rahman, Director, TMC &amp; RCH, TGHS</p> <p>✚ <b>Dr Khadija Mannan</b>, Jr. Consultant (Obs/Gyn) Fetomaternal Medicine (Deputation), BSMMU</p> <p>✚ <b>Dr. Md. Ahamedul Kabir</b>, Assistant Professor, Endocrinology, TMSS Medical College &amp; Rafatullah Community Hospital</p> <p>✚ <b>Prof. Dr. Farhana Dewan</b>, President, Obstetrical and Gynaecological Society of Bangladesh (Online)</p>	Prof. Dr. A.K.M Masudur Rahman Hall	
<b>Prayer and Lunch 1:15– 2:00 (45m)</b>				
2:00 – 3:00 (1h)		<p>Plenary Session on <b>Public Health Literacy in Bangladesh</b></p> <p>✚ Key Presenter: <b>Dr. Narayana Prasad</b>, Co-Founder, Public Health Literacy</p> <p>✚ Chair: <b>Dr. Aftab Uddin</b>, Chairperson, Public Health</p>	Prof. Dr. A.K.M Masudur Rahman Hall	

Event/Focus	Time (BD)	Session	Venue	Remarks
		Foundation Bangladesh <b>Panelists:</b> <b>Md. Ashadul Islam</b> , Former Senior Secretary Planning Division, Ministry of Planning, Government of the People's Republic of Bangladesh ✚ <b>Prof. Dr. Abu Jamil Faisel</b> , President Elect, Public Health Association of Bangladesh ✚ <b>Prof. Sharmeen Yasmeen</b> , Former Chairperson, PHFBD; Head, Dept. of Community Medicine and Public Health, BMC and Chairperson, Autism Welfare Foundation		
Closing and award 3:00 – 4:00 (1h)		Welcome Speech ✚ <b>Prof. Dr. M.H. Alamgir Pavel</b> Chairman, Conference Committee and Professor of Surgery, TMSS Medical College		
		<b>Award Ceremony</b> ✚ Award of Best Presenters (Oral and Poster) ✚ Token of Appreciation to Judges ✚ Awards to Volunteers ✚ Award to the Organizers ✚ Award to Best Organizers		
		<b>Reflections from Participants/Presenters</b>		
		Speech of Special Guests ✚ <b>Eng. Dr. Rafiqul Islam Maruf, PhD</b> Associate Professor, Division of Healthcare Digital Transformation, Dept. of Data-Driven Innovation Initiative, Kyushu University, Japan ✚ <b>Dr. Mohammad Shafiul Azam</b> Civil Surgeon, Bogura ✚ <b>Prof. Dr. Md. Wadudul Hoque Tarafder Nahid</b> Principal, Shaheed Ziaur Rahman Medical College, Bogura ✚ <b>Prof. Dr. Khandker Md Faisal Alam</b> Principal, Rajshahi Medical College ✚ <b>Md. Saifullahil Azam</b> Director General (Grade-1), Office Directorate General of Family Planning, MOHFW	Prof. Dr. A.K.M Masudur Rahman Hall	
	Speech of Chief Guest ✚ <b>Md. Ashadul Islam</b> , Former Senior Secretary, Planning Division, Ministry of Planning, Government of the People's Republic of Bangladesh			
	<b>Vote of Thanks</b> ✚ <b>Dr. Aftab Uddin</b> , Chairperson, Public Health Foundation Bangladesh <b>Concluding Speech</b> ✚ <b>Prof. Dr. Muzaherul HuQ</b> , Founding Chairperson, PHFBD and Member of the Health Sector Reform Committee, Bangladesh			
<b>End of the conference following snacks</b>				

---

Thanks

---

### **Title: Sustainable learning in healthcare**

*Keynote Speaker: Dr. Badrul Khan*

#### **Abstract**

**Background:** Sustainable development in education is critical for fostering impactful and adaptive learning environments, especially within healthcare. The SMART framework — encompassing Sustainability, Motivation, Adaptability, Results-orientation, and Technology — presents a comprehensive strategy to address the evolving demands of healthcare education. By leveraging blended learning methodologies, SMART frameworks enrich learner engagement, optimize resource utilization, and enhance institutional outcomes.

**Methods:** This study explores the application of the SMART framework in designing and implementing blended learning environments in healthcare education. It involves a comprehensive review of existing educational models and evaluates the pedagogical, technological, and ethical dimensions to assess the feasibility and impact of the SMART approach.

**Results:** The findings underscore that effectively applied SMART environments significantly enhance learning outcomes, accessibility, and learner motivation. Technology-driven tools within the framework facilitate interactive and adaptable educational experiences while addressing challenges related to ethics and institutional logistics. Additionally, the study highlights the importance of robust resource management and institutional support to ensure the sustainable adoption of the SMART framework.

**Conclusion:** The SMART framework represents a transformative approach to healthcare education by integrating sustainability with cutting-edge learning strategies. For its full potential to be realized, institutions should prioritize blended learning initiatives and systematically incorporate technological and pedagogical innovations. This holistic strategy empowers healthcare professionals with future-ready competencies and promotes equitable access to high-quality education aligned with global sustainable development goals.

**Keywords:** SMART Learning, Blended Learning, Healthcare Education, Sustainability, Technology-Enhanced Learning.

### **Theme: Health and its local and global determinants, Does Geopolitics determine Global Health?**

*Prof. Dr. Bettina Borisch, MD, MPH, FRCPath*

CEO, World Federation of Public Health Associations  
Professor, Global Public Health, University of Geneva, Switzerland

#### **Abstract**

*Health and its local and global determinants, Does Geopolitics determine Global Health?*

As the Ottawa Charter stated: Health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by non-governmental and voluntary organization, by local authorities, by industry and by the media. Besides these actors for health, we have seen the increasing importance of global actors, such as supra- national organizations, think-tanks, charities and businesses that influence health. After all,

the COVID pandemic is a demonstration of the interconnectedness of all health determinants around the world. The geopolitical landscape is changing very fast. The case of the pandemic treaty negotiations will serve as a case study to investigate how geopolitics may influence global health.

**Title: Reducing Child Stunting in Bangladesh: Building Convergence in the Narrative and Policy Response**

*Keynote Speaker: Dr. Ziauddin Hyder*

Senior Health Specialist, World Bank; Email: [hydersmz@gmail.com](mailto:hydersmz@gmail.com)

**Abstract**

One in every four children under five suffer from stunted growth in Bangladesh and the progress in reducing stunting over the past three decades is slower than expected. Stunting has crippling impacts that are largely irreversible, damaging a child's cognitive and physical capacity, leading to lower educational attainment, lower economic productivity, and reduced income earning potential. Failure to address this public health nutrition crisis on an urgent basis is limiting Bangladesh's ability to achieve Universal Health Coverage as well as its ability to reduce poverty and improve equality of opportunity. Accelerated progress on child stunting requires a major shift in both policy design and policy implementation. Policy design needs to include the critical public health and environmental factors that underly the biological drivers of stunting. The most urgent of these is the reduction of exposure to human and animal fecal waste, especially for infants, through the child provision of safe water, sanitation and animal waste management, and comprehensive behaviour change. Early marriage and early pregnancy are neglected but critical drivers of the intergenerational transmission of child stunting. Finally, child stunting cannot be reduced sustainably without strengthening health systems, addressing food and water security and dietary quality and diversity. A transformation of the Agri-food system is needed to tackle the compound risks to food and water security from environmental degradation and a rapidly changing climate. Progress across these multiple dimensions will require an integrated cross-sectoral effort, led by empowered local government bodies, with a clear mandate, adequate resources and a sharp focus on areas and populations that are most deprived.

### **Title: From awareness to action: Empowering patients in Gestational Diabetes Management (GDM)**

*Prof. Dr. Fatema Ashraf; Former Head of the Dept. (Obs & Gyn), Shaheed Suhrawardy Medical College & Hospital, Dhaka, Bangladesh & Ex-Chairperson, Public Health Foundation, Bangladesh and Chairperson, Smart Healthcare and Research Limited*

Email: fatema.phfbd@gmail.com

#### **Abstract**

"Patient empowerment" as a public health approach focuses on giving individuals more control over their health decisions and actions, which leads to better outcomes in managing diseases such as gestational diabetes mellitus (GDM). This approach shifts the focus from just medical professionals making decisions to involving patients in their care. Here's how it can be explained in the context of GDM:

- 1. Education and Awareness:** Empowering patients begins with educating them about GDM—what it is, its risks, and how it affects both mother and baby. Understanding the condition allows women to make informed choices about their care.
- 2. Self-Management Skills:** Patients are taught how to monitor their blood glucose levels, follow dietary recommendations, engage in regular physical activity, and take medications as prescribed. This increases their ability to manage GDM independently, reducing complications.
- 3. Shared Decision-Making:** Empowerment involves patients actively participating in the decision-making process. They work with healthcare providers to choose treatment plans that align with their personal values, preferences, and lifestyle.
- 4. Access to Resources:** Public health programs can provide access to tools like support groups, mobile health apps for glucose monitoring, or educational materials. These resources ensure women with GDM have the support needed to manage their condition effectively.
- 5. Supportive Environment:** Creating a health system and community environment that supports patient empowerment is critical. This includes easy access to healthcare, nutritional counseling, and emotional support, which are all essential in managing GDM successfully.

In short, patient empowerment helps women with GDM take control of their health by providing the knowledge, skills, and support necessary for effective self-management, leading to better health outcomes for both mother and child.

## “One Health”

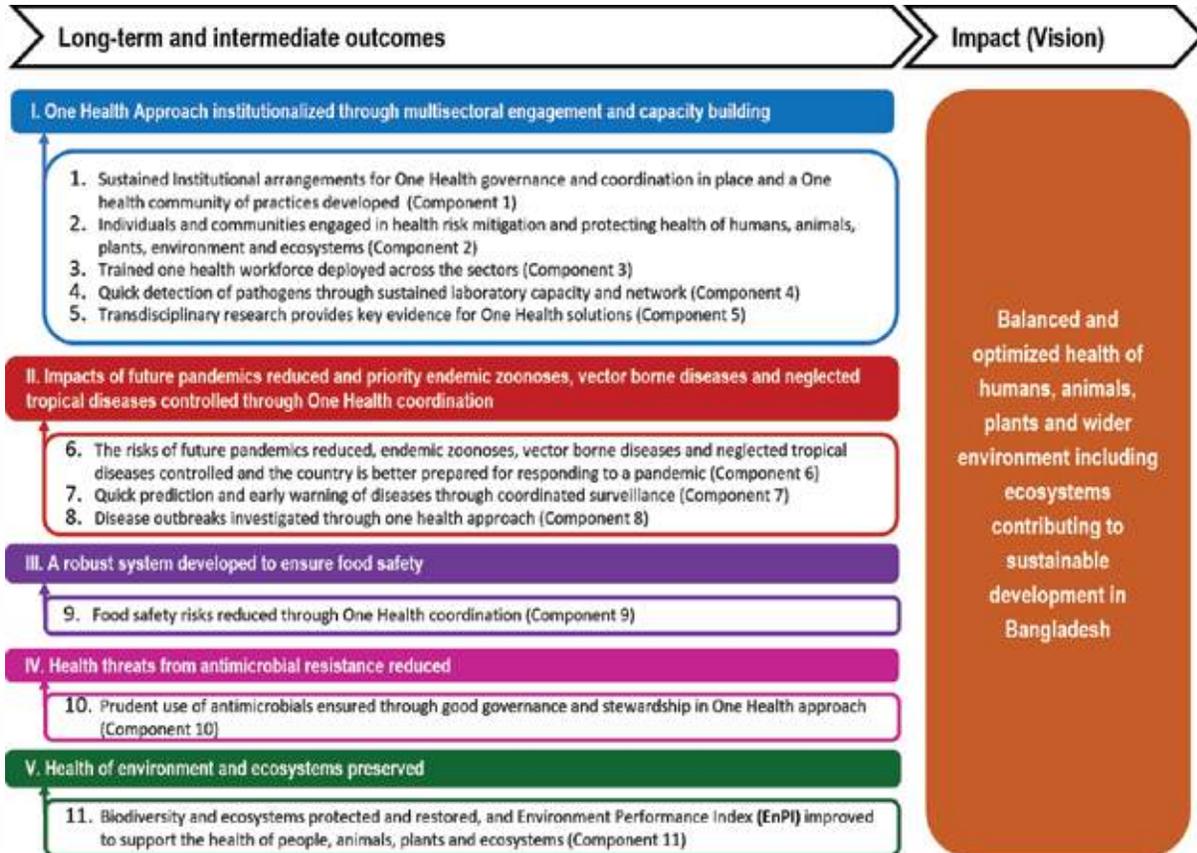
### Title: One Health Strategic Framework Bangladesh 2024-2030

*Md Rafiqul Islam<sup>1</sup>, Mohammad Mushtuq Husain<sup>2</sup>, Motahara Tasneem<sup>3</sup>*

1. ECTAD, Food and Agriculture Organization (FAO), Bangladesh, 2. Advisor, IEDCR (Independent Consultant, IEDCR)

Presenter: Dr Mohammad Mushtuq Husain; Advisor, IEDCR (Independent Consultant)

E-mail: mushtuq@gmail.com



Key words: zoonosis, pandemic, biodiversity, ecosystem, food safety, antimicrobial resistance

## Adolescent Drug Abuse and Delinquency in Bangladesh: Exploring the Roles of Socioeconomic Factors, Educational Barriers, and Family Neglect (4#40)

*Shamim Ahmed Choudhury<sup>1</sup>, Md. Kaoser Bin Siddique<sup>2</sup> and Md. Matiur Rahman<sup>3</sup>*

1. Associate Professor & Head, Community Medicine & Public Health, TMSS Medical College, Bogura.
2. Research & Training Coordinator, Grand Health Sector, TMSS, Bogura, Bangladesh
3. Chief of Health Sector, TMSS, Bogura, Bangladesh

**Presenter:** Dr. Shamim Ahmed Choudhury; Head, Community Medicine, TMSS Medical College, Bogura; Email: drshamim1965@gmail.com

### Abstract

**Background:** Adolescence is a critical period of development, and factors such as socioeconomic status, family dynamics, and educational attainment can significantly impact the trajectories of young individuals. In Bangladesh, the issue of juvenile delinquents is a growing concern.

**Objective:** This study aims to explore the role of socioeconomic, educational, and family-related factors of juvenile delinquents.

**Methods:** This cross-sectional study was conducted among 117 adolescents aged 13-19 years. The study duration was 20 June -30 September, 2024. The Snowball sampling method was used to select participants from different areas of Bogura, Bangladesh. The respondents were interviewed separately with a pre-tested questionnaire after ensuring all ethical issues.

**Results:** The study examined 117 adolescents, with a majority being boys 89.7%. Educationally, 58% had passed HSC, 27% passed SSC, 6.5% had completed up to class eight, and 8.5% were illiterate. A significant 41% of HSC and SSC graduates dropped out of further education due to institutional admission criteria. Economically, 44% were from high-income families, 39% from middle-income, and others from low-income and poor backgrounds. Notably, 77% felt neglected by their families, and 94% were irregular in school, relying on coaching centers for study. Most were not regular in staying at home or eating with family. All respondents used smartphones and had access to drugs. Moreover, 97% had political or local protection. Although adolescents had no clear plans for their future, education, or moral/spiritual growth, 47% hoped to go abroad to improve their prospects.

**Conclusion:** The findings highlight concerns about juvenile delinquency due to educational dropout, economic struggles, family neglect, and political shelter. The prevalence of drug abuse, enabled by easy access and influential protection, presents a severe societal threat that demands immediate action, such as, Educational Reform, Parental Support Programs, Anti-Drug Campaigns, Law Enforcement, Vocational Training, Community Engagement.

**Keywords:** Juvenile delinquency, drug abuse, educational dropout, family neglect, socioeconomic factors, political protection.

## **Prevalence of Depression, Loneliness and Associated Factors among the Medical Students in Bangladesh (5#41)**

*Zarin Tasnim Maliha<sup>1</sup>, Sayeda Nazmun Nahar<sup>2</sup>, Dipak Kumar Mitra<sup>3</sup>, Nadira Sultana Kakoly<sup>3</sup>, Kamrun Nahar Koly<sup>5</sup>, Md Humayun Kabir Talukder<sup>6</sup>, Helal Uddin Ahmed<sup>7</sup>, Rajat Das Gupta<sup>8</sup>, M. Tasdik Hasan<sup>9</sup>*

1. RTM International;
2. Uppsala University;
3. North South University; icddr, b;
4. Centre For Medical Education;
5. National Institute of Mental Health;
6. University of South Carolina;
7. Monash University

**Presenter:** Zarin Tasnim Maliha; Email: [drmalih@rtm-international.org](mailto:drmalih@rtm-international.org)

### **Abstract**

**Background:** Mental health concerns among medical students are a growing global issue, with Bangladesh now facing high rates of depression and loneliness among this group. The lack of accessible mental health services exacerbates the problem, especially in resource-limited settings.

**Objective:** This study aimed to estimate the prevalence of depression and loneliness among medical students in Bangladesh.

**Methods:** This cross-sectional study collected data from 529 medical students using a convenient sampling technique through an online survey. The PHQ-9 tool was used for depression screening, and the UCLA loneliness scale measured loneliness levels. Additionally, the M.I.N.I. tool was used via online interviews (Zoom/phone) to confirm clinical diagnoses of depression among PHQ-9-positive cases.

**Results:** Moderate to severe depression was reported by 31.5% of participants, with 38.7% experiencing mild depression and 29.8% minimal depression. Of the 50 PHQ-9-positive cases confirmed by the M.I.N.I. tool, 34% had no clinical depression, while 54% were diagnosed with recent depression. Additionally, 32% and 30% of participants had past and recurrent depression, respectively. Female students and those living away from family, particularly during their first year of medical school, were more prone to depression. Loneliness was also prevalent, with 27.3% of students experiencing high loneliness, 52.2% moderate loneliness, and 20.5% low loneliness. Unhealthy habits, such as smoking and drug abuse, were more common among students reporting loneliness.

**Conclusions:** The findings highlight the urgent need for mental health services in medical colleges in Bangladesh. Given the study's certain limitations, further longitudinal studies are recommended to explore these issues in greater depth.

**Keywords:** Medical students, Depression, Loneliness, Mental health, Bangladesh

**Understanding the prevalence and determinants of diabetes distress, perceived stress, and depression in young and middle-aged adults with early-onset Type 2 Diabetes: A cross sectional study (6#48)**

*Sree Shib Shankar Devnath Debu<sup>1</sup>, Ryadul Alam<sup>2</sup> Department of Public Health, North South University<sup>1</sup>, Department of Public Health & Informatics, Jahangirnagar University<sup>2</sup>*

**Presenter:** Dr. Sree Shib Shankar Devnath Debu; **Email:** dr.shibshankar88@gmail.com

**Abstract**

**Background:** This cross-sectional survey aimed to investigate the prevalence and correlates of diabetes distress, perceived stress, and depressive symptoms with early-onset Type 2 diabetes in Bangladesh. Limited research exists on the psychological impact of diabetes in this population.

**Objective:** This study aimed to highlighting the need for a comprehensive understanding of the psychosocial challenges faced by these individuals.

**Methods:** This cross-sectional study involved 350 adults with early-onset Type 2 diabetes, recruited through convenient sampling at a tertiary hospital in Dhaka. Data on diabetes distress, perceived stress, and depressive symptoms were collected using the DDS, PSS, and PHQ-9 scales. Statistical analysis was conducted using SPSS, and ethical approval and informed consent were obtained.

**Results:** The sample included 350 participants, mostly male (61.4%) and aged 30-40 years (62.0%). Diabetes distress was prevalent, with 46.9% reporting no distress and 31.7% reporting moderate distress, significantly associated with age ( $p = 0.001$ ), occupation ( $p = 0.001$ ), and marital status ( $p = 0.001$ ). Perceived stress was higher in younger participants ( $p = 0.041$ ), while depression was also more significant in those aged 30-40 years ( $p = 0.045$ ). Gender, education, and income showed no significant associations with stress or depression.

**Conclusion:** This study highlights the prevalence and correlates of diabetes distress, perceived stress, and depressive symptoms among adults with early-onset Type 2 diabetes in Bangladesh. The findings underscore the importance of addressing psychological wellbeing as part of diabetes management. Integrated mental health care, targeted interventions, and psychosocial support programs should be implemented to meet the specific needs of this population.

**Keywords:** Diabetes distress, Perceived stress, Depressive symptoms, Early-onset Type 2 diabetes, Prevalence, Psychosocial challenges, Integrated care.

**Mental health status among healthcare professionals in academic platform:  
A cross sectional study in Bangladesh context (7#51)**

*Bilkis Banu<sup>1</sup>, Nasrin Akter<sup>2</sup>, Nusrat Hossain Sheba<sup>2</sup>, Nigar Sultana<sup>1</sup>, Md. Allama Faysal<sup>1</sup>, Nawzia Yasmin<sup>1</sup>*

1. Department of Public Health, State University of Bangladesh, 696 Kendua, Kanchan, Rupganj, Narayanganj, Dhaka-1461, Bangladesh
2. Department of Public Health, Northern University Bangladesh, 111/2 Kawla Jamea Masjid Road, Dakshin Khan, Uttara, Dhaka.

**Presenter:** Dr Bilkis Banu; Email: [bilkisbanu80@gmail.com](mailto:bilkisbanu80@gmail.com)

**Abstract**

**Background:** Mental health status of healthcare professionals requires comprehensive investigation, which is currently lacking.

**Objective:** This study aimed to assess the mental health status among healthcare professionals in the academic platform of Bangladesh.

**Methods:** This cross-sectional study involved 280 healthcare professionals engaged as public health students of Northern University Bangladesh. Demographic, clinical, organizational and mental health related data was collected by self-administered, structured, and online questionnaire. Mental health status was assessed by DASS-21 Scale. Bivariate and multivariate techniques were adopted to analyze the data.

**Results:** The results indicated that the majority of respondents (64%) were in the age group of  $\leq 40$  years. Professionals who reported feeling stressed and anxious had considerably greater rates of depression than those who did not. The study identified that married respondents (AOR=4.06), younger individuals ( $\leq 40$  years: AOR=2.48), those with smaller family sizes ( $\leq 3$  members: AOR=2.91) and those with comorbidities (AOR=2.49) had significantly ( $p < 0.05$ ) higher levels of depression than another group. Additionally, significantly ( $p < 0.05$ ) higher levels of anxiety were observed among female respondents (AOR=3.12), single individuals (AOR =2.64), those with lower monthly family income ( $\leq 45000$  BDT: AOR=1.82), and those with comorbidities (AOR=2.49) compared to normal subjects. Furthermore, similar to depression, the odds of stress were significantly higher ( $p < 0.05$ ) for respondents who were younger ( $\leq 40$  years: AOR=2.89), had smaller families ( $\leq 3$  members: AOR=2.23), and experienced comorbidities (AOR=2.46).

**Conclusions:** The findings suggest that healthcare professionals should prioritize raising awareness of mental health issues at the individual, institutional, and societal levels.

**Keywords:** Mental health, healthcare professionals, depression, anxiety, stress.

## **Assessing anxiety levels of “left behind” families of people working or living abroad from Bangladesh (9#72)**

*Md Jahangir Hossain<sup>1</sup>, Chayon Kumar Das<sup>1</sup>*

1. Department of Psychiatry, Monno Medical College and Hospital

**Presenter:** Md Jahangir Hossain; Email: jhpsy2014@gmail.com

### **Abstract**

**Background:** Prevalence of psychiatric disorders is increasing radically in Bangladesh. Anxiety disorders are the second most common disorders for both adults and children in Bangladesh. Migrating to other countries are also very common in Bangladesh but there is very limited data about the anxiety level of family members of these expatriates.

**Objective:** The objective of this study is to assess the anxiety level of family members whose significant others are living abroad.

**Methods:** A cross sectional survey design was executed to conduct the study. Data was collected using purposive sampling technique from 1 January, 2024 to 30 July, 2024 by a psychiatrist from four psychiatric facilities (three private chambers and one tertiary level hospital). Bangla version of Generalized Anxiety Disorder-7 (GAD-7) along with customized questions to uncover data related to demographic information was used as assessment tools. 112 participants from South East part (Savar and Manikganj) of Dhaka participated in the study. Ethics to conduct research with human participants were strictly followed.

**Results:** Majority of the participants were female (75.9%), married (67%), in the age range of 18-35 (45.5%) and studied up to Secondary School Certificate (45.5%). Among the family members, wives (57.1%), children (23.2%), and parents (8.9%) were the most who opted for psychiatric consultancy. Most common diagnosed disorders were Generalized Anxiety Disorder (54.5%), Bipolar Mood Disorder (9.8%) and Schizophrenia (8%). According to GAD-7, 17%, 38.4%, and 34.8% had severe, moderate, and mild level of anxiety respectively.

**Conclusion:** As a high level of anxiety was found among psychiatric patients whose family members were living abroad, a nationwide survey to identify mental health status of this population was recommended. Moreover, it is high time to ensure mental health support for this population.

**Keywords:** Anxiety level, Left behind, Family, Working abroad.

## **Depression among married female adolescents in Bangladesh: the toll of marriage, pregnancy, and violence (11#172)**

*Md Mahabubur Rahman<sup>1</sup>, Md Tazvir Amin<sup>1</sup>, M. Moinuddin Haider<sup>1</sup>, Shusmita Hossain Khan<sup>2</sup>  
Sumaiya Nusrat<sup>1</sup>, Quamrun Nahar<sup>1</sup>, Mizanur Rahman<sup>2</sup>, Kanta Jamil<sup>3</sup>*

1. International Centre for Diarrhoeal Disease Research Bangladesh
2. Data for Impact, University of North Carolina, United States
3. Institution: Independent Consultant, Fitzroy North, VIC, Australia

**Presenter:** Md Mahabubur Rahman; Email: mahabubur.rahman@icddr.org

### **Abstract**

**Background:** Major depressive disorder (MDD) is a life-threatening psychiatric condition that is spreading faster among adolescents than adults around the globe.

**Objective:** This study aims to estimate the prevalence of MDD among currently married female adolescents (CMFAs) in Bangladesh and unpacks its association with sociodemographic factors, factors around marriage and childbearing, and social safety.

**Methods:** We used data from the Bangladesh Adolescent Health and Wellbeing Survey (BAHWS) 2019–20, the first national-level survey conducted on adolescents ages 15–19 in Bangladesh. This study included a total of 2,408 CMFAs ages 15–19. BAHWS 2019–20 collected depression data using the modified Indian Bangla version of PHQ-9 that is specific to the adolescent. We used multivariable logistic regression and Poisson regression with robust variance to examine the factors associated with MDD.

**Results:** The estimated prevalence of MDD among CMFAs ages 15–19 is 15%. The odds of MDD did not vary by age, education, wealth, residence type, and region. CMFAs who felt connected with their husband and mother-in-law were respectively 31% and 34% less likely to have MDD than the rest. The odds of MDD were almost twofold among pregnant CMFAs than their counterparts. We found significantly higher odds of MDD among CMFAs who experienced physical violence from their husbands (AOR:1.93, 95%CI: 1.31,2.85) or others (AOR:2.07, 95%CI: 1.15,3.71), any form of sexual harassment (AOR:2.25, 95%CI: 1.49,3.42), and cyberbullying (AOR:3.73, 95%CI: 2.01,6.93) than those who did not experience such adverse events.

**Conclusions:** This study highlights that MDD is not clustered in any specific sociodemographic group. It is, rather associated with not feeling connected with husband and in-laws, health condition (pregnancy), and experiencing physical, sexual, and cyber abuse. Findings suggest integrating mental health programs in maternity care and preventing violence against women may help prevent and manage MDD.

**Keywords:** Female adolescents, Depression, marriage, Violence, Pregnancy, Bangladesh

## **The Learning Style and Thinking of Generation Z: A Cross Sectional Study among Medical Students (15#31)**

*Ovi Sharma Devjoty<sup>1</sup>, Fabia Benta Faruque<sup>1</sup>, Dr. Arifur Rahman<sup>2</sup> Md. Kaoser Bin Siddique<sup>3</sup>*

1. Intern Doctor, TMSS Medical College & Rafatullah Community Hospital, Bogura.
2. Director, TMSS Biomolecular Lab & Associate Professor, Histopathology, TMSS Medical College & Rafatullah Community Hospital, Bogura.
3. Coordinator, Research & Training, Grand Health Sector, TMSS & Adjunct Faculty, TMSS Nursing College

**Presenter:** Dr. Ovi Sharma Devjoty; Email: ovisharma1000@gmail.com

### **Abstract**

**Background:** Sociologists and researchers have classified generation into 6 groups: Silent Generation, Baby Boomers, Generation X, Generation Y, Generation Z and generation alpha. Generation Z (born between the period of 1997–2012) has got increased exposure to technology than the previous generations, hence they have got distinct learning styles and preferences and extensive research required to reshape the future medical education.

**Objective:** The aim of the study is to find out the learning styles, thinking, preferences, and preferred learning strategies of Gen Z medical students.

**Method:** This cross sectional study was conducted among 300 medical students of TMSS Medical College, Bogura in 2024. A validated questionnaire VARK (visual, Aural, Read and Kinesthetic) and LSI 1 and 2 (life styles inventory assessment) was used for data collection. Data were analyzed by using SPSS.

**Results:** The study of Generation Z medical students in Bangladesh reveals a diverse learning preferences transitioning towards digital methods. With a mean age of 21.84 years and a slight female majority (57.3%), these students show a strong inclination for visual learning (76.3%) and modern teaching methods (79.0%). While 58.0% prefer offline learning, a significant 42.0% favor online platforms. The average focus duration of 30.2 minutes suggests shorter attention spans. Digital note-taking (66.7%) and online exam methods (52.7%) are preferred by the majority. Notably, 83.0% believe social media positively impacts their studies.

**Conclusion:** Generation Z medical students show a clear preference for digital and visual learning methods, while still valuing some traditional approaches. Their shorter attention spans, positive view of social media for studying, and inclination towards online resources indicate a need for modernizing medical education. To effectively engage these students and improve learning outcomes, a blended approach that integrates digital technologies with traditional teaching methods is recommended.

**Keywords:** Learning style, Thinking, Generation Z, Medical student.

## **A review of Bangladesh's current Mental Health Laws from a therapeutic perspective (16#127)**

*Rakiba Nabi*

Professor & Chairperson, Dept. of Law, University of Chittagong; Email: rakiba.nabi@cu.ac.bd

### **Abstract**

This paper evaluates the conventional doctrinal framework of mental health law and juxtaposes it with an innovative, interdisciplinary perspective called therapeutic jurisprudence. Therapeutic jurisprudence perceives the law as a possible instrument for healing and well-being. Unfortunately, the Mental Health Act 2018 missed this component of growing in prominence as a reappraisal of law and the legal process. The recent student movement was a glaring example where the mental health condition of the people including students is at stake. More than a thousand people lost their lives in July 2024. Returning to normal life has become increasingly difficult for many who witnessed confrontations and bloodshed. Having been on the front lines of gun violence, and bombings, students are among the most suffering. Very few people have made a full recovery, even from relatively minor injuries. Because of this, many youngsters are going back to school with emotional scars. Against this backdrop, this paper will address the existing legal framework such as the Mental Health Act 2018, the National Mental Health Strategy for 2020–2030, the National Mental Health Policy 2022, and other Public Health regulations and their correlation with effectively controlling mental wellness and health of the post-traumatic community via therapeutic jurisprudence. This paper will cover therapeutic jurisprudence aiming to reduce depression and stress by informing people how to cope with it in powerful new ways with an analysis of the global mental health needs, services, barriers, and challenges. A persistent need exists for the implementation of a new mental health law that integrates human rights-based methods and incorporates global best practices of therapeutic jurisprudence.

**Keywords:** Therapeutic jurisprudence, Depression, Mental Health Law

## **Passive Smoking and pediatric dental caries: An emerging public health concern (3#87)**

*Presenter: Dr. Sirajam Munira; Email: drmuniraoreen@gmail.com*  
Research Officer, BCCP, Dhaka, Bangladesh

### **Abstract**

**Background:** Dental caries is a chronic dental disorder of children and it can result in substantial morbidity due to pain, dysfunction, poor appearance, and problems of speech development.

**Objective:** The study was conducted to assess the association between passive smoking and pediatric dental caries.

**Methods:** The cross-sectional study was conducted among 92 school children aged 5-10 years. Data on exposure to passive smoking both indoor and outdoor were obtained through face to face interviews of the parents with the help of semi-structured questionnaire and checklist. Dental caries was diagnosed by clinical examination and passive smoking exposure was assessed by estimated urinary cotinine level.

**Results:** The study revealed that 58.70% children were male and 41% were female respectively. The mean age of the children was 7.20 years. It was found that 59.8% fathers of the studied children were smokers where 68.5% children reported that some of their family members were indoor smokers. Of all the children, 62% had dental caries and 85.5% of the children had dental caries who were exposed to passive smoking and had significant association between exposure to passive smoking and dental caries ( $p < 0.001$ ). Dental caries was common among children aged 5-6 years who were exposed to passive smoking. The mean urinary cotinine level was 27.81 ng/ml and maximum children (65.2%) had a urinary cotinine level more than 10ng/ml who was exposed to passive smoking. The study found significant positive correlation between urinary cotinine concentrations and the duration of exposure to passive smoking ( $r = 0.692, p < 0.001$ ).

**Conclusion:** This study suggests reduction of exposure to passive smoking may be an effective measure for prevention of pediatric dental caries.

**Keywords:** Passive smoking; Children; Dental caries; Urinary cotinine

## **Malocclusion prevalence and public health: Exploring causes, impacts and treatment challenges (5#135)**

*Presenter: Dr. Faria Tabassum Tann: Email: fariatabu@yahoo.com*

Bangabandhu Sheikh Mujib Medical University

### **Abstract**

**Background:** Malocclusion means irregularities of the teeth or a mal-relationship between the dental arches beyond the range of what is accepted as normal. Malocclusion affects esthetics, physical, psychological, and social life of a person and they may also have difficulty in chewing and speaking. It is also related with cleft lip and cleft palate.

**Objective:** The objective of this study is to determine the prevalence of malocclusion in school-aged children.

**Methods:** A cross-sectional descriptive survey was conducted among 748 children (08-12 years old) from two different areas of Sylhet Sadar Upazila, Bangladesh. They all were examined from October 2019 to September 2020 by disposable dental tools. After the collection of all data, it was compiled and analyzed by Statistical Package for the Social Sciences (SPSS) Windows version 23. Chi-square test was used for categorical variables.

**Results:** The prevalence of malocclusion in urban school-aged children was 237(63.4%) and in rural 213(57.0%). The majority (70.5%) were found Angle's class I in urban group and 148(69.5%) in rural. One forty-three (60.3%) patients were found to have increased overbite with malocclusion in urban groups and 124(58.2%) in rural. Angle's Class-I malocclusion and increased overbite were the most commonly occurring malocclusion.

**Conclusion:** Prevalence of malocclusion was more in urban school age children when compared with rural. Angle's Class-I malocclusion Increased overbite were the most commonly occurring malocclusion of school age children in a selected urban and rural community of Sylhet, Bangladesh. For the interest of public health, conducting an evaluation is useful to understand the causal factors of malocclusion. An effective evaluation will surely contribute to the impact and treatment challenges, as well as the social factors that affect the feasibility of treatment.

**Keywords:** Malocclusion, Rural, Urban, Overbite.

## **Prevalence of periodontal diseases among diabetic patients attending Swasthosheba hospital, Bogura (7#164)**

*Aesha Rizwana<sup>1</sup>, Lamiya Tabassum<sup>1</sup>, Raghieb Ahsan<sup>1</sup>*

1. Pundra University of Science & Technology, Bogura.

**Presenter:** Ayesha Rizwana; Email: raghibraj@gmail.com

### **Abstract**

**Background:** Periodontal disease is a common chronic inflammatory dental disease. Periodontal diseases are highly prevalent and a global health care burden adversely affecting the quality of life. Epidemiological data confirm that diabetes is a major risk factor (a three-fold increased risk) for periodontitis.

**Objective:** To measure the prevalence of periodontal diseases among diabetic patients attending the OPD of Swasthosheba hospital, Bogura.

**Methods:** A cross-sectional study was conducted between May 2023 and June 2024 involving 483 diabetic patients. They were recruited from the out-patient department of Swasthosheba Hospital, Nawab Bari, Bogura, using a purposive sampling method. Data were analyzed and interpreted using descriptive as well as inferential statistical techniques.

**Results:** By sex, 47.8% were males and 52.2% were females. By lifestyle practices, regularly 53.4% maintain diabetic diet, 15.5% perform exercise, 65.2% maintain personal hygiene, 72.7% refrain from sugar containing food, 23.6% check blood glucose, 3.7% consult their doctors, and 13% do yearly health checkup. Despite all those fair lifestyle practices, 89.4% of the diabetic respondents, in this study, were found to have periodontal diseases. Chi-square tests show no association of sex, yearly health checkup and type of diabetes with periodontal diseases. But, a highly significant association of duration of being diabetic ( $p<0.001$ ) and maintenance of personal hygiene ( $p<0.01$ ) were observed. A highly significant association was observed with grades of HBA1C and severity of periodontal diseases ( $p<0.001$ ). Independent sample T-test shows a highly significant association of fasting blood glucose ( $p<0.001$ ), random blood glucose ( $p<0.001$ ) and HBA1C ( $p<0.001$ ) with periodontal diseases.

**Conclusion:** Diabetes is an important risk factor for periodontal diseases. Risk of periodontal disease increases with control of glycemic status. Oral health (including periodontal health) is a fundamentally important component of general health, and particularly so in diabetes. Periodontal assessment is very important in people with diabetes.

**Keywords:** Periodontal disease, Diabetes mellitus, Risk factors, Glycemic control.

## Clinico-pathological Variations of Paediatric Oral and Maxillofacial Malignancies and their Treatment Outcome in a Tertiary Level Hospital of Bangladesh (8#207)

*Md. Badruddoza<sup>1</sup>, S. M. Anwar Sadat<sup>2</sup>, Noushad Kaiser Pathan<sup>2</sup>, Israt Jahan Ferdous<sup>3</sup>*

1. Ibn Sina Medical College Hospital, Kallyanpur, Dhaka;
2. Dhaka Dental College;
3. Dhaka Medical College

**Presenter:** Dr. Md.Badruddoza; Email: badruddc46@gmail.com

### Abstract

**Background:** Paediatric oral and maxillofacial malignancies are less common but it remains a significant cause of paediatric mortality.

**Objective:** To observe the clinico-pathological variations of paediatric oral and maxillofacial malignancies and their treatment outcome in a tertiary level hospital of Bangladesh.

**Methods:** An observational study was conducted in the Department of Oral & Maxillofacial surgery, Dhaka Dental College Hospital from December 2019 to May 2022. Patient age  $\leq 18$  years was included in the study. Malignancies of eye, intracranial region, thyroid, parathyroid gland, trachea and esophagus were excluded from this study. Each of the patients was analyzed by their clinical presentation, radiological findings and histopathological pattern.

**Results:** Out of 20 diagnosed cases of paediatric oral and maxillofacial malignancies, most of the cases were in between 0-5 years and 2<sup>nd</sup> decade (11 – 18 years) of life. The patients' ages ranged from 1 year to 16 years with a mean of 8.85 years ( $SD \pm 5.23$  years); male to female ratio was 1:1. The maxilla was the most frequent site occurrence for head and neck malignancies. The most frequent clinical presentation of paediatric head and neck malignant patients as swelling in 100% followed by pain, ulceration, tooth mobility, mal-occlusion, palpable regional lymph node, nasal bleeding and trismus. Embryonal Rhabdomyosarcoma (RMS) was the most common paediatric head and neck malignancies followed by Non-Hodgkin's Lymphoma (NHL), Primitive Neuroectodermal Tumor (PNET), Langerhan Cell Histiocytosis (LHCH), Osteosarcoma, Chondrosarcoma, Ewing's sarcoma, Muco-epidermoid carcinoma, Mixo-fibrosarcoma and Ganglio-neuroblastoma. The overall survival period was 600.4 days (average).

The average survival periods in RMS (E), NHL, PNET and LHCH were 379.57 days, 232.67 days, 1178.5 days and 969.5 days respectively.

**Conclusions:** It is very difficult to control paediatric oral and maxillofacial malignancies but rapid evaluation, proper diagnosis and immediate multimodal treatment approach can increase the survival of the patient's life.

**Keywords:** Clinicopathological variation, Oral and maxilo-facial malignancy, Treatment outcome.

## **Knowledge regarding service-seeking behavior towards safe dental care services among Bangladeshi patients (9#208)**

*Fatema Afrin<sup>1</sup>, Nasrin Akter<sup>1</sup>, Sujana Haque Chowdhury<sup>1</sup>, Bilkis Banu<sup>1</sup>, Sarder Mahmud Hossain<sup>1</sup>*

1. Department of Public Health, Northern University Bangladesh, Dhaka, Bangladesh;

**Presenter:** Dr. Fatema Afrin; Email: ayeshafatema2011@gmail.com

### **Abstract**

**Background:** Safe dental service-seeking knowledge and behavior are essential for the sustainable management and prevention of dental problems, which might help to avail exact treatment management facilities regarding dental issues.

**Objective:** This study aimed to assess the knowledge and behavior toward safe dental service-seeking practice.

**Methods:** This was a cross-sectional study conducted among randomly selected 312 dental patients of Khulna city. Data was collected by semi-structured questionnaire through face-to-face interviews, and uni- and multi-variate procedures were used for analysis.

**Results:** The average age was found to be 34 years, with a higher frequency (61.2%) of female respondents. Most of the study subjects had graduate and above education (69.6%), belonged to a nuclear family (24.7%), and resided in urban areas (71%). Most of the respondents had poor service-seeking knowledge (69.6%) and behavior (64.1%) regarding safe dental care, and overall poor knowledge triggered poor behavior significantly (OR/p= 3/0.01; 95% CI: 1.79-5.03). Some factors under socio-demographic and clinical information were identified as significantly ( $p < 0.05$ ) associated with such poor knowledge (less education; AOR/p= 2.29/0.01, deleterious habit; AOR/p= 2.05/0.01) and behavior (monthly income BDT  $\leq 50000$ ; AOR/p= 3.31/0.02, and having deleterious habits; AOR/p= 1.82/0.01).

**Conclusion:** This study reveals a depressive scenario regarding knowledge on safe dental service-seeking practice. This study will provide future researchers of this field with a concrete base for further study and will assist the policymakers of the pertinent arena.

**Keywords:** Safe dental care, service-seeking knowledge, behavior, Bangladesh.

## **Prevalence of antimicrobial resistance and the spectrum of pathogens in dental and oral-maxillofacial infections at a tertiary level hospital in Chattogram (10#211)**

*H M Shahriar Rubel 1, Arpita Biswangree1, Shayeri Noor Gani1, Tasin Afrose1, Esrat Jahan 2, Md Salim Uddin 1, Tarannum Afreen Shovna 1, Manjur-E-Mahmud 1, Mohammed Morshed Alam 1*

1. Dental Unit, Chittagong Medical College, Chittagong, Bangladesh;
2. Maternal and Child Health, International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh

**Presenter:** Dr. H M Shahriar Rubel; Email: 45neel@icddr.org

### **Abstract**

**Background:** The escalating threat of antimicrobial resistance (AMR) presents a critical challenge to global public health, particularly in developing countries like Bangladesh.

**Objective:** This study aimed to investigate the prevalence of pathogens and patterns of antimicrobial resistance in dental and oral-maxillofacial infections in Chattogram, Bangladesh.

**Methods:** A cross-sectional, descriptive study was conducted at Chittagong Medical College Hospital from January to December 2023. Socio-demographic and clinical data were collected from 85 participants, and samples were obtained for culture and sensitivity testing.

**Results:** Results revealed a predominance of *Pseudomonas aeruginosa* (27%) among isolated pathogens, followed by *Klebsiella* species (21%) and *Staphylococcus aureus* (19%). Analysis of antibiotic resistance patterns demonstrated high resistance rates to commonly prescribed antibiotics, with erythromycin and aztreonam showing complete resistance. Additionally, antibiotics such as oxacillin, azithromycin, and ceftriaxone exhibited moderate to high resistance rates (above 70%). Conversely, some antibiotics including cloxacillin, netilmicin, and chloramphenicol showed high sensitivity rates (above 80%), suggesting effective treatment options.

**Conclusion:** The study highlighted the urgent need for comprehensive surveillance and effective antimicrobial stewardship programs in dental care settings to combat the rising threat of AMR. Findings underscored the importance of rational antibiotic use, access to healthcare, and public health education to mitigate AMR. Further research is warranted to better understand resistance mechanisms and optimize antibiotic therapy in dental and oral-maxillofacial infections.

**Keywords:** Prevalence, Antimicrobial resistance, Dental and oral maxillofacial infections, Tertiary hospital

**The association between low serum vitamin D level and periodontal disease in Bangladeshi population- An Observational study (12#221)**

*Shaikh Ahmed Rinku*

OMS department, Dental Unit, TMSS medical College, Bogura.

**Presenter:** Dr. Shaikh Ahmed Rinku; Email: dr.shaikhahmed14cmc@gmail.com

**Abstract**

**Background:** According to a recent study, Bangladeshi population (20-45 age) presents early tooth loss of tooth without any history of systemic disease. Lack of serum vitamin D level is one of the prompting factors of early tooth loss.

**Objective:** The aim of the study is to assess the significance of low or insufficient serum vitamin D level as a factor of early tooth loss in Bangladesh perspective.

**Methods:** An observational study was performed in the dental unit of TMSS Medical College from January 2021 to December 2022. A total of 70 patients were selected by non-random sampling (judgment sampling) who fulfilled the inclusion and exclusion criteria. We assessed the variables like gingivitis, periodontal pocket & tooth mobility clinically. The depth of the periodontal pocket & gingivitis was assessed by the periodontal probe & the mobility by using a blunt instrument & feel with the fingers before & after Vit-D supplementation. Data were processed and analyzed using computer software SPSS version 26.0.

**Results:** Deficiency of low serum Vit-D level has significant effect on periodontal bone resorption and after correction of serum vit D level resulted clinical improvement on periodontal health.

**Conclusions:** Insufficient levels of vitamin D can predispose individuals to a range of health issues, including low bone mineral density, osteopenia, and osteoporosis, as well as infectious and chronic inflammatory diseases like periodontitis.

**Keywords:** Low serum Vitamin-D, Periodontal diseases, Bangladeshi population

## Ethical issues in the use of Artificial Intelligence in healthcare in Bangladesh (2#33)

*Shaikh Shohag Hossain<sup>1</sup>, Sumaia Sultana Emu<sup>1</sup>, Raspiatur Rashpi<sup>2</sup>, Anika Achol<sup>3</sup>*

1. Lecturer, Department of Law, National University, Gazipur, Bangladesh
2. Lecturer, Department of Law, Bangladesh Army International University of Science and Technology(BAUIST)
3. Lecturer, Department of Law, Varendra University, Rajshahi, Bangladesh.

**Presenter:** Raspiatur Rashpi; Email: shaikh.shohag@nu.ac.bd

### Abstract

**Background:** In Bangladesh, where the healthcare system struggles with overburdened public hospitals, resource scarcity, and limited access to specialists, AI can be a powerful tool to enhance medical services. However, issues of data privacy, bias in decision-making, and accountability, remain largely unaddressed.

**Objective:** This study explores the ethical issues in the use of AI in healthcare in Bangladesh.

**Methods:** These researchers use a qualitative methodology to explore the ethical dimensions of AI in healthcare through a combination of literature review, case studies, and expert interviews. The study also examines existing legal frameworks, international standards, and Bangladesh's readiness to regulate AI in healthcare.

**Results:** The study identifies several ethical concerns in the use of AI in Bangladesh's healthcare system. Data privacy stands out as a critical issue. Patient data is often stored and processed without adequate safeguards. Moreover, the inherent bias in AI algorithms can be trained on datasets that do not reflect the diverse population of Bangladesh, risks perpetuating healthcare inequalities. Accountability is another concern. When AI-driven systems make mistakes, it is unclear who is responsible; the AI developers, healthcare providers, or institutions? The study also notes the lack of transparency in AI decision-making processes, raising concerns about the trustworthiness of AI systems among patients and healthcare professionals.

**Conclusion:** While AI has the potential to greatly improve the health care improve healthcare system in Bangladesh, addressing its ethical challenges is crucial for its sustainable implementation. Strengthening data protection laws, developing inclusive AI training datasets, and establishing clear accountability frameworks are necessary steps to mitigate the ethical risks associated with AI in healthcare. A collaborative effort between the government, healthcare providers, and tech developers will be essential to ensure that AI serves the healthcare needs of all Bangladeshis ethically and effectively.

**Keywords:** Artificial intelligence, Healthcare, Ethics, Data privacy, Bangladesh.

## Digital dependence & Myopia: Assessing the impact of devices addiction among Bangladeshi university students (4#121)

*MD Sazid Islam<sup>1</sup>, Mohammad Naveed Ishtiaq<sup>2</sup>, S.M.Nazmul Ahasan<sup>3</sup>, Sanjida Jahan Shifa<sup>4</sup>, Md. Mortuza Ahmmed<sup>5</sup>*

American International University-Bangladesh, Dhaka 1229, Bangladesh

**Presenter:** Md.Sazid Islam; Email: 23-50389-1@student.aiub.edu

### Abstract:

**Background:** Nowadays, myopia is more common, especially among university students. Obsessive use of digital devices and heavy exposure to digital screens is a normal thing for students, puts stress on the eyes and encourages further myopia. Screen exposure is a significant cause of Myopia especially through digital devices. Digital device users are increasing in Bangladesh and most of them are young adults.

**Objective:** The aim of the study is to find connection between myopia and device addiction among university students in Bangladesh.

**Methods:** This study is a mixed-method approach by combining quantitative and qualitative methods in the study of the relationship between device addiction and myopia in university students in Bangladesh. Data collection has leaned towards the cross-sectional survey of the pattern of use of mobile phones, academic impacts, and self-reported visual health. Participants were selected using stratified random sampling to represent both public and private universities in Bangladesh equally. Demographic data and patterns were described through descriptive statistics, whereas logistic regression examined the association between device addiction with risk factors for myopia.

**Results:** The study found that 42.2% of Bangladeshi university students were very dependent on mobile phones. Specifically, 34% used their gadgets for more than four hours daily, and the dominant use became very non-academic, which included social media use at 87.1%. Almost half of the respondents, 48%, reported sleep loss due to the use of their phones at night. As a result, this increased their risks for digital eye strain and myopia progression.

**Conclusion:** This study, brings out a positive correlation between device addiction and its negative impacts on the health of eyesight and academic performances of Bangladeshi university students. These findings consequently call for targeted interventions through awareness campaigns, promotions of balanced device use through educational policy, and health-promotion initiatives to reduce screen time and enhance protection practices.

**Keywords:** Myopia, Device Addiction, University Students, Screen Time, Digital Device

## Smartphone Applications to Prevent Type 2 Diabetes: A Systematic Review and Meta-Analysis (6#218)

*Esrat Jahan MPH<sup>1,2</sup>, Rawan Almansour<sup>3</sup>, Kiran Ijaz PhD<sup>4</sup>, Shaira Baptista PhD<sup>5</sup>, Leticia Bezerra Giordan MD<sup>6</sup>, Rimante Ronto PhD<sup>1</sup>, Sarah Zaman PhD<sup>7,8</sup>, Edel O'Hagan PhD<sup>7\*</sup>, Liliana Laranjo PhD<sup>7\*</sup> (corresponding author)*

1. Department of Health Systems and Population, Macquarie University, NSW, Australia
2. Maternal and Child Health Division, International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh
3. College of Applied Medical Sciences, King Faisal University, Al Ahsa, Saudi Arabia
4. School of Architecture, Design and Planning, University of Sydney, NSW, Australia
5. Deakin University and the University of Melbourne, Victoria, Australia
6. Northern Beaches Hospital, 105 Frenchs Forest Rd W, Frenchs Forest, 2086, NSW, Australia
7. Faculty of Medicine and Health, University of Sydney, NSW, Australia
8. Department of Cardiology, Westmead Hospital, Sydney, NSW, Australia

**Presenter:** Esrat Jahan; Email: [esrat.jahan1@icddr.org](mailto:esrat.jahan1@icddr.org)

### Abstract

**Background:** Evidence supporting the use of apps for lifestyle behavior change and diabetes prevention in people at high risk of diabetes is lacking. The aim of this systematic review was to determine the acceptability and effectiveness of smartphone applications (apps) for the prevention of type 2 diabetes.

**Methods:** PubMed, Embase, CINAHL and PsychInfo were searched from 2008 to 2023. Included studies involved adults at high risk of developing diabetes evaluating an app intervention with the aim of preventing type 2 diabetes. Random-effects meta-analyses were conducted for weight loss, body mass index (BMI), glycated hemoglobin, and waist circumference. Narrative synthesis was conducted for all studies, including qualitative studies exploring user perspectives.

**Results:** Twenty-four studies (n=2,378) were included in this systematic review, including 9 randomized controlled trials (RCTs) with an average duration of 6 months, 10 quasi-experimental and 7 qualitative studies. Socially disadvantaged groups were poorly represented. Six RCTs were combined in meta-analyses. Apps were effective at promoting weight loss [mean difference (MD) -1.85; 95% CI -2.90 to -0.80] and decreasing BMI [MD -0.90, 95% CI -1.53 to -0.27], with no effect on glycated hemoglobin and waist circumference. No studies reported on diabetes incidence. Qualitative studies highlighted the need for app personalization.

**Conclusion:** Smartphone apps have a promising effect on preventing type 2 diabetes by supporting weight loss. Future robust trials should include diverse populations in co-design and evaluation of apps and explore the role of artificial intelligence in further personalizing interventions for higher engagement and effectiveness.

## **A study of AI-Based early detection and personalized nutrition for obesity prevention (#10)**

*S.M.Nazmul Ahasan<sup>1</sup>, MD Sazid Islam<sup>1</sup>, Mohammad Naveed Ishtiaq<sup>1</sup>, Sanjida Jahan Shifa<sup>1</sup>, Md. Mortuza Ahmmed<sup>1</sup>*

1. American International University-Bangladesh, Dhaka 1229, Bangladesh

**Presenter:** S.M.Nazmul Ahasan; Email: 23-50371-1@student.aiub.edu,

### **Abstract:**

**Background:** High enough risk of various chronic diseases – diabetes, heart diseases, some cancers etc. over lifetime due to obesity. According to World Health Organization data, obesity which is the condition when an individual has abnormal or excessive fat accumulation that may damage health, has nearly tripled worldwide since 1975 and the common reason of obesity is due to an energy imbalance between calories consumed and calories expended.

**Objective:** The aim of this study is to prevent obesity using AI to identify individuals at high risk of obesity and provide customized nutritional solutions.

**Methods:** By using predictive modeling, the study will analyze both historical and real time data such as lifestyle habits, genetic information and socio-economic factors to estimate obesity risk in diverse populations. This study also has some challenges such as the need to ensure data privacy and security, develop user-friendly interfaces that promote engagement and potential biases in AI algorithms.

**Results:** According to the latest US health surveys, public health officials report that August in the year 2023, the number of adult's obesity suffering nearly 40.3 % in the USA which shows some slight decline as compared to earlier years when the rates were around 41.9% during the years 2017-2020. It further increased in terms of obesity which went up from around numbers of 7.7% during the years 2013-2014 to about 9.7% during the years 2021-2023 which indicates that this is becoming a worrying trend. It is alarming that within the last half a century it seems like there has been a rise in obesity on a threefold basis.

**Conclusions:** In conclusion, this research aims to establish a comprehensive AI-based framework that not only makes early detection of obesity risk but also promotes personalized nutrition solutions. Moreover, this study highlights the importance of combining technology with public health initiatives to increase obesity prevention strategies where AI can play a vital role.

**Keywords:** Artificial intelligence, Obesity, Nutrition, Health, Personalization

## Interpretable machine learning and spatial regression methods to predict vector-borne diseases in Bangladesh with climatic drivers (4#201)

*Md. Siddikur Rahman<sup>1\*</sup>, Arman Hossain Chowdhury<sup>1</sup>*

1. Department of Statistics, Begum Rokeya University, Rangpur

**Presenter:** Md. Siddikur Rahman, PhD; mail: siddikur@brur.ac.bd

### Abstract

**Background:** Bangladesh faces a formidable challenge in mitigating vector-borne diseases exacerbated by climate change. However, a comprehensive understanding of the spatiotemporal dynamics of these diseases at the district level remains elusive.

**Objective:** This study aimed to fill this gap by investigating the spatiotemporal pattern and associated meteorological factors of vector-borne diseases in Bangladesh.

**Methods:** This study used district-level reported cases of vector-borne diseases (dengue, malaria, diarrhoea and cholera) obtained from the Bangladesh Bureau of Statistics. Simultaneously, meteorological data (temperature, relative humidity, wind speed, and precipitation) were sourced from NASA from 2017 to 2020. A combination of exploratory spatial analysis, spatial regression, and advanced tree-based machine learning models were utilized for comprehensive analysis.

**Results:** From 2017 and 2020, Bangladesh reported 26,983 vector-borne disease cases. The spatial regression model identified mean temperature as a major risk factor for vector-borne ( $\beta = 16.64$ , s.e: 6.39) diseases. The optimal XGBoost model highlighted temperature and wind speed as the primary determinants for Bangladesh's vector-borne diseases from 2017 to 2020.

**Conclusions:** The study's findings, incorporating the One Health perspective, provide insights for planning early warning, prevention, and control strategies to combat vector-borne diseases in Bangladesh and similar endemic countries. Preventive measures and intensified surveillance must be implemented in certain high-risk districts nationwide.

**Keywords:** Vector-borne, Climate change, One Health, Artificial Intelligence, XGBoost.

## **Research engagement and career aspirations among public health graduate students: experiences from a developing country (12#147)**

*Mohammad Jahid Hasan<sup>1</sup>, Susmita zaman<sup>2</sup>, Salwa Islam<sup>1</sup>, Mohima Benojir<sup>3</sup>, Jannatul Fardous<sup>4</sup>, Sajia Afrin<sup>5</sup>, Tamanna Tabassum<sup>2</sup>, Paramita Zaman<sup>2</sup>, Md Rafiul Hasan<sup>6</sup>, Masudur Rahman Kanchon<sup>3</sup>, Taha Choudhury<sup>1</sup>, Mohammad Delwer Hossain Hawlader<sup>7</sup>, Sujan Rudra<sup>8</sup>, Hasnat M. Alamgir<sup>9</sup>*

1. Tropical Disease and Health Research Center, Dhaka;
2. Pi Research & Development Center, Dhaka;
3. BRAC James P. Grant School of Public Health, BRAC University, Dhaka;
4. National Institute of Mental Health (NIMH), Dhaka;
5. University of South Asia, Dhaka;
6. Directorate General of Health Services, Mohakhali, Dhaka;
7. North South University, Dhaka; 8. Statistics department, Bangladesh Bank, Dhaka;
8. Southeast University, Dhaka

**Presenter:** Dr Mohammad Jahid Hasan; Email: [dr.jahid61@gmail.com](mailto:dr.jahid61@gmail.com)

### **Abstract**

**Background:** In every year approximately 1888 graduate students are enrolled in Master of Public Health (MPH) course across various public and private institutions of Bangladesh.

**Objective:** This study aimed to delineate the engagement of graduate public health students in Bangladesh in research endeavors, and explore the career aspirations among public health graduate students.

**Methods:** This cross-sectional descriptive study was conducted among graduate public health students from seven institutes using a questionnaire covering demographics, research engagement, training, future research aspirations, and encountered barriers.

**Results:** Among the 417 participating students, the mean age was  $31.3 \pm 5.7$  (SD) years, with a majority being female (58.7%). Approximately half of the participants (49.2%) had engaged in research activities prior to pursuing their current degree, while 27.6% had received formal research training. Of all, 87.8% students (n=366) had an intention to pursue research career in future. Female students (OR 2.07, 95% CI 1.02-4.19,  $p=0.043$ ), students who were  $\geq 30$  years (OR 2.51, 95% CI 1.11-5.69,  $p=0.027$ ), and studying MPH in public institutions (OR 0.45, 95% CI 0.22-0.90,  $p=0.024$ ) exhibited a higher likelihood of conducting research independently, compared to male students, age <30 years and studying MPH in private institutions, respectively. Factors such as prior research training (OR 5.61, 95% CI 2.64-11.9,  $p<0.001$ ) and prior education in non-science discipline (OR 3.40, 95% CI 1.16-9.99,  $p=0.026$ ) were positively associated with student's engagement in conducting research.

**Conclusion:** Graduate public health students have demonstrated a strong interest in research careers, with nearly half reporting prior research experience. Being able to conduct research is shaped by factors such as gender, academic background, and the quality of training they receive.

**Keywords:** Research Involvement, Public Health, Medical Education, Developing country, Research training.

## **Socioeconomic Determinants and Patient Experience in an AI-Based Diabetic Retinopathy Screening Program (5#187)**

*Md. Sajidul Huq*

Deep Eye Care Foundation, Darshona, Rangpur  
Email: sajidul.decf@gmail.com

### **Abstract**

**Background:** To explore the socioeconomic determinants and patient satisfaction within an AI-based diabetic retinopathy (DR) screening program at an eye hospital in Bangladesh.

**Methods:** This retrospective cross-sectional study analyzed data from a year-long AI-based DR screening program conducted by the Deep Eye Care Foundation, from January to December 2023. Participants aged 18 and above with known diabetes, no previous DR diagnosis, and consent to the screening were included. Data on demographics, socioeconomic status (age, gender, education, occupation, income), screening outcomes (positive or negative), and satisfaction (timeliness, result communication, cost, overall service, recommendation likelihood) were collected. Chi-square tests were performed to explore associations between variables. Ethical considerations included ensuring patient confidentiality and obtaining necessary approvals.

**Results:** Out of 3,079 patients screened, 2,228 (72.4%) tested negative, and 851 (27.6%) tested positive for DR. The majority of patients (42.3%) had diabetes for 1-5 years. The largest age group was 41-50 years (35.8%), and 42.3% of patients earned between BDT 25,001-50,000. High levels of patient satisfaction were reported across all categories, with 73.8% expressing overall high satisfaction and a similar percentage highly recommending the service to others. Significant associations were found between exam results and various demographic factors: age group ( $p < 0.001$ ), income group ( $p < 0.001$ ), duration of diabetes ( $p < 0.001$ ), gender ( $p < 0.001$ ), education ( $p < 0.05$ ) and occupation ( $p < 0.001$ ).

**Conclusions:** The study highlights the significant role of socioeconomic factors in screening outcomes and underscores the high satisfaction levels with AI-based DR screening. These findings emphasize the need for tailored interventions considering demographic and socioeconomic contexts to enhance screening effectiveness and patient experience.

**Keywords:** Diabetic retinopathy, AI-based screening, Patient satisfaction

## The Association between Cumulative Social Risk and Adolescent Obesity: Differences by Race/Ethnicity and Income (1# 5)

Helal Uddin<sup>1</sup>, Zobayer Ahmmad<sup>2</sup>, Harvey L. Nicholson Jr.<sup>3</sup> & Jalal Uddin<sup>4</sup>

1. Department of Sociology, East West University, Dhaka 1212, Bangladesh.
2. Department of Sociology, University of Vermont, Burlington, Vermont, USA
3. Department of Sociology, University of Toronto (St. George Campus), Toronto, Canada
4. Department of Community Health and Epidemiology, Faculty of Medicine, Halifax, Dalhousie University, Canada.

**Presenter:** Helal Uddin; Email: helal@ewubd.edu

### Abstract

**Background:** A large body of research has examined racial-ethnic disparities in children's obesity. However, this area of scholarship has yet to focus on psychosocial risk factors for obesity and whether the impact of psychosocial risks varies by income and race/ethnicity. We examine the association between cumulative social risk (CSR) and adolescent obesity and test whether this association varies by race-ethnicity and income.

**Methods:** A cross-sectional analysis was conducted among 47,892 children aged 10-17 years using the 2017-2020 National Survey of Children's Health (NSCH). Logistic regression with survey weights was used to obtain odds ratios (OR) and 95% confidence intervals (CI) of adolescent obesity.

**Results:** Overall, 15.4% of children had obesity and above 14% had two or more CSR experiences. A higher CSR score was associated with a higher prevalence of obesity among the three income groups (0-199% FPL, 200%-399% FPL, & ≥400% FPL). Children with 2 or more CSR have increased odds of being obese in all income groups (for example, OR= 1.51, 95% CI: 1.18-1.93 in 0-199% FPL and OR= 1.47, 95% CI: 1.00-2.18 in ≥400% FPL), after adjusting for sociodemographic factors. Further, interaction models suggest that the impact of CSRs on obesity is weaker among higher-income Black adolescents than those among higher-income White adolescents.

**Conclusion:** Income has a graded impact on the association between psychosocial risk factors and adolescent obesity in different racial/ethnic groups. Hence, low-income racial-ethnic minority children are at higher risk of obesity.

**Keywords:** Race-ethnicity, Disparity, Obesity, Cumulative Social Risk (CSR)

## Exclusive Breastfeeding Practices and Policy Landscape Analysis in Bangladesh: Where We Stand? (5#112)

*Kinkar Ghosh<sup>1</sup>, Reaz Mobarak<sup>2</sup>, Jahangir Alam<sup>2</sup>*

1. Bangladesh Sishu Hospital & Institute, Dhaka; <sup>2</sup>Bangladesh Sishu Hospital & Institute, Dhaka

**Presenter:** Kinkar Ghosh; Email: [kinkarghosh32@gmail.com](mailto:kinkarghosh32@gmail.com)

### Abstract

**Background:** Exclusive breastfeeding (EBF) practices contribute to overall well-being and development of children. The EBF rate is low in Bangladesh. It's a significant problem not only in Bangladesh but in other developing nations.

**Objective:** To observe the scenario of exclusive breast feeding (EBF) practices in Bangladesh, existing policy analysis of health care settings and development of effective strategies to raise and sustain EBF practices.

**Methods:** A descriptive cross-sectional study was conducted among 32 government health care facilities of Bangladesh for five months. Multi stage stratified sampling design was followed for health care facilities and lactating mothers who visited health care facilities having a child with below one year of age and institutional head and service provider of the health care settings were chosen by purposive sampling.

**Results:** Among 320 respondents, socio demographic characteristics of respondents revealed 92.2% were housewives; most of them had primary to higher secondary level education. Two thirds of mothers exclusively breastfed their child (74%) and knew about benefits of colostrum (78.1%). Majority (95%) of the mothers visited for ANC check-up, during this time above 50% of the mothers were counseled, explained about position and attachment of EBF. But only half of the mothers were counseled about EBF (59.4%) during PNC check-up and had knowledge about stored milk (49.1%). About half of the health care providers (46.9%) got government training in breastfeeding counseling and 59% of the health care workers don't use counseling cards but above 80% family members were counseled and took feedback from mothers about counseling. Almost half of the service providers had no idea about the breast milk substitute act. Among all, 87.5% health managers disseminated the importance of EBF on coordination or other staff meetings. In health care settings, 68.8% were taking adequate time for counseling with feedback and near about 80% facilities had waiting rooms and maintained privacy in breast feeding rooms.

**Conclusion:** Foster multidisciplinary teamwork, continuous leadership support, and enforce national or institutional policies, focusing on the National Breastfeeding Policy and Regulation of Breast Milk Substitutes Act can increase the practices.

**Keywords:** Exclusive breast feeding, Service provider, Health manager, Policy.

## Symptomatic urinary tract infection during pregnancy and beyond: a cross-sectional study in Baliakandi Upazila of Bangladesh (5#33)

*Esrat Jahan<sup>1</sup>, Lutful Kader Riyad<sup>1</sup>, Ahmed Ehsanur Rahman<sup>1</sup>*

1. Maternal and Child Health Division, International Centre for Diarrhoeal Disease Research, Bangladesh

**Presenter:** Esrat Jahan; Email: [esrat.jahan1@icddr.org](mailto:esrat.jahan1@icddr.org)

### Abstract

**Background:** Urinary tract infections (UTI) are common during pregnancy and can have devastating outcomes if not diagnosed and treated promptly. There are limited studies exploring the prevalence of UTIs during and after pregnancy in community settings in low-and-middle income settings.

**Objective:** This study aimed to report the prevalence of UTI symptoms and explore the predictors and outcomes of UTI among pregnant women residing in a rural area in Bangladesh.

**Methods:** Study participants were recruited from Baliakandi Upazila of Bangladesh. A total of 903 women (delivered within the last 3 months) were included and a cross-sectional study was conducted. Questions relating to symptoms of UTI were asked. UTI was classified into two types- cystitis and acute pyelonephritis. Basic descriptive analysis was performed and logistic regression modelling was used for prediction and outcomes measurement.

**Results:** Prevalence of overall UTI symptoms was 23%. Majority of the women had moderate (42%) followed by severe symptoms (30%). Advanced age (35-39 years), multiparity, low education level (primary) were predisposing factors to UTI symptoms in both the antepartum and postpartum period. Normal vaginal delivery was an additional risk factor for postpartum UTI symptoms. Women with hypertension, diabetes, kidney disease, arthritis or any cancer were at an increased risk of UTI symptoms at any time. Moreover, women with UTI symptoms in preceding trimesters had a significant fold increased risk of UTI symptoms in subsequent trimesters or postpartum period.

**Conclusions:** One in four women suffered from UTI symptoms during pregnancy or in the postpartum period in a rural cohort in Bangladesh. This is alarming and priority needs to be given in early diagnosis and meticulous treatment of this infection at its early stages to prevent complications.

**Keywords:** Urinary tract infection, Pregnancy, Low-and-middle income country

## Navigating maternal health: Insights into pregnancy and postpartum care in Northern Bangladesh (7#37)

*Farhana Yasmin<sup>1</sup>, Muhammad Zubayer<sup>1</sup>*

1. Department of Community Medicine, Rajshahi Medical College

**Presenter:** Farhana Yasmin; Email: f.yasmin5115@gmail.com;

### Abstract

**Background:** This study explores maternal healthcare utilization in Northern Bangladesh, focusing on antenatal and postnatal care. The objective was to identify healthcare trends, influencing factors, and barriers, aiming to provide insight into improving maternal health outcomes in this culturally diverse region.

**Methods:** A community-based cross-sectional descriptive study was conducted at Rajshahi Medical College from August to October 2023. A sample of 515 pregnant and postnatal women was selected through purposive sampling. Data were collected using a pre-tested semi-structured questionnaire and analyzed using IBM SPSS Version 24.0. Women in antenatal and postnatal periods provided informed consent, with exclusion criteria covering those unable to consent. Statistical significance was set at  $P \leq 0.05$ .

**Results:** The average age of participants was  $24.81 \pm 4.81$  years, with 61.2% aged 18-25 years. Most women (93.2%) were Muslims, and 58.6% had secondary education. Among participants, 76% opted for hospital births, 18.8% used NGO/private clinics, and 5.1% had home births. Postnatal care was utilized by 86% of women, primarily at government hospitals (80.9%). Satisfaction with antenatal care was high, with 73.3% expressing contentment. Financial constraints (59.4%) emerged as the leading barrier to antenatal care, while high costs (43.9%) and lack of awareness (19.5%) impeded postnatal care. Emotional support during pregnancy was reported by 70.9%, while 34.2% experienced discomfort during healthcare encounters. Notably, 27.4% reported complications during delivery, emphasizing the need for improved healthcare access and quality.

**Conclusions:** The study highlights the need for targeted interventions to improve maternal health access in Northern Bangladesh. Financial barriers, family support, and awareness gaps were significant factors influencing healthcare utilization. These findings emphasize the importance of culturally sensitive strategies to improve maternal healthcare services and outcomes.

**Keywords:** Maternal health, Antenatal care, Postnatal care, Northern Bangladesh, Healthcare barriers

## Addressing rising cesarean section rates in Lower–Middle–Income Countries: A Case study of Bangladesh (10#54)

*Monaemul Islam Sizar and Dr. Mamunur Rashid*

Open Development and University of Gavle, Sweden

**Presenter:** Monaemul Islam Sizar; Email: sizar.monaemul@gmail.com

### Abstract

**Background:** Cesarean section (CS) deliveries have sharply increased worldwide, from 16 million in 2000 to 29.7 million in 2020. This trend is particularly concerning in low- and middle-income countries (LMICs) in Eastern and Southern Asia and Northern Africa. In Bangladesh, CS rate has surged by 27% over the past decade, from 18% in 2011 to 45% in 2022—a rate much higher than neighboring countries. According to the WHO, the acceptable CS rate is between 10% and 15%, making Bangladesh's rate three times higher than recommended, posing serious risks to maternal and newborn health, and the healthcare system.

**Objective:** The present study aims to explore the primary reasons for the dramatic increase in CS delivery in Bangladesh and proposes evidence-based recommendations for reducing the rate of unnecessary CS.

**Methods:** The study is based on a thorough literature review and followed an extensive search of global and regional studies to understand C-section trends and key factors. A focused review of Bangladeshi literature was then conducted to identify the primary drivers behind the significant rise in C-section rates over the past two decades. Conclusions are derived from an in-depth analysis of 20 recent and highly relevant articles.

**Results:** The high rate of CS delivery in Bangladesh is largely driven by profit motives, with private hospitals encouraging procedures over physical examinations and external agents pressuring public hospitals to transfer patients, despite existing CS protocols. It is also found that physicians and family breadwinners often decide on cesarean deliveries, leaving pregnant women unaware of the risks, while highly educated couples are more likely to prefer CS due to fewer economic barriers and insufficient awareness of its potential complications. Apart from these, a combination of sociocultural factors and medical factors contributes to this increasing CS rate.

**Conclusions:** Given the alarming rise in CS rates and its negative impact on families and the healthcare system, it is pivotal to understand medical necessity, patient autonomy, and respectful maternity care to restrict the unnecessary CS. Further research, particularly qualitative studies, is needed to explore the perspectives of healthcare providers, pregnant women, families, and community norms that influence CS rates.

**Keywords:** Cesarean section, Pregnancy, Maternal health, Lower-middle-income countries, Bangladesh.

## Exploring Socioeconomic Dimensions of Obstetric Fistula in Bangladesh: A SDG-Centric Statistical Approach (#11)

Sadia Afrin<sup>1\*</sup>, Tathapi Mondal<sup>1</sup>, Md. Mortuza Ahmmed<sup>2</sup>

1. Department of Computer Science, American International University-Bangladesh, Dhaka
2. Department of Mathematics, American International University-Bangladesh, Dhaka

**Presenter:** Sadia Afrin; Email: 22-49254-3@student.aiub.edu

### Abstract

**Background:** In Bangladesh obstetric fistula is an important women's health problem that comes with childbirth that caused because of prolonged or blocked labor. This concern is usually related to various factors of socioeconomics. This study explores the dimensions of socioeconomics and aims to prevent obstetric fistula and achieve SDG targets.

**Methods:** Collecting data from UNICEF, UNFPA, Bangladesh Bureau of Statistics, and World Bank for the period 2010 to 2022, five factors were evaluated concerning obstetric fistula prevalence. To be specific the dimensions are Poverty Rate, Early Marriage, Skilled Birth Attendance, Access to Health, and Health Expenditure. Using the data, statistical analysis was evaluated to specify the associations between fistula prevalence and socioeconomic determinants.

**Results:** The analysis shows a reduction in the determinants related to *Obstetric Fistula* from 2010 to 2022. Decline in obstetric fistula was observed for per 100,000 women aged between 15 to 49 years old (60 in 2012 to 45 in 2022). The poverty rate has also gradually decreased (31.5% in 2010 to 23.6% in 2022). Early marriage percentage was observed for aged between 20 to 24 years old women (65% in 2010 to 51% in 2022). Additionally, a sudden improvement was noticed in skilled birth attendance (21% in 2010 to 56% in 2022). Accordingly, enhancement in healthcare facilities was observed a little (35% in 2012 to 42% in 2022). Percentage of health expenditure was reduced over years (2.8% in 2010 to 2.2% in 2022).

**Conclusions:** The results illustrate the obstetric fistula outcomes from socioeconomic perspectives. The combination of reduced poverty and early marriages, and a working improvement of health facilities and professional assistance in delivering have brought up a notably positive result. This research suggests that obstetric fistula prevalence might be reduced through attention to these socioeconomic determinants.

**Keywords:** Obstetric fistula, Socioeconomic, SDG, Bangladesh.

## **Breaking sociocultural barriers: A holistic approach to advancing sexual and reproductive health and rights education for adolescents in Bangladesh (4#252)**

*Presenter: Debjyoti Sarkar*

North Western University, Khulna

Email: debjyotiraja@gmail.com

### **Abstract**

**Background:** Sexual and Reproductive Health and Rights (SRHR) education is crucial for young people's healthy development, providing them with the knowledge and skills to make informed decisions about their bodies and reproductive health. In Bangladesh, however, SRHR education faces significant challenges due to persistent cultural norms and religious fundamentalism that view discussions on sex and sexual health as taboo.

**Objective:** This study examines the limitations hindering effective SRHR education in Bangladesh.

**Methods:** The imitations hindering effective SRHR education in Bangladesh has been evaluated by analyzing existing laws, policies, and their implementation gaps. It examined the role of schools, adolescent-friendly health services, the exclusion of sexual health from curricula, and stereotypes surrounding sexuality. The research also assesses Bangladesh's alignment with international human rights commitments regarding adolescents' right to health and education.

**Results:** The findings highlight a significant gap between SRHR policy goals and their execution, underscoring the need for policy reforms. Key recommendations include the development of more specific instructions for educators, improved health care services, and a community-level acceptance of SRHR education. The research calls for national policies to be more inclusive and aligned with international SRHR frameworks while accounting for Bangladesh's sociocultural context.

**Conclusion:** The study advocates for comprehensive, inclusive, and rights-based SRHR education in Bangladesh. This approach should bridge geographical and cultural barriers, empowering adolescents with the knowledge to make informed decisions about their sexual and reproductive health. The proposed changes aim to direct policies towards equitable and simple SRHR education for all.

**Keywords:** SRHR education, Adolescents, Policy reform, Cultural barriers, Reproductive health rights, Bangladesh

## Knowledge and Awareness of Safe Motherhood (Antenatal and Postnatal Care) among Newly Married Rural Women in Bangladesh1 (4#30)

*Shankri Mondol, Biplab Halder*

1. NIPSOM; 2. Manikganj Nursing College

**Presenter:** Biplab Halder; Email : nirabh.4@gmail.com;

### Abstract

**Background:** Over 300 million women in developing countries suffer from illnesses related to pregnancy and childbirth, with around 50 million pregnant women globally experiencing morbidity annually. This study aimed to assess the knowledge and awareness of safe motherhood, specifically Antenatal Care (ANC) and Postnatal Care (PNC), among newly married rural women in Bangladesh.

**Methods:** A cross-sectional study was conducted between January and December 2023 in two rural areas of Mymensingh District (Paranganj and Shumvuganj). The study included women married for at least 6 months to one year, aged 18 or older. Data were collected through face-to-face interviews using semi-structured questionnaires, involving 120 participants.

**Results:** The mean age of respondents was 19 years (SD  $\pm$ 1.2). Most respondents (68.3%) were Muslim, and 62.5% belonged to nuclear families. Educational levels varied, with 40.8% having primary education, and 52% were housewives. The majority (70%) married at 18 years old. Age of respondents significantly correlated with postnatal care knowledge ( $p=0.000$ ). ANC knowledge was associated with age ( $p=0.005$ ), age at marriage ( $p=0.002$ ), religion ( $p=0.005$ ), occupation ( $p=0.003$ ), and educational status ( $p=0.001$ ). A significant 88.3% of respondents had poor knowledge of ANC, while 11.7% had good knowledge. Alarmingly, all respondents (100%) had poor knowledge about PNC.

**Conclusion:** While most respondents received antenatal care services, their understanding of postnatal care was critically low. These findings suggest the need for improved education on the timing, frequency, and content of both ANC and PNC visits to ensure comprehensive maternal healthcare.

**Keywords:** Safe Motherhood, Antenatal Care, Postnatal Care, Rural Women, Bangladesh

## Assessment of pregnant women's level of knowledge and practices about pregnancy and prenatal care attending a tertiary care hospital (2#9)

*Aeysha Begum<sup>1</sup>, Sheuly Akter<sup>1</sup>, Nasrin Nigar<sup>1</sup>, Parvin Rahman<sup>1</sup>*

1. Khawja Yunus Ali Medical College, Bangladesh

**Presenter:** Dr. Aeysha Begum; Email: dr.aeysha.begum@gmail.com;

### Abstract

**Background:** Maternal mortality remains high, particularly in impoverished countries like Bangladesh. Pregnancy may go through serious health issues like anemia, eclampsia, hypertension, genito-urinary infections, neural tube disorders, low birth weight, and fetal death. Pregnancy challenges can be prevented by maintaining women's health and providing them with adequate information.

**Objective:** The objective of this research is to assess pregnant women's level of knowledge and practices about pregnancy and prenatal care.

**Methods:** This cross-sectional study was conducted from July 2023 to June 2024 at the Obs & Gynae outpatients' department of Khawja Yunus Ali Medical College Hospital, Enayetpur, Bangladesh, using a closed-ended questionnaire that included the participants' demographic details, parity status, knowledge, and practices regarding pregnancy and their prenatal care.

**Results:** In this study of 500 pregnant women, we found that the majority were between 20-30 years, with 88% in their third trimester. More than half were aware of pregnancy symptoms such as fatigue, missed periods, anorexia, nausea, vomiting, abdominal pain, and an increase in breast size. However, 69.3% were unaware of rubella, and 60% were unaware of anemia symptoms. 48.4% knew high blood pressure and convulsions as features of eclampsia. Most of the pregnant women were aware of preventing constipation. 70.6% were unaware of the impact of urinary tract infections, gum, and tooth problems on pregnancy. Obstetricians were the source of information for 91.9% of the women, while 71.9% learned it from their mothers. 44% of participants mentioned that an undue increase in weight during pregnancy might harm the unborn child's health. Folic acid supplementation was used in 13.5% of women, and 88.3% kept their breasts clean.

**Conclusion:** The prenatal care centers should enhance counseling on eclampsia, anemia, and rubella, emphasize folic acid supplements, and encourage pregnant women to participate in prenatal healthcare discussions.

**Keywords:** Antenatal checkup, Knowledge, Practice, Pregnancy.

## **Knowledge of Neonatal Resuscitation Among Service Providers in Primary and Secondary Healthcare Facilities of Narayanganj District (4#29)**

*Presenter: Jannatul Mehjabin Juhy*

Directorate General of Health Services (DGHS), North South University

Email: jannatulmehjabin0455@gmail.com;

### **Abstract**

**Background:** Adequate knowledge of newborn resuscitative procedures is crucial for early diagnosis and suitable management. However, data on healthcare professionals' knowledge about neonatal resuscitation in Bangladesh are limited.

**Objective:** To assess the level of knowledge of neonatal resuscitation among service providers in primary and secondary healthcare facilities of Narayanganj district, Bangladesh.

**Methods:** This cross-sectional study included 140 healthcare providers (doctors, nurses, midwives) involved in maternal and neonatal care, selected using stratified random sampling. Data were collected through a pretested structured questionnaire. Ethical approval was obtained from the Institutional Review Board (IRB) of North-South University. Descriptive statistics and multivariate logistic regression were used for data analysis.

**Results:** Participants' ages ranged between 25 to 35 years (50%), >35 years (32.1%), and <25 years (17.9%) with a mean age of 30.53±5.92 years. The cohort consisted of 57.2% midwives, 30.7% nurses, and 12.1% doctors. Additionally, 64.3% worked in clinics and 35.7% in hospitals. Experience levels were <5 years (52.1%), 5-10 years (17.9%), and >10 years (30%). Good knowledge of neonatal resuscitation was found in 52.7% of participants, while 47.9% had poor knowledge. Factors significantly associated with knowledge included place of work, experience, and training on neonatal resuscitation.

**Conclusion:** The overall knowledge of neonatal resuscitation was insufficient. Enhancing competency through simulation-based in-service training, refresher courses, supportive supervision, and mentorship is recommended to improve providers' capability in neonatal resuscitation.

**Keywords:** Neonatal resuscitation, Healthcare providers, Maternal and neonatal care, Primary healthcare.

## **Hygiene knowledge and behaviour among female garment workers of Bangladesh: a cross-sectional study in Urban setting (6#181)**

*Joynal Abedin Khan<sup>1</sup>, Nasrin Akter<sup>1</sup>, Bilkis Banu<sup>2</sup>, Sujana Haque Chowdhury<sup>1</sup>, Sarder Mahmud Hossain<sup>1</sup>*

1. Department of Public Health, Northern University Bangladesh, Dhaka, Bangladesh;
2. Department of Public Health, State University Bangladesh

**Presenter:** Joynal Abedin Khan; Email: joynulabedinmitul@gmail.com

### **Abstract**

**Background:** Poor hygiene knowledge and practices play major roles in the increased burden of communicable diseases in developing countries. This study was undertaken to delineate the level of knowledge and practices on personal hygiene among female garment workers of Dhaka city in Bangladesh.

**Methods:** This cross sectional study was conducted on 500 female garments workers working in four different garments in Dhaka, Bangladesh. Data were collected by face-to-face interview method using semi-structured questionnaire included information on socio-demography, different components of personal hygiene such as taking bath, brushing teeth, washing feet, washing/ changing cloth, washing hair by soap/ shampoo, trimming nail and washing hand. Data were analysed by univariate and multivariate statistics.

**Results:** A large proportion of respondents found with adequate knowledge (K) and practice (P) in taking bath (k: 88%, P: 88%); brushing teeth (k: 97%, P: 100%); washing feet (k: 94%, P: 94%); wash/change cloth (k: 84%, P: 82%) and trimming nail (k: 82%, P: 83%) and knowledge of the subjects are significantly associated with ideal practice of all components ( $p=0.01$ ). Surprisingly, all the respondents found inappropriate knowledge and practice on hand-washing technique though they used appropriate materials. Predictors identified according to Age, BMI, education and marital status of respondents were significantly associated with taking bath, washing feet, cloth, hair and hand.

**Conclusions:** The study findings emphasized the need for more hand-washing as well as personal hygiene education among female garments workers. Successful implementation of comprehensive health hygiene intervention programs which substantially attenuate the transmissible disease burden among female garment workers.

**Keywords:** Knowledge, Personal hygiene, Behaviour, Female garment worker, Bangladesh, Urban setting.

## **Cognitive Testing and Piloting of the Bangla Version of the Washington Group Short Set Questionnaire on Functioning among Adolescent Girls and Women with Disabilities in Selected Sub-districts of Bangladesh (4#175)**

*Munzur E Murshid<sup>1</sup>, Sanmei Chen<sup>1</sup>, Namira Rahman Era<sup>2</sup>, Yoko Shimpuku<sup>1</sup>, Md Moshir Rahman<sup>1</sup>, Md Ziaul Islam<sup>3</sup>*

1. Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan;
2. Maternal and Child Health expert, Dhaka, Bangladesh;
3. Director, National Institute of Preventive and Social Medicine, Dhaka, Bangladesh.

**Presenter:** Munzur E Murshid; Email: d221843@hiroshima-u.ac.jp

### **Abstract**

**Background:** This study focuses on the cognitive testing and piloting of the Bangla version of the Washington Group Short Set Questionnaire on Functioning among adolescent girls and women with disabilities in selected sub-districts of Bangladesh. The Washington Group on Disability Statistics developed the questionnaire as a tool to assess the functioning and disability status of individuals. The adaptation of this questionnaire to Bangla is crucial for capturing accurate data on the experiences of adolescent girls and women with disabilities in Bangladesh.

**Methods:** The research employs a two-phase approach, starting with cognitive testing to ensure the linguistic and cultural relevance of the translated questionnaire. This phase involves engaging with a sample of the target population to assess the comprehension, clarity, and appropriateness of the questions. Subsequently, a pilot study was conducted in selected sub-districts to evaluate the feasibility and validity of the Bangla version of the Washington Group Short Set Questionnaire on Functioning in real-world settings. Both of the tests were conducted in March 2023.

**Results:** There were different types of participants with different types of disabilities. Information processing, meaning, understanding the questions, thinking, and answering speed or time were different between groups, even though they were different from person to person. The initial assessments indicate strong consistency in responses. Participants demonstrated a favorable response rate, indicating potential effectiveness for broader implementation.

**Conclusion:** In the current study, comprehensiveness, clarity, feasibility and validity of the Bangla version of the Washington Group Short Set Questionnaire on Functioning were ensured. In the first phase, comprehensiveness, clarity and in the second phase, feasibility and validity were tested. Researchers and clinicians may rely on our accurate and validated Washington Group Short Set Questionnaire on Functioning translation into Bangla when working with adolescent girls and women with disabilities.

**Keywords:** Cognitive test, pilot test, WG-SQ, Washington group, short set questionnaire, adolescent with disabilities, women with disabilities, Bangladesh

## **Knowledge of neonatal danger signs among spouses of primigravida women (8#48)**

*Ashrafun Nahar<sup>1</sup>, Dr. Nasreen Farhana<sup>1</sup>*

National Institute of Preventive and Social Medicine

**Presenter:** Ashrafun Nahar; Email: anannyajmc@gmail.com;

### **Abstract**

**Background:** Early detection of neonatal illness is crucial for improving newborn survival. To reduce neonatal mortality and morbidity, parental knowledge of neonatal danger signs is vital.

**Objective:** This study aimed to assess knowledge of these signs among spouses of primigravida women.

**Methods:** A cross sectional study was conducted from 1<sup>st</sup> January to 31<sup>st</sup> December 2023, with 350 spouses enrolled following the defined criteria. Convenience sampling was used to acquire data from three hospitals with antenatal corners in Jessore. Data were collected using a pretested structured questionnaire based on the WHO program handbook with a Likert scale grading. Good knowledge was assumed for spouses who scored above the mean and poor knowledge for those who scored below. Statistical analysis was performed using SPSS version 22 and nonparametric tests with a p-value of less than 0.05 to determine significant associations.

**Results:** In this study, among 350 respondents, more than half (58%) of them had good knowledge of neonatal danger signs, with a mean of  $17.91 \pm 10.28$ , and the highest 37% of them belonged to the age group of 26–30 years. About 60% of the respondents strongly agreed to poor feeding, fast breathing, and diarrhea as signs, whereas birth weight <2500 gm was recognized poorly (15.4%). Professional health workers were the most common source of information for 69% of spouses, and about 57% regularly accompanied their wives to antenatal visits. The odds of having good knowledge was positively associated with spouses age (AOR=1.92, 95% CI 1.094 to 3.367), educational status (AOR=4.931, 95% CI 2.924 to 3.367) and time of care seeking (AOR= 7.641, 95% CI 4.144 to 14.087).

**Conclusion:** Since the problem is of public health importance in developing countries, particularly in Bangladesh, further efforts are needed to create awareness for both parents at ANC corners to reduce neonatal mortality.

**Keywords:** Knowledge, Neonates, Neonatal danger signs, Spouses.

## **Knowledge about selected aspects of Type 2 Diabetes Mellitus among the adult patients attending outpatient departments of Adhunik Zilla Hospital, Joypurhat, Bangladesh (30#193).**

*Hafiza Arzuman<sup>1</sup>, Abdullah Al Mahfuz Ansari<sup>1</sup>, Wahida Jahan<sup>2</sup>, Nahid Sultana<sup>1</sup>, Towhida Tasnim<sup>1</sup>, Md. Azfarul Habib<sup>1</sup>*

1. Department of Community Medicine and Public Health, TMSS Medical College Bogura, Bangladesh
2. Department of Pharmacology, TMSS Medical College Bogura, Bangladesh

**Presenter:** Abdullah Al Mahfuz Ansari; Email: mahfuzansari909@gmail.com

### **Abstract**

**Background:** Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder in which prevalence has been increasing silently and poses a major public health problem all over the world.

**Objective:** To explore the level of knowledge about selected aspects of Type 2 Diabetes Mellitus among the adult patients attending the outpatient department of Adhunik Zilla Hospital, Joypurhat, Bangladesh.

**Methods:** A descriptive cross sectional study was conducted among (n- 434) adult patients aged 30-65 years irrespective of gender. Data was collected by a pre-tested interviewer administered structured questionnaire having five point Likert scale and the sampling technique was purposive.

**Results:** Among 434 respondents (241, 55%) were female and (193, 45%) were male, majority (155, 36%) were in the age group of 30-39 years, educational qualification were up to class V (195, 45%), occupation wise they were in farmer, beggar, rickshaw puller, hawker group (243, 56%) and their family's monthly income (232, 54%) was <10000 taka. As per our scoring scheme, the respondents' knowledge level on general area and in risk factors of Type 2 DM was average (15/24, SD 1.29) and (16/24, SD 1.24) respectively, knowledge level about sign symptoms was good (26/36, SD 1.21) and knowledge level about complications was average (22/36, SD 1.31). The overall knowledge level in Type-2 Diabetes Mellitus was good as per our scoring scheme, but the score was at the lower level of good knowledge in the scoring scheme. (81/120, SD 0.915).

**Conclusion:** The hospital based study revealed the knowledge level in different areas of Type 2 Diabetes Mellitus is average to good among adult patients. Knowledge and health literacy is vital in the epidemiological change of any disease. For preventing the emergence of risk factors, a community level awareness development programme is required.

**Keywords:** Type-2 Diabetes Mellitus, Knowledge, Adult patient

## **Knowledge, attitude and practice of safe delivery among rural women at Keranigonj upazila in Bangladesh (40#178)**

Begum N<sup>1</sup>, Jahan H<sup>2</sup>, Hossain A<sup>3</sup>

1. Department of Community Medicine, Sir Salimullah Medical College, Dhaka.
2. Associate Professor of Community Medicine, Army Medical College, Bogura
3. Lecturer of Community Medicine, Sir Salimullah Medical College, Dhaka.

**Presenter:** Dr. Nasima Begum; Email: dr.hasnajahan@gmail.com

### **Abstract**

**Background:** Pregnancy and childbirth are essential for the survival of an entire human population. But every day almost 800 women die from preventable causes related to pregnancy and delivery. Nearly 95% of all maternal deaths occurred in low and lower-middle-income countries. In Bangladesh, the maternal mortality ratio (90.8/100,000 live births) is still high. Adequate knowledge and practices of safe delivery can save the lives of women and newborns.

**Objective:** To assess knowledge, attitude and practice of safe delivery among rural women at Keraniganj Upazila in Bangladesh.

**Methods:** This descriptive cross-sectional study was carried out from June to November, 2023 among 300 rural married women of childbearing age (15-49 years) of Keraniganj Upazila. Data were collected purposively using a semi-structured questionnaire through face-to-face interviews.

**Results:** Most (51.3%) respondents were between (25-34) years. The majority (80.7%) knew about safe delivery. They knew about specific danger signs of pregnancy including convulsion and swollen feet (57.3%), headache (42.7%), blurring of vision (38.7%), and vaginal bleeding (36%). Regarding birth preparedness, they knew about the place of delivery (54%), skilled birth attendants (36%), and arrangements of finances (53%), blood donors (25.3%), transport (17.7%). Most (52.3%) respondents gave birth in government hospitals, believing hospital delivery was better than home delivery. Nearly 90% of women attended at least one antenatal care (ANC) and 65% postnatal care (PNC) visit. The majority (84.7%) were immunized against tetanus.

**Conclusion:** The majority of the respondents had general knowledge about safe delivery. However, most were not aware of the danger signs of pregnancy and birth preparedness. Most of them thought that hospital delivery was better. The study's findings will serve as a foundation for future research and planning in safe delivery practices. Leveraging innovation for a resilient health system can play a significant role in addressing safe delivery practices.

**Keywords:** Attitude, Knowledge, Practice, Rural women, Safe delivery.

## **Knowledge about Management of Type 2 Diabetes Mellitus and Status of Random Blood Sugar among the adult patients attending outpatients of District Hospital, Joypurhat, Bangladesh (29#192)**

*Md. Azfarul Habib, S.M Mejba Ul Hoque Kutbul Zannat, Tahsina Nasrin., Hafiza Arzuman*

Department of Community Medicine and Public Health TMSS Medical College Bogura, Bangladesh

**Presenter:** Dr.S M Mejba Ul Hoque; Email: mejbaulhoque555@gmail.com

### **Abstract**

**Background:** Knowledge about the management of Type 2 Diabetes Mellitus (T2DM) is an essential preventive strategy. Despite of many visible efforts in creating public awareness, its prevalence continues to rise posing a concern in public health

**Objective:** To explore the level of knowledge about management of Type 2 Diabetes Mellitus and status of Random Blood Sugar level among the adult patients attending outpatient departments of Adhunik District Hospital, Joypurhat, Bangladesh.

**Methods:** A descriptive cross sectional study was conducted among adult patients aged 30-65 years irrespective of gender. Knowledge based data was collected by a pre-tested interviewer administered structured questionnaire and Glucometer with strips were used for measuring Random Blood Sugar. Purposive sampling technique was used and the sample size was 434.

**Results:** Out of 434 respondents (241, 55%) were female and (193, 45%) were male, majority (155, 36%) were in the age group of 30-39 years, their educational qualifications were mainly up to class V (195, 45%). the majority (334, 76%) of them were in the day worker category (farmer, beggar, rickshaw puller, hawker), (232, 54%) respondents' monthly family income was <10000 taka. Their physical work nature was mainly moderate (233, 54%). As per our scoring scheme, the respondents' knowledge in management of Type-2 DM was good (26/36, SD 1.29). As per American Diabetic Association guidelines, (318, 73%) respondents' Random Blood Sugar was within normal level. (64, 15%) of them were pre-diabetic and the rest of them were Diabetic (50, 12%).

**Conclusion:** The small scale hospital based study revealed the knowledge level about management of Type 2 Diabetes Mellitus and status of the Random Blood Sugar among adult patients. For enhancing diabetes detection and prevention, community level intervention is required focusing on diabetes education focusing on healthy lifestyle and dietary habits.

**Keywords:** Knowledge, Management, Type 2 Diabetes Mellitus, Random Blood Sugar, Adult patients.

## **Eating attitude and its associated mental health problems among the adolescents in Dhaka City, Bangladesh (1#22)**

*Mst. Mahfuza Akter<sup>1</sup>, Md.Nazmus Sakib<sup>1</sup>, Ziad Rahman Bhuiyan<sup>1</sup>, Md.Jubayer Hossain<sup>1</sup>*

1. Population Health Studies Division, Center for Health Innovation, Research, Action and Learning Bangladesh, Dhaka, Bangladesh

**Presenter:** Mst. Mahfuza Akter; Email: mahfuza.chiral.bd@gmail.com

### **Abstract**

**Background:** This study investigated the distribution and association between eating disorders and mental health problems among school and college students in Bangladesh.

**Methods:** The data were obtained from a cross-sectional study, using the census method with 1185 students from selected schools (10) and colleges (2) in Dhaka City 2024. The Eating Attitudes Test questionnaire (EAT-26) was used to investigate ED symptoms, and the Depression Anxiety and Stress Scales (DASS-21) were used to measure the emotional states of depression, anxiety, and stress. The Chi-squared test was performed to estimate the proportional difference, and the binary logistic regression model was used to examine the association between EDs and mental health problems. Data analysis was conducted using R programming (version 4.2.0). In all analyses, a p-value of <0.01 was considered statistically significant.

**Results:** One out of three (35.3%; 99% CI, 31.71-38.89) students had ED. According to the binary logistic regression, anxiety (severe  $\beta=0.80$  and extremely severe  $\beta=0.91$ ) and stress (severe  $\beta=0.63$  and extremely severe  $\beta=1.4$ ) were significantly associated with ED risk among the participants ( $p<0.01$ ). The participants' sociodemographic variables, such as field of study, mother's education status, and BMI, were significantly different from ED scores.

**Conclusion:** This study revealed that EDs were significantly associated with mental health. Therefore, prevention and health promotion programs should be implemented for mental health and to reduce the incidence of eating disorders. Further intervention programs and longitudinal cohort studies incorporating large and diverse samples of Bangladeshi school and college students are needed to determine the causal pathways of ED risk.

**Keywords:** Eating disorder, Mental health, High school & college students, Adolescents.

## **Stress-Related Factors at Workplace among Health Care Providers in Bangladesh (1#6)**

*Kazi Rakibul Islam<sup>1</sup>, Faria Haque Farin<sup>1</sup> and Md. Ibrahim Islam Rumi<sup>1</sup>*

1. R. P. Shaha University, Jahurul Islam Medical College, Saic Institute of Medical and Technology.

**Presenter:** Dr. Kazi Rakibul Islam; Email: rakibselective@gmail.com

### **Abstract**

**Background:** Job stress brought about hazardous impacts not only on health care provider's health but also on their abilities to cope with job demands. This study was carried out to determine the level of occupational stress among health care providers and associated risk factors in selected hospitals.

**Methods:** It was a descriptive type of cross-sectional study conducted over a period of four months. The sample size for the proposed study was 174. Two public and private hospitals from Dhaka city were selected purposively to select the sample. All clinical nurses and health service providers who worked more than three years on regular monthly payment were involved in this study. Non randomized purposive sampling technique was applied. A semi-structured, pre-tested and modified questionnaire was used to collect the data. All the data were entered and analyzed by using Statistical packages for social science (SPSS) software version 24.0 (Chicago).

**Results:** Average length of service of the health professionals was 14.74 years ( $SD \pm 9.133$ ) and average working hours per day was 7.89 ( $SD \pm 2.332$ ) and 50.0% of the health professionals worked 7 hours per day. 35.1% of the Health Professionals had moderate stress, 28.2% had no stress, 17.2% had severe stress, 15.5% had mild stress and 4% had extreme stress. Mean score of overall occupational stress was  $31.64 \pm 15.423$  indicating moderate occurrence of stress among health professionals. The overall prevalence of occupational stresses among health professionals was 52.9% i.e. more than half of the health professional's experienced job-related stress.

**Conclusions:** Health professionals' occupational stressors were poor doctor's attitude, posting in busy departments (emergency/ICU), inadequate pay, too much work, and so on. Thus, hospital managers should initiate strategies to reduce the amount of occupational stress and should provide more support to the Health Professionals to deal with the stress.

**Keywords:** Health care providers, Workplace, Occupational stress, Health education.

## **Gender Differences in Mental Health Help-Seeking Behavior in Bangladesh: Findings from an Online Survey (#4)**

*Zunayed Al Azdi*

ARK Foundation, Bangladesh; Email: zunayedazdi@gmail.com

### **Abstract**

**Background:** Mental health disparities persist as a pressing public health concern globally. Gender disparities in mental health are evident, with women disproportionately affected by conditions such as depression and anxiety. Despite this need, studies indicate that women are less likely to seek mental health care compared to men.

**Objective:** This study aims to investigate gender differences in mental health help seeking behavior in Bangladesh.

**Methods:** A cross-sectional online survey was conducted from October 15 to 30, 2021, targeting individuals with perceived mental health problems via the organization's Facebook page. Data (n=3,031; women: 2,140, Men: 891) were collected using the JotForm online survey tool and analyzed using descriptive statistics, bivariate analyses, and multinomial logistic regression.

**Results:** Most participants were female (70.6%), aged between 18 and 34 years (87.3%), and from urban areas (85.4%). Overall, 28.4% received non-professional help, with females at 30.9% and males at 22.3%. Additionally, 22.9% received professional help, with females at 20.8% and males at 28.1%. Significant gender disparities were observed in mental health help-seeking behavior. While females had higher odds of seeking non-professional support (OR: 1.49, 95% CI: 1.21-1.84, p-value: <0.001), they had lower odds of obtaining professional assistance compared to males (OR: 0.70, 95% CI: 0.56-0.86, p-value: 0.001). Factors such as stigma, financial constraints, and marital status significantly influenced help-seeking behaviors.

**Conclusions:** This study contributes to understanding gender disparities in mental health care utilization in Bangladesh, underscoring the need for gender-sensitive approaches in mental health care service delivery.

**Keywords:** Mental health, help-seeking, gender, online survey, Bangladesh

## **Impact and precautions of Polycystic Ovary Syndrome among Bangladeshi women (#12)**

*Sanjida Jahan Shifa<sup>1</sup>, MD Sazid Islam<sup>1</sup>, S.M.Nazmul Ahasan<sup>1</sup>, Mohammad Naveed Ishtiaq,<sup>1</sup> Md. Mortuza Ahmmed<sup>1</sup>*

1. American International University-Bangladesh, Dhaka 1229, Bangladesh

**Presenter:** Sanjida Jahan Shifa; Email: 23-50386-1@student.aiub.edu

### **Abstract**

**Background:** Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder affecting women worldwide, with a potentially higher prevalence in Bangladesh. Typical symptoms include irregular menstruation, hirsutism, obesity, and insulin resistance, which elevate the risks of type 2 diabetes, thyroid issues, cardiovascular disease, and infertility. These physical symptoms also contribute to psychological stress, with many affected women experiencing anxiety and depression.

**Objective:** This study aims to assess the impact of PCOS and possible precautions among Bangladeshi women.

**Method:** A cross-sectional study surveyed Bangladeshi women to identify the prevalence and common symptoms of PCOS, as well as associated psychological effects.

**Results:** The study found a PCOS prevalence rate of approximately 20%, with 58% reporting menstrual irregularities, 42% obesity, and 38% hirsutism. Psychological impacts were also significant, with 65% of affected women reporting increased anxiety and 52% experiencing depression. Additionally, 33% were at elevated risk for type 2 diabetes, and 25% displayed symptoms of thyroid disorders. Limited access to diagnostic services was reported by 71% of participants, underscoring the need for improved healthcare access.

**Conclusion:** Creating a supportive environment may reduce the adverse health and psychological effects of PCOS, enhancing quality of life. These findings contribute to the PCOS literature and provide policy recommendations to address this pressing health issue in Bangladesh.

**Keywords:** PCOS, Public Health Initiatives, Psychological Stress, Prevalence.

## **Vaping and mental health: A Cross-sectional study among university students in Bangladesh (22#54)**

*Farah Sabrina,<sup>1</sup> Mohammad Delwer Hossain Hawlader,<sup>2</sup> Md. Nur Alam,<sup>3</sup> Farhan Ibne Faruq,<sup>2</sup> Farah Parisha Bhuiyan,<sup>4</sup> Biswajit Banik,<sup>5</sup> Aziz Rahman<sup>5</sup>*

1. Development Research Network (Dnet), Dhaka
2. North South University, Dhaka;
3. icddr,b, Dhaka.
4. The University of Chester, UK;
5. Federation University Australia, Australia.

**Presenter:** Farah Sabrina; Email: farah.sabrina@northsouth.edu,

### **Abstract**

**Background:** As vape use and dual smoking among youth continue to rise, it is crucial to understand their potential association with psychological well-being. This study examines the relationships between vaping and mental health issues such as psychological distress, depression, and anxiety among university students in Bangladesh.

**Methods:** This cross-sectional study utilized a convenient sampling method and enrolled 1,615 undergraduate students aged 18-25 from seven universities in Bangladesh. Data were collected from November 2023 to June 2024. An online link to the web-based questionnaire was developed in Google Forms. The survey invitation, online link, and QR code were shared on social media platforms, emails, and text messages to the students in those selected universities. Psychological distress was measured by using the K10 scale, while the CES-D10 and GAD-7 scales assessed depression and anxiety, respectively. Statistical analysis was performed using STATA version 25, reporting multivariable logistic regression results as adjusted odds ratios (AOR) and 95% confidence intervals (CIs). A p-value of <0.05 indicated statistical significance. The study received approval from the Institutional Review Board (IRB) of North South University

**Results:** Overall, the prevalence of vaping among university students was 15.36%. Key findings revealed that 6.2% reported current cigarette users, 6.5% utilized vape, and 8.9% were dual users. Regarding mental health, a similar proportion of participants exhibited psychological distress, depression, and anxiety (while 17.0%, 17.6%, and 17.9%). Before adjusting other covariates, vape users had increased odds of psychological distress symptoms (AOR=1.55; 95% CI: 1.13 - 2.13). After adjusting other covariates, dual users had 1.93 times higher odds of having depression symptoms (AOR=1.93; 95% CI: 1.04–3.57) compared to nonusers, and only vape users had increased odds of medium to severe anxiety levels (AOR=1.46; 95% CI: 0.95-2.24) compared to non-users. Notably, current vape users demonstrated an association with alcohol consumption compared to non-users (AOR=11.43; 95% CI: 7.41-17.63).

**Conclusion:** The study underscores a concerning association between vaping and psychological distress, depression, and anxiety among Bangladeshi university students, highlighting the need for further research, especially given the prohibition of vapes.

**Keywords:** Cigarette smoking, Vaping, Mental health, Dual Users, Psychological Distress, Anxiety, Depression

## **Factors Influencing the Suicidal Ideation and Attempt to Suicide among Medical Professionals: A Cross Sectional Study (23#46)**

*Maskura Benzir<sup>1</sup>, Md. Kaoser Bin Siddique<sup>2</sup>, Md. Mamun Al Mujahid<sup>3</sup>, Md. Matiur Rahman<sup>4</sup>*

1. Assistant Professor, Department of Anatomy, TMSS Medical College, Bogura
2. Coordinator, Research & Training, TMSS Grand Health Sector, TMSS, Bogura
3. Assistant Professor, Department of Psychiatry, TMSS Medical College, Bogura
4. Chief of Health Sector, TMSS, Bogura

**Presenter:** Dr. Maskura Benzir; Email: [mkbenzir@gmail.com](mailto:mkbenzir@gmail.com);

### **Abstract**

**Background:** Medical professionals often experience intense stress and emotional strain due to their demanding roles, long working hours, and high-stakes environment. In Northern Bangladesh, where medical systems face unique challenges including limited resources and high patient loads, these stressors may be aggravated, increasing the risk of mental health issues among medical workers. However, there is a lack of localized research on this issue in the region.

**Objective:** This study aimed to investigate the contributing factors of suicidal ideation and attempts to suicide among medical professionals.

**Methods:** This cross-sectional study employed a structured survey to collect data from 247 medical professionals: doctors and post-graduation trainees in Northern Bangladesh. The survey included questions on demographic information, work-related stressors, social support, job satisfaction, mental health status, and experiences of suicidal ideation and attempts. Statistical analysis was done using SPSS version 20.

**Results:** The study examined mental health and suicidal ideation among 247 individuals, with an average age of 29.8 years, 78% being male, and 83.7% residing in urban areas. Of the respondents, 67.3% were employed, and 36.7% reported feeling sometimes overwhelmed by workload, while 14.3% felt always overwhelmed. Anxiety was prevalent, with 87.5% experiencing symptoms, predominantly mild (43.2%). Suicidal ideation was reported by 43.8%, with 17.4% indicating active plans towards suicide. However, only 11.4% experienced suicidal ideation, and barriers to seeking help were significant, including lack of time (43.2%) and access to services (21.6%). These findings highlight a pressing need for improved mental health support and accessible resources, particularly in workplace settings.

**Conclusion:** Understanding the factors influencing suicidal ideation and attempts among medical professionals in Northern Bangladesh is crucial for developing effective mental health strategies. This research will contribute to addressing the mental health needs of this essential workforce, promoting their well-being, and ensuring a more resilient medical system.

**Keywords:** Medical Professional, Suicidal Tendency, Mental Health, Risk Factors.

**Prevalence of emotional and behavioral problems among adolescent offspring of female sex Workers and residents of urban slum, Bangladesh: A comparative study (28#17)**

*Presenter: Afia Mahmuda Khan*

Department of Public Health, North South University

Email: afia.mahmuda@northsouth.edu

### **Abstract**

**Background:** This study aimed to evaluate the prevalence of emotional and behavioral problems among adolescents who are offspring of female sex workers (FSWs) and to compare these findings with those of adolescents whose parents are slum dwellers in Daulatdia and Dhaka City, Bangladesh.

**Method:** A cross-sectional study was carried out from March 2024 to May 2024, involving a sample of 394 adolescent offspring. They included 196 adolescents whose mothers were sex workers and 198 adolescents from slum-dwelling families. Data was collected using a structured questionnaire. Socio-demographic data, as well as information about emotional and behavioral health issues, was collected through the Strength and Difficulties Questionnaire (SDQ). The Kidscreen-10 scale was used to collect data on health-related quality of life

**Result:** In the emotional and behavioral assessment of adolescents born to female sex workers in brothel environments, the highest proportion of abnormal scores was observed in conduct problems (24%), followed by peer problems (10.2%), hyperactivity problems (9.7%) and emotional problems, which had the lowest rate at 8.2%. In comparison, adolescents living in the Korail slum also showed the highest prevalence of conduct problems (28.8%), but hyperactivity problems had the lowest rate at 5.6%.

**Conclusion:** The study found that the overall prevalence of emotional and behavioral problems among adolescents whose mothers are female sex workers (FSWs) was significantly lower than that of adolescents living in slums, especially in the emotional problem subscale. Adolescent offspring of FSWs who undergo emotional trauma should be given priority in the implementation of psychosocial intervention and mental health services should be incorporated into standard medical treatment.

**Keywords:** Adolescent, Female sex workers, Emotional problems, Behavioral problems, Quality of life

## **Effectiveness of Mental Health Day Centre and Community-based Rehabilitation for persons with mental health needs (30#225)**

*Chayon Kumar Das<sup>1</sup>, Md. Rabiul Hasan<sup>1</sup>, Md. Shakawat Hossen<sup>1</sup>*

1. Centre for the Rehabilitation of the Paralyzed, Savar, Dhaka, Bangladesh.

**Presenter:** Md. Rabiul Hasan; rabiulot15@gmail.com

### **Abstract**

**Background:** Psychiatric disorders are considered as one of the main causes of disability worldwide. But rehabilitation focused mental health facilities with evidence-based intervention are largely absent in Bangladesh. Mental health day center with a multidisciplinary team and community-based support can be an effective approach of treatment for persons with mental health needs.

**Objective:** The main objective of this study is to identify whether a mental health day center approach with community based support is effective for rehabilitating people with mental health needs.

**Methods:** A pre-test post-test design was conceived to evaluate effectiveness of the intervention protocol of a mental health day center which is mainly an occupational therapy based treatment model where clinical psychologist and psychiatrist are also incorporated. In addition, training, M-health support, income generating activities are also provided to appropriate beneficiaries. From January 2022 to June 2024, 306 beneficiaries were enrolled. Data was collected from 203 participants using Life Skills Profile (LSP) from January 2023 to June 2024 before and after receiving the treatment. Moreover, data about their present occupational status was also collected from all the beneficiaries on 24 in 24 June 2024.

**Results:** Data analysis of LSP shows significant mean difference which indicates significant improvement in functional level in the participants. In addition, 69.93% of the service receivers were found to be involved in different meaningful activities whereas 23.20%, 5.56%, and 1.31% were respectively found unemployed, unreachable, and dead.

**Conclusion:** Comprehensive treatment of mental health day center along with community based support comprising all rehabilitation professionals, appropriate trainings, and income generating support for beneficiaries can be an effective model of intervention to rehabilitate people with mental health needs.

**Keywords:** Effectiveness, Mental health day center, Community based rehabilitation, Persons with mental need needs.

## **Exploring the risk factors of acute malnutrition in under-five children in Bangladesh: A Multi-hospital study (1#6)**

*Mst. Shabnaz Aktar<sup>1</sup>, Md. Anjim Macsud<sup>2</sup>, Afsana Israt<sup>3</sup>, Md. Asaduzzaman Pial<sup>4</sup>, Saad Ahmmed<sup>5</sup>, Md. Abdul Awal<sup>1</sup>*

1. Barind Medical College, Rajshahi, Bangladesh;
2. Charbag Danga Union Health Center, Chapainawabganj, Bangladesh;
3. Kushtia Municipality, Kushtia, Bangladesh;
4. Water Development Board, Jashore;
5. Assistant Commissioner, Rajbari, Bangladesh

**Presenter:** Mst. Shabnaz Aktar; Email: shabnazbmc@gmail.com

### **Abstract**

**Background:** Acute malnutrition in children leads to severe, long-term developmental, medical, economic, and social consequences, perpetuating illness, poverty and inequality. While most malnutrition studies in Bangladesh focus on chronic malnutrition, this study aims to identify key risk factors for acute malnutrition in children, which is often preventable.

**Methods:** This case-control study regarding risk factors for acute malnutrition (weight-for-height z-score < -2) in children, conducted at Sir Salimullah Medical College Hospital, Dhaka, and Chapainawabganj General Hospital, Chapainawabganj. A total of 180 children, aged 6-59 months, were included—90 with WHZ-scores < -2 and 90 with WHZ-scores ≥ -2. Detailed histories were taken, and anthropometric measurements of the children and their parents were recorded using measuring tapes and weight machines. BMI of children and parents, as well as weight-for-height, weight-for-age, height-for-age, BMI-for-age, and MUAC-for-age Z-scores of children, were calculated. Data were collected through a semi-structured questionnaire, and conditional logistic regression was used to identify risk factors.

**Results:** The mean age of the acute malnourished children was 26.07±14.21 months with slight male predominance (male-female ratio 1.20:1). The mean weight-for-height Z-score of the cases was -2.82±0.41 and 31.10% acute malnourished cases had severe acute malnutrition. Monthly family income (<10000 BDT), younger mother (≤20 years) and father (≤25 years), less educated mother and father (illiterate or upto primary), undernourished mother (BMI <18.50 kg/m<sup>2</sup>) and predominant breast feeding stop before 4 months had significantly higher odds of developing acute malnourishment (p<0.05). Among these factors, monthly family income (<10000 BDT) and predominant breast feeding stop before 4 months were found to be independently associated with acute malnutrition.

**Conclusion:** Acute malnutrition was found to be significantly associated with less monthly family income, younger mother and father, less educated mother and father, undernourished mother and early stop of predominant breast feeding.

**Key words:** Acute malnutrition, Risk factors, Under 5 children, Bangladesh

## **Nutritional Status and Dietary Diversity among Adolescent Girls in Rohingya Refugee Camp in Cox's Bazar (3#70)**

*Syeda Rezwana<sup>1</sup>, Mst.Jami Parvin<sup>2</sup>*

1. Bangladesh University of Health Sciences;
2. Pundra University of Science and Technology

**Presenter:** Mst. Jami Parvin; Email: drjamiparvin@gmail.com

### **Abstract**

**Background:** Adolescent girls, constituting approximately 10% of the entire populace, hold a place as one of the most prominent sections in our community. These girls require special care as they bear significant relevance to the health and shape of the well-being of present and future generations.

**Objective:** To assess nutritional status and dietary diversity among teenage girls.

**Methods:** This study was undertaken by the researchers aimed at evaluating the nutritional status and dietary diversity among teenage girls. A cross-sectional study was conducted in a particular Rohingya camp in Cox's Bazar among adolescent girls between the ages of 10 and 19 (n= 317). The pretested, semi-structured questionnaire was implemented to assemble information regarding anthropometric measurements, diversity of diets, and sociodemographic traits. An assessment of nutritional status concerning individual dietary diversity was also done.

**Results:** The socio-demographic data show that most of the participants are between 14 and 16 years old, from a lower-middle and middle-class background. Out of them, 72.7% were identified as students, though other smaller groups had also been involved in domestic or labor roles. Individual dietary diversity reflects that nearly half of the adolescent girls (49.9%) have medium dietary diversity, and another 33.4% have low, showing a general need to improve access to a wider variety of nutritious food. The nutritional status, as indicated by BAZ, is normally weighted for 75.7%, while 15.6% either severely thin or moderately thin. Another 8.7% of the participants are overweight, thus showing that both undernutrition and overweight coexist among this population. As indicated by the HAZ, 11% of the adolescent girls are severely stunted, while 24.7% are mildly to moderately stunted; the majority, 55.3%, have a normal height, reflecting varied growth outcomes among participants. There were positive relations between nutritional status and individual dietary diversity of the adolescent girls (correlation coefficient of 0.128).

**Conclusion:** This will provide substantial insights to support a comprehensive overview of the condition of nutrients and dietary habits. Its results will help in the formulation of appropriate dietary interventions and health education programs for adolescent girls of this endangered segment of inhabitants transported to Rohingya camps.

**Keywords:** Adolescent girl, Nutritional status, Dietary diversity, Rohingya camp.

## **Proportion of low bone mineral density among the Bangladeshi public health professionals (4#75)**

*Nusrat Jahan Nipa<sup>1</sup>, Md. Anower Hussain Mian<sup>1</sup>, Md Salim Reza<sup>1</sup>, Palash Chandra Banik<sup>1,2</sup>*

1. Bangladesh University of Health Sciences, Dhaka, Bangladesh
2. Bangladesh University of Professionals, Dhaka, Bangladesh

**Presenter:** Nusrat Jahan Nipa; Email: nusratjahannipa994@gmail.com,

### **Abstract**

**Background:** In Bangladesh low bone mineral density is a hidden public health problem in the population including the health professionals. Fracture bone is a common complication due to low mineral density in both male and female.

**Objective:** The aim of this study is to assess the low bone mass among public health professionals working in Bangladesh.

**Methods:** A cross-sectional study was conducted among 330 public health professionals in Bangladesh. The data collection comprised two components: by face-to-face interview through a structured questionnaire, and physical measurement like height, weight, blood pressure and bone mineral density (BMD) following standard guidelines. Both univariate, bivariate and multivariate analysis were done as appropriate. Statistical analyses were conducted using SPSS version 25.0, where level of significance ( $\alpha$ ) was set at 5% ( $p < 0.05$ ).

**Results:** The mean age of the respondents was  $35.2 \pm 11.5$  years and 55.2% were male. Of the total respondents, 37.9% (95% CI, 32.6-43.1) had low bone mass (LBM) whereas females (38.5%; 95% CI, 33.2 – 43.7), doctors (40.3%; 95% CI, 35.0 – 45.6), aged group 25-65 (88.4%; 95% CI, 0.0-1.9), education level 11 years and above (38.6%; 95% CI, 33.3 – 43.8) were predominant. A significant difference for LBM with age group was observed ( $p = 0.006$ ). Respondents who had diabetes (53.3%; 95% CI, 47.9 – 58.6) and chronic kidney disease (66.7%; 95% CI, 61.6 – 71.7) were more prevalent to LBM, but differences were not significant.

**Conclusion:** More than one out of three public health professionals are suffering from low bone mass, whereas, female professionals, professionals aged 25 to 65 years, doctors by profession, are more prevalent. Moreover, professionals who had diabetes mellitus and chronic kidney diseases were more prevalent with low bone mass. **Keywords:** low bone mass, Bangladesh, public health, professionals

## **Management of Malnutrition through the CINI Method: Insights from Rural and Urban Parts of Eastern India (7#114)**

*Mithun Mondal<sup>1</sup>, Shourjya Mukherjee<sup>1</sup>, Naresh Kumar Gupta<sup>1</sup>*

1. Institute for Affiliation- Child in Need Institute (CINI)

**Presenter:** Mr. Mithun Mondal; Email: mithunmondal@cinindia.org

### **Abstract:**

**Background:** Undernutrition, which includes both protein-energy malnutrition and micronutrient deficiencies, severely impairs children's physical growth and cognitive development. India's rapidly growing economy and the implementation of one of the largest programs in the world to combat malnutrition, the country continues to face alarming levels of child malnutrition.

**Objective:** This study aimed to evaluate the impact of nutrition education on the nutritional status of children living in resource-constrained settings and to identify the factors contributing to undernutrition among children aged 0-5 years in both urban and rural regions.

**Methods:** A community based cross-sectional study involved 17,836 children under the age of five from three eastern Indian states: West Bengal, Jharkhand, and Assam. Children were categorized as mildly, moderately, or severely underweight based on Z-scores. Nutritional assessments were conducted using anthropometric measurements and a 24-hour dietary recall. The intervention strategy consisted of nutrition counseling, targeting mothers and caregivers. The initial screening took place in July 2024, followed by a two-month follow-up period. Descriptive analysis was used to determine the prevalence of undernutrition, and multivariate logistic regression was employed to assess the factors associated with undernutrition. Data were processed using MS Excel and SPSS Version 20.

**Results:** In urban areas such as Kolkata and Siliguri, 456 children (2.89%) were identified as severely underweight among the 15,783 screened, with 188 (41.22%) shifted to next level after the intervention. In rural areas such as Tamulpur and Dumka, 130 children (6.33%) were identified as severely underweight among 2,053 children, with 74 (56.92%) demonstrating substantial improvement, following the two-month intensive intervention. 1,670 children (10.58%) in urban areas were classified as moderately underweight, while in rural areas, 264 children (12.85%) were identified as moderately underweight during the screening period.

**Conclusion:** The study identified key factors influencing child nutritional status and applied intervention significantly improved the nutritional status of severely underweight children. Additionally, the study emphasized the importance of linking social support systems and services. These findings underscore the need for targeted, localized strategies to combat child malnutrition in both urban and rural areas. The study concludes that nutrition education effectively reduced undernutrition, particularly in food-insecure households

**Keywords:** Undernutrition, Prevalence, Children under five, Intervention, Urban, Rural, India.

## **Assessment of knowledge and awareness on iron deficiency anaemia among the BSc Nursing Students in Manikgonj College, Bangladesh (8#144)**

*Biplab Halder,<sup>1</sup>Rapti Hasan Rose,<sup>1</sup> Joy Biswas,<sup>1</sup> Shahadat Hossain Sheikh,<sup>1</sup> Umme Wara Aelma,<sup>1</sup> Afsana Akter Mim,<sup>1</sup> Modina Akter Suma,<sup>1</sup> Nuray Hafsa,<sup>1</sup> Sharifa Akter,<sup>1</sup> Fariha Akter Humayra<sup>1</sup>*

1. Manikgonj Nursing College, Faculty of Nursing, Dhaka University

**Presenter:** Biplab Halder; Email: biplabshilpi@yahoo.com

### **Abstract**

**Background:** Iron deficiency anemia (IDA) remains a significant health issue globally, particularly in populations vulnerable to inadequate nutrition and healthcare awareness. Female students want to be slim and reluctant to eat healthy food.

**Objective:** To assess knowledge and awareness on IDA among the nursing students at Manikganj Nursing College.

**Methods:** This cross-sectional study was conducted among sixty participants aimed to assess the knowledge and awareness related to IDA among nursing students at Manikganj Nursing College, Bangladesh. Structured questionnaires were used for data collection and analyzed using descriptive statistics.

**Results:** The study findings indicated all the participants (100%) had heard about anemia. Astonishingly, the misconceptions were evident among most of the participants (76.7%) recognized anemia as a fatal condition. While the majority of them (96.7%) correctly knew that anemia decreases RBC count/hemoglobin concentration. Additionally, the majority of the participants (86.7%) acknowledged the importance of consuming iron-rich foods for prevention. Awareness-related findings indicated that only half of the participants (53.3%) had checked their hemoglobin levels in the past year, and only more than one third of them (40%) had taken iron-folic acid (IFA) tablets. Thus some extent of poor awareness might signify the poor practices. Though overall, the IDA related knowledge range was minimum= 5.00, maximum=14 and mean =10.35; where awareness range was minimum=0.00, maximum=6.00 and mean=2.85. Among the undergraduate student's IDA related knowledge and awareness was correlated ( $p > 0.77$ ).

**Conclusion:** Focused on educational interventions to address misconceptions and enhance awareness among nursing students regarding IDA prevention, treatment, and associated practices are worthwhile. Thus initiatives might be effective for promoting better healthcare practices and improving health outcomes, not only among nursing students but also within the broader community. Future endeavors may focus on evaluating the effectiveness of educational interventions in improving IDA awareness and prevention practices in the larger community.

**Keywords:** Knowledge, Awareness, Iron-deficiency anaemia, Nursing students.

## **Assessing the Nutritional Impact of Rising Food Prices on University Students in Bangladesh: A Cross-Sectional Study (9#123)**

*Farjana Nur Naly*

Noakhali Science and Technology University, Noakhali, Bangladesh

Presenter: FarjanaNur Naly; Email: farjananurnaly499@gmail.com

### **Abstract**

**Background:** A healthy diet among university students is being severely impacted by inflation in food costs, especially in poor nations like Bangladesh.

**Objective:** To evaluate the effect of expanding food costs on Bangladeshi university students' nutritional security, consumption of nutrients, and quality of eating habits.

**Methods:** This cross sectional study was conducted on 520 students from public universities. Data were obtained using the Food Insecurity Experience Scale (FIES), and a semi-quantitative version of the Food Frequency Questionnaire (FFQ). To guarantee equal coverage throughout gender, financial status, this research used a stratified random sampling method. Statistics, such as descriptive statistics, chi-square tests, multiple regression analysis, and logistic regression were employed for analyzing the findings with the objective to determine trends in consumption of nutrients as well as modifications to diets.

**Results:** The findings demonstrated that 68% of students' eating habits had risen to poorer in nutrients, particularly a decrease in the quantities of raw fruits and vegetables eaten with a spike in packaged food consumption. Nutritional imbalances remained common, particularly notable declines in dietary intake of minerals such as calcium, iron, and vitamin A. Participants coming from families with less money showed a higher probability of inadequate nutrition (OR = 3.20,  $p < 0.001$ ) as well as worse scores on diversity of diets, indicating clear distinctions in socioeconomic status. Gender disparities were also noted, having female students being greater chances than male students to cut back on the quantity of portions or miss meals because of budgetary restrictions ( $p = 0.001$ ).

**Conclusion:** The investigation comes to the conclusion that developing food expenses pose an imminent threat to the physical and mental well-being of students, along with suggests specific actions, such as reducing food prices and laws meant for improving security of food on university campuses.

**Keywords:** Food insecurity, Dietary quality, Nutrient intake, Food price inflation, University students.

## **Perception and Factors Influencing Fast Food and Junk Food Consumption of High School Students of Bogura Town, Bangladesh (33#209)**

*Sammak Nabila, Md Jawadul Haque, Farhana Yasmin, Mostofa Mahabub Morshed, Md. Sazzadul Bari*

**Presenter:** Sammak Nabila; Email: drnabilasammak@gmail.com

### **Abstract**

**Background:** Fast food and junk food consumption among adolescents is a growing public health concern due to its association with various health risks.

**Objective:** This study aims to investigate the perception and factors influencing fast food and junk food consumption among high school students in Bogura Town.

**Methods:** This study employed a mixed-methods approach, involving a cross-sectional survey and semi-structured interviews. The study sample consisted of 384 high school students aged 11 to 19 years. Data were collected using a semi structured questionnaire and analyzed using descriptive and inferential statistical methods. Qualitative data were analyzed thematically.

**Results:** The majority of participants were aged 14-16 years (58.07%), with a higher proportion of females (66.15%). Most participants resided in urban areas (95.31%) and came from nuclear families (87.24%). Nearly half of the participants were underweight (46.61%), while 45.57% had a healthy weight. Half of the participants consumed less than three major meals daily, and breakfast was the most skipped meal (41.15%). Fast food consumption at school was high (74.48%), with significant instant food consumption at home (78.13%). Factors influencing fast food consumption included taste (83.33%), accessibility (51.82%), and social media influence (61.46%). Awareness of balanced diets was low (27.34%), and most participants recognized the negative health impacts of fast food, such as obesity (94.53%) and heart disease (87.76%).

**Conclusion:** The study highlights significant trends in fast food and junk food consumption among high school students, driven by taste, accessibility, and social influences. The findings underscore the need for targeted nutritional education and interventions to improve dietary habits and reduce health risks among adolescents.

**Keywords:** Adolescents, fast food consumption, dietary habits, nutritional education, health risks.

## **Study on correlation of vitamin D level with prediabetes status (41)**

*Ahmed Al Montasir<sup>1</sup>, Azizur Rahman<sup>1</sup>, Zakir Hossain<sup>1</sup>, Kaoser Bin Siddique<sup>2</sup>, Minhaz Uddin<sup>1</sup>, Zilker Nime<sup>1</sup>*

1. TMSS Medical College, Bangladesh
2. TMSS Health Sector, Bangladesh

**Corresponding author:** Ahmed Al Montasir; Email; a.montasir@gmail.com

**Presenter:** Zilkar Naim

### **Abstract:**

**Background:** Prediabetes is a term used to define the biochemical condition where the blood glucose level is between normal and diabetic range. The frequency of prediabetes is increasing. Up to 70% of individuals with prediabetes will eventually develop diabetes by 5 years. Lack of vitamin D is a serious and widespread health issue. Low blood vitamin D3 levels have been linked to an increased risk of diabetes in different observational studies; however, whether vitamin D3 supplements will lower the risk is unclear.

**Objective:** The objective of this study is to find out the correlation between prediabetes and vitamin D levels.

**Method:** Between July 2023 and June 2024, 50 patients with prediabetes and 50 healthy controls visited the outpatient department of medicine at TMSS Medical College, Bangladesh. All participants were healthy and used to do desk jobs. Patients with comorbid conditions were excluded. A serum vitamin D3 and oral glucose tolerance test was conducted.

**Results:** Sixty percent of patients were in the 36-40 years' age group. 54% and 62% were male in the case and control group respectively. Prediabetic patients' serum vitamin D3 levels were much lower than those of controls ( $p = 0.02$ ). Among the prediabetic group 55% were in vitamin D3 deficient group and 40% were in the insufficient group. There was an inverse association found between vitamin D3 levels with fasting blood glucose and blood glucose two hours after 75 gram glucose intake orally.

**Conclusion:** Prediabetics have noticeably reduced vitamin D levels. The levels of vitamin D3, prediabetic blood glucose values are significantly inversely correlated. To validate it further, large scale prospective studies are required.

**Keywords:** Prediabetes, Vitamin D, Oral glucose tolerance test.

**Prevalence of dissatisfaction regarding transport facilities and its association with academic Issues and mental health among university students in Dhaka, Bangladesh (4#73)**

*Sabiha Binta Siraj', Md. Mobarak Hossain Khan'*

<sup>1</sup>Population and Public Health Sciences, Department of Social Relations, East West University

**Presenter:** Sabiha Binta Siraj; Email: sabihairinn@gmail.com

**Abstract**

**Background:** Transportation facilities are important for the majority of the university students of Dhaka because they have to commute on a regular basis using public transport. As the capital of Bangladesh, Dhaka faces a serious problem of traffic congestion which could adversely affect students' academic performance and there is scarcity of evidence in this context.

**Objective:** This study aims to report on the dissatisfaction regarding transport facilities and its association with academic issues (CGPA and academic stress) and mental health among university students in Dhaka, Bangladesh.

**Methods:** A cross-sectional study was conducted using a pre-tested self-administered questionnaire with a sample of 962 students from three different universities (Jahangirnagar University, Jagannath University & East West University). Each student was asked to rate their overall satisfaction regarding transport facilities, which they mostly used to commute from their place of residence to university and vice versa. Such satisfaction was categorized in three groups: Satisfied, moderately satisfied and dissatisfied. Similarly, CGPA was categorized using the above mentioned three categories and academic stress was categorized as high, medium and low. Self-perceived mental health was recorded as good, medium and poor, based on a single question, "how do you rate your mental health"? Appropriate statistical analyses were performed (simple to multivariate) by using SPSS 26.

**Results:** The prevalence rate of dissatisfaction regarding transport facilities and CGPA amongst the students was 34.9% and 34%, respectively. Similarly, the prevalence of high academic stress was 32.6%. Additionally, the prevalence of poor mental health was 18.6%. The dissatisfaction rate was significantly higher for CGPA ( $p=0.008$ ), high academic stress ( $p=0.002$ ), and poor mental health ( $p\leq 0.001$ ) among those students who reported dissatisfaction regarding transport facilities as compared to students who belonged to the satisfied category.

**Conclusion:** Our findings underscore the importance of transport facilities in shaping academic performance and mental health among the university students in Dhaka. Future studies should be conducted to find some feasible solutions to minimize the dissatisfaction level regarding transport facilities and to improve academic performance and mental health among the university students.

**Keywords:** Transportation facilities, Academic performance, Self-perceived mental health, Prevalence, University students of Bangladesh.

**Air pollution, outdoor physical activity and health: A study on middle-class adults in Delhi and Noida in National Capital Region (2#24) (Hybrid)**

*Tulika Sanadhya<sup>1</sup>, Shabana Khan<sup>2</sup>*

1. Dr. Bhim Rao Ambedkar College, University of Delhi
2. Indian Research Academy

**Presenter:** Tulika Sanadhya; Email: rtulikasanaddhya@gmail.com

**Abstract**

**Background:** Delhi was found as one of the most polluted cities in the world in 2023 and the associated areas thus face related challenges at different levels. Noida as a neighboring city shares similar concerns. Although the literature talks about the impacts of air pollution on outdoor physical activities and health, there is a gap for studies evaluating different perceptions, choices and behaviors of people regarding their health across cities within a region. This study thus evaluates the perceptions, choices and behaviors of the middle class adults regarding outdoor physical activity during the winter season with high pollution levels in Delhi and Noida.

**Methods:** The study relies upon the mixed method approach and uses both quantitative and qualitative data from the existing research, the secondary data collected from various governmental and health organizations, and structured schedules conducted with physically active middle class individuals living in Delhi and Noida.

**Results:** It finds that higher Air Quality Index (AQI) levels affect the physical activity of the residents and a clear preference is observed for indoor physical activities as compared to other response options such as using masks, change in timing or moving away from pollution. Although most of the respondents were highly concerned about the issue, they adjusted to the situation with different choices and behaviors.

**Conclusions:** The study argues that most of these responses are inadequate to avoid health consequences and hence there is a need for a more rigorous policy that addresses air pollution as a health emergency in Delhi NCR.

**Keywords:** Air pollution, Outdoor physical activity, Response choices, Middle-class adults, Health.

## **Post-Covid-19 Syndrome among the Symptomatic COVID-19 patients in some selected Urban Communities of Bangladesh (9#182)**

*Presenter: Dr. Shamima Parveen; Email: shamima\_parveen@yahoo.com*

### **Abstract**

**Background:** The persistent symptoms of post-COVID-19 syndrome negatively impact health, quality of life, and productivity.

**Objective:** To explore Post-COVID-19 Syndrome among symptomatic COVID-19 patients in selected urban communities.

**Methods:** This cross-sectional survey was conducted in some selected urban Communities of Bangladesh based on retrospective interviews on 384 individuals (who had negative RT-PCR for the last 4-6 weeks). Face to face interviews were done by the trained personnel by using a pre-tested semi structured questionnaire for data collection. Data were analysed with descriptive frequency in statistical software.

**Results:** The mean age of the respondents were 35.47(SD±15.13) and 226 (58.9%) were male. Most 273(70.9%), 270(70.1%), 243(63.1%), 225(58.4%) of the respondents were suffered from major post COVID-19 syndrome like poor sleep quality, fatigue, anxiety and persistent cough. Male respondents are predominant in developing of Post COVID-19 syndrome like Fatigue-38.4%, Poor sleep quality 41.8%, Anxiety 37.1%, Joint pain-32.7%, Chest pain 31.1%, Persistent cough 35.0%). Regarding risk factors, 227(59.0%) respondents with respiratory distress had developed Post COVID-19 syndrome. More than half (56.8%) of the respondents had developed Post COVID-19 syndrome within < 6 weeks from recovery and 130(33.9%) survivors had no Co-morbidities to developed Post COVID-19 respondents. Among 384 respondents, majority 228(59.4%) had faced internalized stigma, disclosure fear 134(34.9%) and 17(4.4%) respondents had faced perceived externalized stigma respectively. A strong positive association was found between major Post COVID-19 Syndrome of Fatigue (P=0.000), poor sleep quality (P=0.000), Anxiety (P=0.065), Dyspnea (P=0.015), Joint Pain (P=0.000), Persistent cough (P=0.000), chest pain (P=0.052) with risk factors of respiratory distress. With millions of people infected worldwide, our results highlight how important it is to plan resources and patient-centered services in advance for post-COVID-19 care.

**Key words:** Post-COVID-19 Syndrome, Risk factors, Co-morbidities, Social stigma.

**Prevalence of Viral Hepatitis B and C and the associated risk factors for transmission in Kolkata slums – A situation analysis from 5 wards of Kolkata Municipal Corporation (8#141) (Hybrid)**

*Swati Chakraborty<sup>1</sup>, Mithun Mondal<sup>1</sup>, Rumeli Das<sup>1</sup>*

<sup>1</sup>Corresponding Author: Mr. Mithun Mondal; Email: mithunmondal@cinindia.org

<sup>1</sup>Institute for Affiliation- Child in Need Institute, India

**Presenter:** Dr. Swati Chakraborty; Email: swati@cinindia.org

**Abstract:**

**Background:** India has “intermediate to high endemicity” for Hepatitis B surface antigen and an estimated 40 million chronic HBV-infected people, constituting approximately 11% of the estimated global burden. The population prevalence of chronic HBV infection in India is around 3-4 %. There is a wide range of possibilities to explore the community-based prevention, screening, referral, and follow-up of cases as per the National Guidelines for Prevention Diagnosis and Management of Viral Hepatitis

**Objective:** To analyze the prevalence of Viral Hepatitis B and C in urban slum areas of Kolkata; to analyze the associated risk factors for transmission in Kolkata Slums; and to inform directions for designing a community-based Viral Hepatitis management framework.

**Results:** The screening results indicated an overall prevalence of 1% (120 cases) for Hepatitis B and 0.1% (15 cases) for Hepatitis C. Bivariate analysis revealed that hepatitis infections were significantly associated with several risk factors, including blood transfusions, needle-stick injuries, multiple sexual partners, tattoos, dental extractions, surgical procedures, intravenous drug use, and circumcision. Knowledge regarding transmission of Hepatitis B, 11893 (94.2%) had inadequate knowledge. 6943 (55%) were aware of the term hepatitis, 4143 (32.8%) were aware of the term Hepatitis B and C. 47.2% of the people think that the source of transmission of Hepatitis B is food transmission. 41.8% of participants responded that water is the source of transmission of Hep-B. The knowledge regarding risk factors for hepatitis B & C, 9971 (78.9%) had inadequate knowledge and knowledge regarding preventive measures for hepatitis B & C, 9836 (77.9%) had inadequate knowledge.

**Conclusion:** This study provides valuable insights into the epidemiology of Hepatitis B and C in a highly vulnerable urban population, highlighting the urgent need for targeted public health interventions and enhanced screening and prevention strategies in these communities. Prevention strategy and management in urban slum areas is not ready so it's important to create a framework in urban metro cities.

**Keywords:** Hepatitis B, Hepatitis C, Knowledge, Awareness, Urban Slums, Kolkata.

**Influence of a pilot urban primary healthcare model on the healthcare-seeking patterns of slum populations from medically trained providers (MTPs) for the management of acute illness in Bangladesh (#5)**

*Md. Golam Rabbani, Md. Zakir Hossain, Khadija Islam Tisha, Kamrun Nahar, Towhida Nasrin, Zillur Rahman Sakin, Mohammad Wahid Ahmed, Md. Zahid Hassan, Margub Aref Jahangir<sup>2</sup>, Maya Vandenen<sup>2</sup>, Daniel D. Reidpath<sup>3</sup>, Shehrin Shaila Mahmood*

Health Systems and Population Studies Division, icddr, Dhaka, Bangladesh

UNICEF, Dhaka, Bangladesh

Institute for Global Health and Development Division, Queen Margaret University, Edinburgh, UK

**Presenter:** Md. Golam Rabbani, Email: rabbaniduihe@gmail.com

**Abstract**

**Background** Since 2021 an urban primary healthcare model called ‘Aalo Clinic’ is being piloted to serve the low-income urban population in Bangladesh. With an aim to ensure universal health coverage for the urban population, the model delivers an essential package of health services.

**Objective:** The aim of the study was to assess the implementation effect of this pilot model on the utilization of healthcare from medically trained providers (MTPs) for the management of acute illness.

**Methods** Following a cross-sectional study design, implementation research was conducted between October 2021 and August 2023 in the Korail, Mirpur, Shyampur, Dhalpur, and Tongi-Ershad Nagar slums, as Aalo Clinics are adjacent to these. Two household surveys at baseline (January - February 2022) and end-line (April - June 2023) of implementation were carried out to assess the effectiveness of the model

**Results** At the end-line, 73.36% of the respondents knew about Aalo Clinic compared to 11.46% at the baseline. The utilization of healthcare from MTPs was significantly higher in the end-line (9.81% from Aalo Clinic and 18.6% from non-Aalo Clinic MTPs compared to the baseline (0.64% from Aalo Clinic and 17.68% from non-Aalo Clinic MTPs). Furthermore, it was observed that healthcare utilization from local drug stores, which was the major source of healthcare at baseline, significantly reduced in the end-line (67.19%) compared to the baseline (80.56%). The multivariate logistic regression analysis demonstrated that the respondents were 12.43 times more likely (95% CI: 7.49, 20.63) to utilize healthcare from Aalo Clinic in the end-line compared to the baseline indicating a higher use of MTPs following the implementation of the Aalo clinic model.

**Conclusions** With some concern over the financing mechanism, the study findings are in support of replicating the model features in the existing healthcare structures and scaling it up in other areas of the country to expedite the achievement of universal health coverage for urban Bangladesh.

**Keywords** Urban primary healthcare; Aalo Clinic Model; Healthcare utilization; Slum population; Medically trained providers; Drug stores, Bangladesh

## **Understanding Adolescent Health and evaluation of health outcome in Urban India (5#95)**

*Dr. Arpita Banerjee; Email: arpita.ban1980@gmail.com*

Senior Research Fellow, National Institute of Urban Affairs, New Delhi, India

### **Abstract**

**Background:** In 2020, 34.9% of India's population resides in urban areas. Based on medium variant estimates by World Urbanization Prospects (WUP), 2018, more than half of the country's population will reside in urban areas by 2050. This spurt in urban population in a country of global South is often messy with growth of large metropolises on one hand and generation of slums and sprawls on the other. Given the socio-economic divide determining the lives of urban people, the poor and marginalized could hardly access the modern basic amenities of cities. This often places urban adolescents in a disadvantaged position, who are in their physical and mental transition phase from childhood to adulthood. Adolescents living in congested areas, slums, poor neighborhoods are more prone to child marriages, elopement, teenage pregnancies, easy prey to communicable and non-communicable diseases etc. These incidents have further implications on adolescent mortality.

**Objectives:** The present study was conducted to understand: -

- urban adolescent health outcomes with special emphasis on teenage pregnancies and communicable and non-communicable diseases;
- determinants of health outcomes in relation to socio-demographic parameters, economic and living conditions; and
- implications of adolescent health policies, laws and schemes present in the country to address these health issues and its impact on them.

**Methods:** The study has relied on quantitative data, available at the national and state levels. Simple percentage figures have been calculated. Further, correlations and regressions have been used to determine the effect of socio-demographic parameters on health outcomes of adolescents. The result shows positive and significant relation between adolescent health outcomes with respect to socio-demographic indicators.

**Conclusion:** The result shows positive and significant relation between adolescent health outcomes with respect to socio-demographic indicators. The health policies, schemes and services also seem to play a profound role in their lives.

**Keywords:** Urban, Adolescent health, Teenage pregnancy, Health policies

## **Urban Slum Dweller Mothers Experiences of Exclusive Breastfeeding (EBF): A Phenomenology Qualitative Study (13.#5)**

*Farhana Islam Prema*

Bangladesh University of Health Sciences

**Presenter:** Farhana Islam Prema; Email: farhana.prema11@gmail.com

### **Abstract**

**Background:** Exclusive breastfeeding (EBF) is crucial for infant health, yet prevalence in Bangladesh remains below the recommended target of 50% by 2025. Mothers residing in urban slums encounter numerous challenges that hinder their ability to sustain breastfeeding.

**Objective:** This study aimed to investigate the experiences of urban slum-dwelling mothers regarding exclusive breastfeeding and the factors that influence their practices.

**Methods:** The qualitative phenomenological approach was utilized in this study to conduct in-depth interviews with urban slum-dwelling mothers of Dhaka city. 25 mothers aged between 19 and 37 years, selected through convenience sampling, were interviewed using a semi-structured guideline. All interviews were digitally recorded, transcribed verbatim, and subsequently analyzed through thematic analysis. The study adhered to qualitative research standards as outlined by the COREQ guidelines.

**Result:** Three central themes emerged concerning the practice of exclusive breastfeeding (EBF). Mothers encountered significant barriers, including conflicts between traditional beliefs upheld by grandparents and contemporary scientific guidelines, discomfort associated with breastfeeding, a lack of understanding regarding the benefits of EBF, and apprehensions about insufficient milk production. Despite these challenges, various facilitators and incentives were identified, such as robust family support, a favorable home environment, and the economic benefits of breastfeeding over formula feeding. Critical sources of information on EBF were identified as healthcare providers, alongside the influential advice from mothers and mothers-in-law. These intergenerational perspectives and input from healthcare professionals enabled mothers to navigate the complexities associated with EBF.

**Conclusion:** This study offers significant insights into the experiences of urban slum dweller mothers who engage in exclusive breastfeeding (EBF). The results highlight the critical need for fostering supportive environments, implementing effective counseling policies, and developing social networks to enhance the continuation of exclusive breastfeeding among urban slum dwellers mothers.

**Keywords:** Exclusive Breastfeeding (EBF); Slum Dweller Mothers; Perspective; Experiences; Phenomenology

## **Opportunities and Challenges of Implementing an Urban Primary Health Care Delivery Model: Lessons from Aalo Clinic, Bangladesh (#4)**

*Khadija Islam Tisha<sup>1</sup>, Mohammad Wahid Ahmed<sup>1</sup>, Orin Akter<sup>1</sup>, Md Golam Rabbani<sup>1</sup>, A M Rumayan Hasan<sup>1</sup>, Margub Aref Jahangir<sup>2</sup>, Maya Vandenen<sup>2</sup>, Daniel D. Reidpath<sup>3</sup>, Shehrin Shaila Mahm*

1. Health Systems and Population Studies Division, icddr, Dhaka, Bangladesh
2. UNICEF, Dhaka, Bangladesh
3. Institute for Global Health and Development Division, Queen Margaret University, Edinburgh, UK

**Presenter:** Khadija Islam Tisha

### **Abstract**

**Background:** Rapid urbanization in Bangladesh has strained the healthcare system, leaving urbanites underserved in primary healthcare (PHC). The Aalo Clinic (AC) model, a program by Unicef and the Government of Bangladesh, aims to provide affordable and accessible PHC, particularly for low-income urban residents. This study aimed to identify implementation challenges and opportunities of the Aalo Clinic model to improve access to urban PHC in Bangladesh.

**Methods:** An implementation research design using quantitative and qualitative methods was used. The opportunities and challenges of implementation were explored through qualitative research methods conducted between June 2022 and August 2023 in six Aalo Clinic intervention areas across four city corporations in Dhaka, Bangladesh. Twenty-four in-depth interviews with service providers and eighteen key informant interviews with clinic-in-charges, community leaders, scheme operators, and policymakers were conducted. Subsequently, a thematic analysis was performed.

**Results:** Three core themes evolved from the analysis - technical, administrative, and financial opportunities and challenges. Aalo Clinic's integrated digitalized health platform streamlined operations through medical documentation and real-time monitoring. Initiatives like prescription audits and client feedback systems promoted rational prescribing and delivering patient-centered quality care. However, key challenges included limited choice of medicine, interrupted internet connection, high patient flow, and longer waiting times. Despite challenges, policymakers emphasized Aalo Clinic's potential to integrate into the national health system, underscoring the need for coordinated efforts to overcome obstacles. Financial sustainability, however, hinges on the model's integration into the government system and the provision of public funding to support its implementation.

**Discussions:** The study underscores the importance of addressing implementation challenges while capitalizing on opportunities to scale up the Aalo Clinic model. By tackling challenges, fostering multisector collaboration, and reducing out-of-pocket expenditures, the Aalo Clinic model can evolve as a catalyst for accessible, quality PHC in urban areas, aligning with the broader vision of health for all.

**Keywords:** Primary healthcare, urban health, Healthcare delivery model, Bangladesh.

## **Navigating Pregnancy Challenges in Garment Industries: Addressing Health and Gender Issues in Relation to SDG-3 and SDG-5 (#14)**

*Sheikh Mahmood Hasan*

Department of Public Health, American International University-Bangladesh

Email: 22-92366-1@student.aiub.edu

### **Abstract**

**Background:** The Readymade Garments (RMG) sector of Bangladesh is employing approximately 4 million workers, predominantly women. Since independence in 1971, female participation in economic activities has significantly increased. The RMG industry, which began in the early 1980s, is vital for foreign exchange and employment, yet the challenges faced by pregnant workers in this sector are under-researched.

**Objective:** This study aims to identify the difficulties encountered by female garment workers during pregnancy in Gazipur city.

**Method:** A Descriptive cross-sectional study was conducted among pregnant garment workers in Gazipur from June to September 2024. Data were collected through a semi-structured questionnaire.

**Results:** Most of the respondents were aged 23–27 years, with 46.4% having only primary education. About 66.4% worked overtime during pregnancy, and 68.7% faced challenges accessing antenatal care (ANC), with 44.1% unable to see a doctor due to production pressures. Notably, 73% did not receive free medicines or investigative facilities. Most respondents (83%) experienced issues related to working posture, leading to back pain (24.2%) and leg cramps (28.4%). Additionally, 61.6% reported discomfort from excessive room temperature.

**Conclusion:** The findings highlight significant challenges faced by pregnant female workers, including inadequate healthcare access and poor working conditions. It is crucial for garment industry authorities to address these issues by improving workplace facilities and support systems, ultimately enhancing the health and productivity of female workers.

**Keywords:** Antenatal care, Pregnancy, Female garment workers, Gender issues, SDG.

## **Gestational Diabetes Mellitus: Its relations with the early development of childhood obesity (23#74)**

*Sajib Paul<sup>1</sup>, Mehzabeen Ifty<sup>1</sup>, Nadira Tabassum<sup>1</sup>, Shpona Roy<sup>1</sup>, Sadia Zafur Jannati<sup>1</sup>, Samira Siddika<sup>1</sup>, Jamilur Rahman Bhuiyan<sup>2</sup>, Nazia Binta Bahar<sup>1</sup>, Shahrin Risa Sejuti<sup>1</sup>, Nusrat Jahan Priority<sup>3</sup>, Anindita Das Dristi<sup>1</sup>, Farzana Yeasmin<sup>1</sup>, Pranta Saha Bapan<sup>1</sup>*

<sup>1</sup>School of Pharmacy, BRAC University, Dhaka; <sup>2</sup>Dept of Pharmacy, Jahangirnagar University, Savar, Dhaka; <sup>3</sup>Dept of Pharmaceutical Sciences, North South University, Dhaka, Bangladesh

**Presenter:** Sajib Paul; Email: paul.sajib4048@gmail.com;

### **Abstract**

**Background:** Obesity among young children is a global public health issue which causes harmful long-term effects on health, increasing public health expenditures. In this regard, Maternal gestational diabetes mellitus (GDM) is an important factor that may contribute to the development of childhood obesity, which in turn may affect the long-term health of both the mother and her offspring.

**Objective:** This cross-sectional study investigates the association between maternal gestational diabetes (GDM) and early development of childhood obesity, emphasizing anticipatory

**Methods:** A total of 125 children aged 2–5 years old and their mothers took part in the study. Children's anthropometric parameters were measured, retrospective data on maternal health, including GDM status, pre-pregnancy BMI, and medical history, was collected from June 2023-January 2024, through structured questionnaires and medical records upon taking ethical consent. Statistical analyses were done using SPSS, considering significance level at  $p < 0.05$  and confidence interval 95%.

**Results:** Among all the children, 20% of the children aged at 2–5 years were overweight, and 16% of them were obese, leading to a total 36% of children being overweight or obese. However, 5% of the enrolled mothers were diagnosed with gestational diabetes mellitus. GDM doubles the probability of childhood overweight/obesity at ages 2–5 years old independently of multiple confounding factors. The study has found that the risk of childhood obesity is higher in mothers with gestational diabetes ( $p = 0.002$ ). Dietary intake, older maternal age, and pre-pregnancy weight are the associated risk factors for gestational diabetes mellitus, while GDM also increases the risk of preterm birth ( $p = 0.003$ ).

**Conclusions:** GDM significantly increases the risk of childhood obesity development. During pregnancy, pregnant women should adhere to the antidiabetic medication adherence, while maintaining healthy lifestyles.

**Keywords:** Gestational diabetes, Childhood obesity, Anthropometric parameters, BMI, Dietary intake

## **Evaluating IMCI Service Delivery for Outdoor Childhood Pneumonia Management in Union Sub-Centers of Bangladesh (30#128)**

*Sadman Sowmik Sarkar<sup>1</sup>, Sabit Saad Shafiq<sup>1</sup>*

1. International Centre for Diarrhoeal Disease Research, Bangladesh

**Presenter:** Sadman Sowmik Sarkar; Email: sadman.sarkar@icddr.org

### **Abstract**

**Background:** Pneumonia is the leading cause of under-five mortality in Bangladesh, accounting for 24% of deaths according to BDHS 2022, with over 26,000 annual fatalities. Annually, there are over 4 million pneumonia cases in children, including 0.7 million severe cases. Bangladesh adopted the WHO-recommended IMCI strategy in 1998, scaling it up nationally by 2014. IMCI plays a crucial role in managing childhood pneumonia, focusing on healthcare worker training, system readiness, and community health practices in resource-limited areas.

**Objective:** Evaluating IMCI Service Delivery for Outdoor Childhood Pneumonia Management in Union Sub-Centers of Bangladesh.

**Methods:** Union Health Sub-Centers provide essential rural healthcare in Bangladesh, including maternal and child care, health education, and referrals. Out of 1314 USCs run by DGHS, 64 USCs were assessed from each district, in the survey titled 'Evaluation of current status of implementation and practices of Comprehensive Newborn Care Package in Bangladesh (CNCP)' employing a Facility Inventory questionnaire to assess health facilities' readiness, available resources, support systems, and infrastructure.

**Results:** The survey revealed major gaps in IMCI service delivery at USCs in Bangladesh. Only 49% of USCs had trained IMCI staff, and 56% had oral amoxicillin supply. Critical diagnostic tools required for pneumonia treatment were also limited, with 25% having functioning baby weighing scales, 70% having thermometers, and 71% equipped with ARI timers for diagnosing fast breathing. Alarming, only 25% had pulse oximeters for detecting hypoxemia, a "silent killer" in pneumonia. Additionally, IMCI chart booklets were available in just 19% of USCs.

**Conclusions:** This study identifies significant gaps in IMCI-based pneumonia management at USCs in Bangladesh. Nearly half of the facilities lack trained IMCI staff, and essential resources, including oral amoxicillin, pulse oximeters, and IMCI chart booklets, are inadequately available. These shortcomings hinder effective pneumonia management and contribute to high under-five mortality rates. Addressing these issues through enhanced training and resource availability can improve childhood pneumonia care in Bangladesh.

**Keywords:** IMCI, Pneumonia, Under-five mortality, Union sub-centre.

## Facility-Based Assessment of Kangaroo Mother Care Services at Upazila Health Complexes in Bangladesh (31#129)

*Sabit Saad Shafiq<sup>1</sup>, Sadman Sowmik Sarkar<sup>1</sup>*

1. International Centre for Diarrhoeal Disease Research, Bangladesh

**Presenter:** Sabit saad Shafiq; Email: [sabit.shafiq@icddr.org](mailto:sabit.shafiq@icddr.org)

### Abstract

**Background:** Despite a significant decline in under-five mortality in Bangladesh from 2011 to 2022, neonatal mortality has increased, now accounting for 65% of under-five deaths, up from 58%. In response to this rising concern, the Government of Bangladesh has introduced Kangaroo Mother Care (KMC) for preterm and low birthweight infants.

**Objective:** This initiative was adopted to observe the alignment of country's efforts to meet the Sustainable Development Goal of reducing neonatal mortality to 12 per 1,000 live births by 2030.

**Methods:** A cross-sectional survey was conducted between January and March 2023, covering 272 Upazila Health Complexes (UHCs) to assess the availability and functionality of KMC services. The assessment focused on key indicators such as the presence of KMC rooms or designated care areas, staff training levels, availability of essential equipment (e.g., baby weighing scales), and the maintenance of KMC registers and chart booklets for mothers.

**Results:** The results revealed significant variability in KMC implementation across the 272 facilities. KMC services were available in 61% of UHCs. However, 49% of these facilities lacked dedicated KMC rooms, relying instead on shared spaces in maternity, labor, or postnatal wards. Staff training was relatively strong, with 77% of UHCs reporting at least some KMC-trained personnel. Functional baby weighing scales were available in 60% of the facilities. Other key resources, such as KMC binders, reclining armchairs, and televisions, were available in 56%, 19%, and 0% of UHCs, respectively. KMC registers were present in 59.3% of facilities, while only 7.4% had KMC chart booklets for mothers.

**Conclusion:** These findings highlight the need for targeted interventions to improve KMC service delivery. Strengthening training, ensuring access to essential equipment, and improving documentation are critical for better KMC outcomes. Policy efforts should focus on expanding training, securing equipment, and improving accountability to maximize KMC's impact on reducing neonatal mortality in Bangladesh.

**Keywords:** Kangaroo Mother Care (KMC), neonatal mortality, Upazila Health Complexes

## **Assessing Refractive Errors and Visual Health in School Children through Vision Corner Initiative (28#118)**

*Md. Sajidul Huq<sup>1</sup>, Khairul Islam<sup>1</sup>, Faruck Hussain<sup>1</sup>, Shajeda Azizi<sup>1</sup> Deep Eye Care Foundation, Darshona, Rangpur<sup>1</sup>*

**Presenter:** Md.Sajidul Huq; Email: *sajidul.decf@gmail.com*

### **Abstract**

**Background:** To evaluate the prevalence of refractive errors and overall visual health status among school-age children through the implementation of Vision Corners, an initiative by the Deep Eye Care Foundation, across multiple schools.

**Methods:** This cross-sectional study was conducted from January to July 2023 at five schools in northern Bangladesh, where Vision Corners were established to perform visual acuity tests. Trained teachers, supported by trained "little doctors," administered these assessments. Any student with a visual acuity of less than 6/9 in either eye was referred for further evaluation by an expert ophthalmology team to assess visual health & refractive status. Data on demographic characteristics, eye check-up history, family history, and spectacle use history were collected through questionnaires, focusing specifically on students identified with visual problems.

**Results:** A total of 1,224 students participated in the study. Refractive errors were identified in 127 participants, resulting in an overall prevalence of 10.4%. Among these, 47 males (9.7% within males) and 80 females (10.7% within females) exhibited refractive errors. Notably, 55 participants (43.3%) were newly identified cases, and 47 participants (37%) underwent their first eye check-up. The occupational status of fathers primarily included businessmen (26.8%) and day laborers (22.0%), while most mothers were homemakers (80.3%). Among previously diagnosed cases, 29.2% reported not regularly using spectacles. The study revealed that myopia was the predominant refractive error (49.6%), with additional cases of amblyopia (10 cases), strabismus (4 cases), ocular injuries (12 cases), and eyestrain (54 cases). A significant proportion of students (61.4%) reported a lack of outdoor activities.

**Conclusions:** The findings underscore the effectiveness of Vision Corners in facilitating the early detection and intervention of refractive errors among school-age children. This study highlights the critical need for comprehensive eye care programs, including regular check-ups and access to corrective measures, to promote optimal visual health and enhance academic performance.

**Keywords:** Refractive Errors, Vision Corner, Visual Health, School Children

## **Sexual and Reproductive Health Care-Seeking Practices among Female Garment Workers in Dhaka, Bangladesh (24#88)**

*Rokhsana Yasmin<sup>1</sup>, Mohammad Delwer Hossain Hawlader<sup>2</sup>; Abu Sayed Mohammad Hasan<sup>1</sup>*

1. UNFPA, Bangladesh
2. North South University, Dhaka, Bangladesh

**Presenter:** Rokhsana Yasmin; Email: r Yasmin@unfpa.org

### **Abstract**

**Background:** The ready-made garments (RMG) sector is Bangladesh's largest export industry, employing approximately 4.2 million workers, with women comprising 85-90% of the workforce mostly coming from rural areas. Despite their significant contribution in the economy, they face numerous sexual and reproductive health (SRH) challenges, compounded by socioeconomic and occupational health issues posing barriers to achieving Sustainable Development Goals (SDGs).

**Objective:** To assess the sexual and reproductive health care-seeking practices among female ready-made garment workers in Dhaka, Bangladesh

**Methods:** This cross-sectional descriptive study targeted female garment workers aged 18-49 years living in the Mohammadpur area of Dhaka. A quantitative approach was employed, using snowball sampling to recruit participants. A sample size of 384 was determined by using a standard statistical formula. A structured questionnaire, developed through a literature review, was used for data collection via face-to-face interviews.

**Result:** The study surveyed 385 female RMG workers, with a mean age of 23.53 years (SD = 7.18). Most were economically "not solvent" (79.2%) and had primary education (71.4%). A majority (67.5%) were married, and 71.7% had married before 18 years of age and 43.4% had one child. Among 265 married respondents, 90.2% delivered via normal vaginal delivery. About 70% used family planning, mainly oral contraceptives (70.3%), and 46.8% used clothes for menstrual hygiene. A significant association was found between education and knowledge of family planning ( $\chi^2 = 44.1, p < 0.05$ ). Regarding health services, about 75% had sought healthcare in the last six months, mainly from pharmacies (59.7%). A significant association was observed between economic status and antenatal care ( $\chi^2 = 33.07, p < 0.05$ ).

**Conclusion:** The study highlights that female RMG workers face significant challenges to accessing SRH services due to poor working conditions, limited availability of healthcare, and early marriages. Education and economic status were linked to influence SRH practices. Collaborative efforts among government, NGOs, and stakeholders are needed to address these gaps. Further research is recommended to guide targeted interventions.

**Keywords:** Garment workers, Sexual and reproductive health, Healthcare-seeking behavior, Family planning, Antenatal care.

## **From Healing to Hostility: Investigating Medical Negligence and the Surge in Violence Against Doctors in Bangladesh (1#45)**

*Debjyoti Sarkar, Hasibul Hossain Sumon, Mumtahena Ferdousy*

North Western University, Khulna

**Presenter:** Debjyoti Sarkar, Email: debjyotiraja@gmail.com

**Background:** The healthcare system in Bangladesh faces two critical issues: rising medical negligence and increasing violence against doctors. While healthcare practitioners aim to uphold high standards of care, cases of medical malpractice persist. Simultaneously, violence against doctors, often perpetrated by patients' relatives, creates a climate of fear, affecting service quality and eroding public trust in healthcare providers.

**Methods:** This study examines the relationship between medical negligence and violence against doctors in Bangladesh. A qualitative approach was utilized, involving in-depth interviews with healthcare personnel, legal experts, and policymakers. The research focused on identifying gaps in existing laws addressing these issues and exploring how societal attitudes toward medical negligence hinder effective enforcement.

**Results:** Findings reveal significant deficiencies in the legal framework and its enforcement concerning both medical malpractice and violence against healthcare workers. Societal perceptions and lack of respect for medical practitioners exacerbate these problems, creating a volatile environment. This environment not only threatens the safety of doctors but also compromises patient care and public trust in the healthcare system.

**Conclusion:** The study emphasizes the need for comprehensive legal and policy reforms to protect healthcare providers while ensuring accountability for medical malpractice. Addressing these dual issues through effective legislation, societal education, and healthcare reforms can enhance public trust and create a safer, more reliable healthcare environment in Bangladesh.

**Keywords:** Medical Negligence, Violence Against Doctors, Healthcare System, Patients' Rights

## **Understanding of health status and utilization of health services among elderly people of ethnic community in a selected area of Bangladesh (1#14)**

*Fariha Haseen<sup>1</sup>, Pu Chaw Nu<sup>2</sup>, Umme Haney<sup>1</sup>, Hridi<sup>1</sup>, Nurjahan Akter<sup>1</sup> and Syed Shariful Islam<sup>1</sup>,*

1. Department of Public Health and Informatics, Bangabandhu Sheikh Mujib Medical University;
2. Former Divisional Director of Health, Sylhet, DGHS, Bangladesh

**Presenter:** Fariha Haseen, farihahaseen@bsmmu.edu.bd; far\_haseen@yahoo.com

**Background:** Bangladesh's demographic transition has resulted in a growing elderly population, raising concerns about healthcare accessibility for this group. Among ethnic elderly populations, these challenges are particularly pronounced. Understanding the health status and care needs of the ethnic elderly is crucial for developing elderly-friendly health systems

**Methodology:** A mixed-methods study was conducted between April and July 2024 in Ujaini Para, Municipality area of Bandarban District. A survey was done among 150 individuals aged 60 and above. The Katz Index assessed Activities of Daily Living (ADLs), and WHO's Stepwise approach evaluated chronic disease risk factors, the Geriatric Depression Scale-Short Form (GDS-SF) screened for depression, while anthropometric data and WHO guidelines diagnosed hypertension and diabetes. Twelve in-depth interviews with elderly participants provided qualitative insights into healthcare challenges and social support.

**Results:** Among 150 elderly individuals aged 68.5 years on average, 62% of participants were actively involved in daily household chores, with 30% of men also engaged in agricultural or religious duties. Health assessments showed that 58% of the elderly had hypertension, and 35% had diabetes. Interviews confirmed these chronic health challenges. Approximately two-thirds of respondents preferred seeking care from informal caregivers. Participants highlighted limited awareness of available services and expressed concerns over long waiting times. Additionally, financial barriers further limited access to health services despite their lower cost. In the survey, 91% of respondents reported harmonious relationships with neighbours, the qualitative finding also highlighted this view of mutual support, particularly in times of health crises.

**Conclusion:** The majority of respondents demonstrated physical activity; however, there prevalence of hypertension and diabetes mellitus, accompanied by low healthcare utilization. The findings highlight the need for targeted interventions, improved public healthcare services, and stronger community support systems to promote healthier, active ageing among marginalized elderly populations

**Keywords:** Health status, Health services, Elderly people, Ethnic community

## **Comparison on Knowledge on Health Insurance between Urban and Rural Elderly People (3#184)**

*Fahmida Faizha Shama, ANM Shamsul Islam, Khursheda Akhtar, Shashwati Saha Dristi, Md. Meshbahur Rahman*

National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka.

**Presenter:** Fahmida Faizha Shama, Email: fahmidafaizha72@gmail.com

### **Abstract**

**Background:** For elderly people, due to financial conditions, health service utilization is poor, their health problems, needs are also different from urban to rural settings, which can be helped by health insurance. The objective of the study was to compare the state of knowledge on health insurance between urban and rural elderly people.

**Design and Methods:** A comparative cross-sectional study was conducted among 208 (U: 104; R: 104) elderly people by face-to-face interview through a pre-tested structured questionnaire from January to December 2023.

**Results:** Most of the participants were male (U:63.5%; R:57.7%) with having 5-6 co-morbidities (U:4.1%; R:2%). About 60% urban and 50.5% rural respondents used monthly savings for health expenses. The term health insurance was known by 50% urban and 25% rural respondents. Among them, the source of information for 21.2% urban & 19.1% rural respondents was from insurance company. The highest number of urban participants had knowledge about types (U:37.5%; R:21.2%), duration (U:24.04%; R:15.3%), age limit (U:26%; R:21.2%), policy (U:46.2%; R:24%), coverage (U:39.4%; R:24%), premium (U:33%; R:18.3%), claim (U:39.4%; R:31%), maximum number of claim (U:29%; R:16.4%), deductible (U:18.3%; R:10%), coinsurance (U:18.3%; R:10%) and copay (U:12.5%; R:8%) than rural participants. Location, education and employment status were found to be significantly associated with knowledge.

**Conclusion:** Urban people were more knowledgeable than rural people and education and employment status played salient role to having knowledge. Findings of the study can help policymakers and health administrators to develop specific policies, programs for elderly people thus achieve universal health coverage. (U=Urban; R=Rural)

**Key words:** Knowledge, health insurance, urban, rural, elderly people

## **Gender discrimination in healthcare: A barrier to Sustainable Development in Bangladesh (05)**

*Nusratun Nahar<sup>1</sup>, Yesmin Begum<sup>1</sup>, Israt Jahan Bulbul<sup>1</sup>, Zebunnesa Ahmed<sup>1</sup>, Sabiha Ferdowsy Koly<sup>1</sup>, Fariza Tasnia<sup>2</sup>*

1. Department of Pharmacy, Southeast University, Dhaka -1208, Bangladesh.

2. Department of Biotechnology, BRAC University, Dhaka-1212, Bangladesh.

**Presenter:** Dr. Nusratun Nahar; Email: nusratun.nahar@seu.edu.bd

### **Abstract**

Gender discrimination in healthcare in Bangladesh represents a critical barrier to achieving sustainable development. Women face systematic biases that limit their access to quality healthcare, compounded by cultural norms, economic dependence, and restricted decision-making power. This discrimination manifests in key health areas such as maternal healthcare, reproductive health, and chronic disease management. High maternal mortality rates persist due to factors such as early marriage, limited access to skilled birth attendants, and inadequate maternity care facilities. Cultural taboos further limit access to essential reproductive health services like contraception and safe abortion, hindering women's ability to make informed decisions about their health. Additionally, women experience delayed diagnoses and poorer outcomes in chronic disease management compared to men, exacerbated by biases in medical research and caregiving responsibilities. Intersectionality amplifies these disparities, particularly for women in rural areas and from lower socioeconomic backgrounds. Rural women face reduced access to healthcare services, further widening health inequities. Despite policies targeting gender discrimination, ineffective implementation and limited resources undermine their success, leaving significant gaps in healthcare delivery. Addressing these challenges requires comprehensive reforms focused on integrating gender-sensitive policies into the healthcare system. Enhancing healthcare infrastructure, empowering women through education, and addressing the sociocultural barriers that inhibit health-seeking behaviors are critical. Gender-sensitive training for healthcare providers is also essential to ensure equitable treatment for all individuals.

Achieving gender equity in healthcare is not only a matter of human rights but also essential for sustainable development in Bangladesh. Gender-sensitive policies must be prioritized to empower women to access and benefit from healthcare services, ultimately contributing to the nation's development goals.

**Keywords:** Gender Discrimination, Health Inequities, Sustainable Development, Bangladesh, Gender-Sensitive Policies

## **The Hidden Costs of Stroke Treatment in Bangladesh: Are Public Hospital Expenses Truly Nominal? (6#80)**

*Sheikh Muhit Ahmed<sup>1</sup>, Md. Anjim Macsud<sup>2</sup>, Md Abdur Rafi<sup>3</sup>, Mohammad Jahid Hasan<sup>\*4</sup>*

1. Surgery Department, Dhaka Medical College Hospital, Dhaka, Bangladesh.
2. Medical Officer, Charbag Danga Union Health Center, Chapainawabganj-6300, Bangladesh,
3. Research Investigator, Pi Research and Development Center, Dhaka, Bangladesh.

**Presenter:** Sheikh Muhit Ahmed, Email: macsudanjim@gmail.com

### **Abstract**

**Background:** Although patients in Bangladeshi public hospitals are generally perceived to receive treatment free of charge, the actual costs may not be as minimal as assumed. Therefore, this study aimed to evaluate the true cost of treating stroke patients in public hospitals in Bangladesh.

**Methods:** The study, conducted over six months at Dhaka Medical College Hospital, involved 113 acute ischemic and hemorrhagic stroke patients.

**Results:** A total of 82 (72.6%) ischemic and 31 (27.4%) hemorrhagic stroke patients were included, with male predominance and a mean age of 62 (SD 15.2) years. The median out-of-pocket expenditure of patients for treatment was USD 313. The median medical, nonmedical, and caregiver (or attendant) costs were USD 133.95, USD 140.34, and USD 31.60, respectively. Major sectors for medical costs were medicine (USD 52) and investigations (USD 60), while nonmedical costs included informal expenses, including trolley, beds, and minor procedures such as catheterization and nasogastric tubing. Longer hospital distance (aOR-1.20, 95% CI 1.01-1.50, p-value 0.013), prolonged hospital stay (aOR-2.27, 95% CI 1.62-3.59, p-value <0.001), and hemorrhagic stroke (aOR-4.97, 95% CI 1.11-26.3, p-value 0.043) were associated with higher cost.

**Conclusion:** The study revealed that, despite government subsidies on hospital beds and medications, stroke patients in Bangladeshi public hospitals incur substantial costs due to auxiliary services, transportation, and nonmedical expenses. Longer hospital stays, distance, and hemorrhagic strokes were associated with significantly higher costs, highlighting the need for comprehensive financial support for patients.

**Keywords:** Stroke, public hospital, hidden cost, medical cost, nonmedical cost.

## Cesarean Section Dynamics in Bangladesh: Tradition, Transition, and SDGs-Driven Progress

*Kousik Biswas Arko<sup>1</sup>, Md. Mortuza Ahmmed<sup>2</sup>*

1. Department of Computer Science, American International University-Bangladesh, Dhaka,
2. Department of Mathematics, American International University-Bangladesh, Dhaka

**Presenter:** Kousik Biswas Arko; Email: 22-49234-1@student.aiub.edu

### Abstract

**Background:** In Bangladesh, Cesarean section (CS) birth has risen over the previous two decades and become a significant indicator of mother and baby health. This research explores temporal trends and variables that cause high cesarean section rates that challenge the accomplishment of maternal and child health in SDGs.

**Objective:** The objectives of this study are to investigate the association between rising rates of CS and other key health inputs and outcomes consisting of Maternal mortality rate, Infant mortality rate, Skilled birth attendant prevalence proportion, Health expenditures and socio-demographic characteristics, with a focus on rural and urban areas.

**Methods:** This cross-sectional study evaluated data on CS rates, maternal and infant mortality, hospital deliveries, and health investments on a nationwide basis for the year 2000, 2005, 2010, and 2020. Data were provided by reports from WHO and the Bangladesh health surveys. Trend analyses were carried out to study temporal changes and their relationship with health outcomes.

**Results:** Consequently, in Bangladesh, the rates of CS went up astronomically from 2.1% in the year 2000 to 33.1% in 2020, matching a gain with a reduction in maternal mortality by 59.4% and infant mortality by 60.6%. These include skilled birth attendance, whereby deliveries have gone up from 2.8% to 4.8% in hospitals, and health expenditure as a share of GDP. However, the proportion of high-risk pregnancies increased from 15% to 36%, and striking rural-urban disparities persist in CS rates. Policy interventions, particularly after 2010, contributed to moderate-to-high SDGs progress.

**Conclusion:** An increase in CS rates indicates better health outcomes for mothers and newborns. However, the increase in high-risk pregnancies and persistent urban-rural inequalities have targeted policy implications. On the other hand, policies regarding balancing CS practices and improving healthcare equity are issues that need to be considered if the SDGs are ever to be achieved in these areas.

**Keywords:** cesarean, maternal, infant, healthcare, disparities.

## **Assessing preparedness and response of Skilled Birth Attendants in handling PPH and Emergency Obstetric Care in a Tertiary Hospital (12#2)**

*Rita Rani Maitra, Biplab Halder, Sabita Rani Boral.*

Gournodi Upazila Health Complex; Maninganj Nursing College

**Presenter:** Biplab Halder; Email: nirabh.4@gmail.com

### **Abstract**

**Background:** Postpartum hemorrhage (PPH) is a critical obstetric emergency associated with vaginal birth and cesarean section, and along with hypertensive disorders of pregnancy, it remains one of the leading causes of maternal morbidity and mortality in developing countries.

**Objective:** This study aimed to assess the preparedness and response of skilled birth attendants in handling PPH and emergency obstetric care at a tertiary-level hospital.

**Method:** A descriptive cross-sectional study was conducted with a sample size of 203 respondents. The data were collected through structured questionnaires and analyzed to evaluate the knowledge and practices of skilled birth attendants in managing PPH.

**Results:** The study found that the majority of respondents (43.8%) were aged 41-50 years, with a mean age of  $42.41 \pm 8.439$ . Most were Muslim (47.3%) or Hindu (44.8%). PPH risk was suspected by 44.3% of respondents due to vaginal bleeding  $>500\text{ml}$  within 5 minutes after delivery. Additionally, 37.9% monitored blood loss by counting and weighing pads, and 34.5% by direct measurement using a kidney dish. Effective measures included administering Methergine (44.8%) and encouraging women to void urine every 2 hours (30.5%). The first response to PPH management for 54.7% of respondents was calling for help, while 54.7% recognized uterine massage as the third step. Importantly, all respondents had received training on PPH management.

**Conclusion:** This study highlights the need for continuous training and policy interventions to improve PPH management in Bangladesh, with a focus on strengthening the skills of birth attendants.

**Keywords:** Postpartum Hemorrhage (PPH), Skilled Birth Attendants, Emergency Obstetric Care.

**Barrier of medical terms and languages in receiving healthcare services:  
An exploratory study in Dhaka Medical College & Hospital (8#263)**

*Corresponding author and Presenter: Fazle Elahi Akbar  
Institute of Health Economics (IHE), University of Dhaka  
Email: fazlelahiakbar@gmail.com*

**Abstract**

**Background:** In receiving healthcare services in terms of Bangladesh phenomena, for the local patient's medical terms and languages are working as a barrier.

**Objectives:** The main objective of this study was to examine the barriers of medical terms and languages in receiving healthcare services and also to provide some policy recommendations.

**Methods:** A non-experimental, exploratory study using quantitative approach was conducted. By applying snowball technique, primary data was collected purposively from a sample of 50 patients in Dhaka Medical College & Hospital. A structured, pre-coded with closed-ended questionnaire was used in this study. MS Excel was used for statistical analysis.

**Results:** Among 50 patients, 72% (n=36) patients responded that doctors prescribe their prescriptions in English language whereas, the rest 28% (n=14) patients responded that it is in a mixture of Bangla and English language. Again, 56% (n=28) patients do not understand medical terms as well as medical languages used by doctors whereas, the rest 44% (n=22) somehow understand. And, 62% (n=31) patients think that their treatment process as well as in receiving healthcare services are being affected due to the medical terms and languages used by the doctors whereas, 38% (n=19) patients think that they are not being affected.

**Conclusion:** Policy makers should come to overcome this barrier by implementing sustainable interventions and policies.

**Keywords:** Barrier, healthcare, language, medical, patients.

## Association of The Peroxisome Proliferator-Activated Receptor Gamma Gene Pro12Ala Polymorphism in the Pathogenesis of type 2 Diabetes Mellitus in a Bangladeshi Population (#1)

*D. Manisha, Sumi Rani Debi, Ramendu Parial, Zahid Hassan, Liaquat Ali*

1. Eukaryotic Gene Expression and Function (EuGEF) Research Foundation Chittagong
2. Dept of Biochemistry and Molecular Biology, Jahangirnagar University, Savar, Dhaka-1342.
3. Dept of Biochemistry and Molecular Biology, University of Chittagong, Chittagong 4331,
4. Dept of Physiology and Molecular Biology, Bangladesh University of Health Sciences (BUHS),
5. Pothikrit Foundation, Paribag, Dhaka-1000

**Presenter:** D. Manisha

### Abstract:

**Background:** Peroxisome Proliferator-Activated Receptor Gamma (PPARG) belongs to the nuclear hormone receptor subfamily of transcription factors. The Pro12Ala Single Nucleotide Polymorphism (SNP) of PPAR-gamma 2, an isozyme of PPARG, has been associated with insulin resistance and type 2 diabetes mellitus (T2D). This study investigates the association of the Pro12Ala polymorphism in the pathogenesis of T2D in a Bangladeshi population.

**Design and Methods:** It is a case-control study, a total of 123 T2D patients and 161 healthy controls were recruited. Serum glucose was measured by glucose-oxidase method, lipids by enzymatic-colorimetric, SGPT by UV spectrophotometry, and insulin by ELISA methods. DNA was extracted using a FAVORGEN spin column blood DNA kit, and Pro12Ala polymorphism was investigated by PCR-RFLP.

**Results:** There was no significant difference in age, Body Mass Index (BMI), and blood pressure between T2D subjects and healthy controls. However, the mean waist-to-hip ratio (WHR) was significantly higher in T2D subjects ( $0.95 \pm 0.08$  vs.  $0.92 \pm 0.06$ ;  $p=0.001$ ). Additionally, T2D patients had significantly higher levels of triglycerides (TG), total cholesterol (T Chol) ( $p=0.001$  for both), LDL-C ( $p=0.028$ ), and SGPT ( $p=0.001$ ) compared to controls.

The Pro12Ala genotype and allele frequencies showed no significant association with T2D. However, the polymorphism was significantly associated with WHR, an obesity marker. The study did not find a significant impact of the Pro12Ala polymorphism on age, BMI, blood pressure, lipid profiles, creatinine, SGPT, fasting insulin, family history of diabetes, hypertension, or tobacco exposure.

**Conclusions:** The PPARG Pro12Ala variant may not be directly linked to hyperglycemia or hyperinsulinemia but could be associated with increased WHR, an obesity indicator related to T2D development.

**Keywords:** PPARG, hyperglycemia, T2D, obesity, polymorphism, PCR-RFLP

## **Identification of AMPK Activators from Fenugreek and Oyster Mushroom for Treatment of Type-II Diabetes (1#6)**

*Sanaullah Mazumdar*<sup>1</sup>, *Omar Faruque*<sup>2</sup>, *Md. Alauddin*<sup>3</sup>, *Md. Ruhul Amin*<sup>4</sup>, *Tanjum Kabir Khuku*<sup>5</sup>

<sup>1,2,3,4,5</sup>Department of Nutrition and Food Technology, Jashore University of Science and Technology – JUST, Jashore-7408, Bangladesh

**Presenter:** Sanaullah Mazumdar; Email: sanaullah.mazumdar.just@gmail.com;

### **Abstract**

**Background:** Oral antidiabetic drugs primarily stimulate pancreatic beta-cells, which, for a long time, may exhaust and fail to insulin secretion. AMP-activated protein kinase (AMPK) reduces blood sugar without stimulating beta-cells in non-insulin-dependent pathways.

**Objective:** The objective of the study is to find out AMPK activators through GC-MS and bioinformatic analysis of oyster mushroom and fenugreek seed powder.

**Methods:** In this experimental study we applied the water and ethanol extraction method to identify the fenugreek and oyster mushroom bioactive compounds by GC-MS analysis. Identified bioactive compounds from fenugreek and oyster mushrooms were molecular docked against the AMPK 211 by using the Autodock vina. SwissADME, PKCSM, and Data Warrior tools were used to analyze pharmacokinetics, drug-likeness, and toxicity. Molecular dynamic simulation was also used to assess the stability of the protein-ligand complex by Schrodinger's (Paid version) package program in "Desmond v3.6".

**Results:** The ester class of chemicals was the most prevalent among the detected compounds in fenugreek and oyster mushroom extracts. Fenugreek-extracted bioactive compounds showed higher binding affinity than oyster mushroom compounds. The maximum docking score was determined to be -9.0 kcal/mole in all molecular docking with hydrophobic, hydrogen bond, and electrostatic interaction exhibited. The pharmacokinetics and drug-likeness research revealed that most compounds met acceptable parameters and ranges for future AMPK activators. The lead compound drug score was higher than the control drug (glibenclamide). In molecular dynamic simulation, 1-Methyl-2-phenylbenzimidazole and 2',6'-Dihydroxyacetophenone, and N-Methylphthalimide exhibited less ligand and protein complex fluctuations than the control drug.

**Conclusion:** All the results point to 2',6'-Dihydroxyacetophenone, 1-Methyl-2-phenylbenzimidazole, and N-Methylphthalimide) as possible AMPK direct activators against Type-II diabetes in the non-insulin independent pathway. We suggested that both in vitro and in vivo research be done in the future.

**Keywords:** AMPK, Extraction, GC-MS, Bioactive compounds, Molecular docking, Simulation, Antidiabetic drug

## Advancing Sustainable Vegetable Production: "In Vitro Regeneration of Hybrid Squash (*Cucurbita pepo* L.) cv. First Runner from Cotyledonary Node Explants for Enhanced Nutritional Outcomes (#2)

Kishore Kumar Sarker<sup>1</sup>, Akhi Paul Chowdhury<sup>2</sup>, Fakhru Islam Monshi<sup>1</sup>, Homaira Jahan Sonom<sup>1</sup>, Narifa Nusrat<sup>3</sup>

- 1 Department of Genetics and Plant Breeding, Sylhet Agricultural University, Sylhet 3100, Bangladesh
- 2 Department of Agronomy and Haor Agriculture, Faculty of Agriculture, Sylhet Agricultural University, Sylhet 3100, Bangladesh
- 3 Department of Horticulture, Sylhet Agricultural University, Sylhet 3100, Bangladesh

**Presenter:** Kishore Kumar Sarker, kishore.gpb@sau.ac.bd

### Abstract

**Objective:** The study aimed to optimize an in vitro regeneration protocol for hybrid squash genotypes to establish a reliable method for plant regeneration that could be applied to various *C. pepo* genotypes for potential transgenic applications.

**Design and Methods:** The study optimized an in vitro regeneration protocol for hybrid *C. pepo* by testing various plant growth regulators, explant types, and AgNO<sub>3</sub> concentrations, demonstrating the highest shoot regeneration frequency with 5-day-old cotyledon explants on MS medium supplemented with 1.5 mg L<sup>-1</sup> BA, 0.2 mg L<sup>-1</sup> NAA, and 2.0 mg L<sup>-1</sup> AgNO<sub>3</sub>.

**Results:** The study developed an efficient in vitro regeneration protocol for hybrid *Cucurbita pepo* by optimizing plant growth regulators, explant types, and AgNO<sub>3</sub>. Cotyledon and hypocotyl segments on MS medium with 1.5 mg L<sup>-1</sup> BA and 0.2 mg L<sup>-1</sup> NAA induced callus and shoots, with 66.7% shoot production from 6-day-old cotyledons. Adding 2.0 mg L<sup>-1</sup> AgNO<sub>3</sub> increased shoot regeneration to 86.67% using 5-day-old cotyledons. Regenerated shoots had a 93.33% rooting frequency in medium with 0.1 mg L<sup>-1</sup> NAA, and acclimatized plantlets grew successfully in natural conditions.

**Conclusion:** The optimized in vitro regeneration protocol for hybrid squash genotypes can enhance the production of nutritionally rich squash varieties, potentially contributing to improved dietary diversity and public health outcomes.

**Keywords:** Squash, in vitro regeneration, cotyledon, hypocotyl, growth factors

## Musculoskeletal Health Problems among the Loom Weavers of Sirajganj District, Bangladesh (#6)

*Ankan Sanyal, Taslima Akber Happy, Bishal Ghosh, Muzahidul Islam Zahin, Samiur Rahman Akash.*

Khwaja Yunus Ali Medical College, Sirajganj, Bangladesh

**Presenter:** Ankan Sanyal, Email: ankan.eclipse@gmail.com

### Abstract

**Background:** The loom industry in Bangladesh significantly contributes 0.10% to the GDP and employs approximately 900,000 individuals. However, the repetitive movements, prolonged arm elevation, and inadequate back support often lead to musculoskeletal issues among the weavers. This study aims to assess the proportion of these health problems in selected regions.

**Design and Methods:** This descriptive cross-sectional study targeted weavers in northern Bangladesh, specifically in Enayetpur and Madhabpur villages of Sirajganj, involving 208 participants with a minimum of two years of working experience. A non-probability convenience sampling method was employed, and data were collected using a structured questionnaire covering socio-demographic information, working environment, and the Nordic Musculoskeletal Questionnaire to identify musculoskeletal issues.

**Results:** The findings reveal that most of the weavers were between 26 and 35 years (40%), predominantly male (96.2%), and earn between 10,000-15,000 BDT per month (48.1%). Most have completed secondary education (23.1%). Notably, 59.6% reported experiencing low back pain in the last 12 months, with 50% suffering from this pain within the week prior to the interview. This pain significantly hindered daily activities, affecting 44.2% of respondents' ability to perform routine tasks.

**Conclusions:** The study highlights a concerning prevalence of low back pain and other musculoskeletal issues among weavers, severely impacting their daily lives. Increased awareness and better healthcare provisions are essential for these workers. This study could be helpful further in policy making for their better livelihood.

**Keywords:** Loom, Weavers, Musculoskeletal, Bangladesh, Sirajganj

## **Behavioral risk factors of noncommunicable diseases among adolescent girls of selected school and college of Manikgonj district, Bangladesh (7#79)**

*Tahmina Akhter<sup>1</sup>, Palash Chandra Banik<sup>1</sup>, Halima Akter Sathi<sup>1</sup>, Nusrat Jahan Nipa<sup>1</sup>, Shahana Choudhury<sup>1</sup>,  
Md. Anower Hussain<sup>1</sup>*

<sup>1</sup>Bangladesh University of Health Sciences, Dhaka, Bangladesh

**Presenter:** Tahmina Akhter, tahminatania581@gmail.com

### **Abstract**

**Background:** Background: The burden of disease has significantly changed over the past 30 years, moving from communicable to chronic illnesses such non-communicable diseases (NCDs). All age groups (children, adults and elderly) are vulnerable to the risk factors that lead to NCDs, including poor eating habits, sedentary lifestyles, exposure to tobacco smoke.

**Objective:** The aim of the study was to determine the proportion of behavioral non-communicable diseases (NCD) risk factors among adolescent girls in Manikgonj district in Bangladesh.

**Methods:** A cross-sectional study was conducted in 2024 among adolescent school and college girls of Kaniz Fatema Girls School and College. All students from classes 6 to 12 were approached for inclusion in this study; 514 out of 640 agreed (response rate: 80.3%). Primary data related to socio-demographic, behavioral information such as smokeless tobacco use, dietary habit, physical activity, habit of adding extra salt and frequency of salty processed food consumption were collected using a semi-structured questionnaire. Behavioral factors related questions were adapted from STEP-wise approach to surveillance (STEPS) of Non-communicable diseases risk factors questionnaire of WHO. Ethical approval for the study was obtained from the Ethical Review Committee of Bangladesh University of Health Sciences.

**Results:** The mean age of participants was  $14.1 \pm 2.1$  years. About 78.6% (95% CI, 75.1-82.1) of the respondents were from school. More than two-thirds (76.7%; 95% CI, 73.0-80.4) of the respondents' intake inadequate amount of fruits and vegetable compare to WHO recommendation (<5 servings/day). More than one-third (34.6%; 95% CI, 30.5-38.7) of the respondents consume extra salt per day and most (94.2%; 95% CI, 92.2-96.2) of the respondents reported consuming fast-food frequently. Overall, only 1.8% (95% CI, 0.7-2.9) respondents used smokeless tobacco. More than two-fifths (42.8%; 95% CI, 38.5-47.1) of the respondents were physically inactive. Fruits and vegetables intake of the respondents was significantly associated with their educational level and age group ( $p=0.001$ ); fast-food intake ( $p=0.01$ ) and physically inactivity ( $p=0.02$ ) were also significantly associated with educational level of the respondents.

**Conclusion:** Behavioral risk factors of noncommunicable diseases were fairly high among the school and college adolescent girls in Manikganj district of Bangladesh that warranted an especial attention.

**Keywords:** Non-communicable diseases, Behavioral risk factors, Adolescent, Bangladesh

## **Prevalence of Hypertension and Associated Risk Factors Among the Patients with Stroke treated in a Tertiary Hospital in Bangladesh (13#114)**

*Mahabuba Afrin<sup>1</sup>, K. A. T. M. Ehsanul Huq<sup>1</sup>, Sharif Uddin Khan<sup>2</sup>, Subir Chandra Das<sup>2</sup>, Michiko Moriyama<sup>1</sup>*

Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan

1. National Institute of Neurosciences & Hospital, Dhaka, Bangladesh

**Presenter:** Mahabuba Afrin; Email: mahabuba.a32@gmail.com

### **Abstract**

**Background:** Hypertension is a significant risk factor for stroke and poses a substantial public health burden especially in low- and middle-income countries. This study examined the prevalence of hypertension and associated risk factors among stroke patients in a tertiary hospital in Bangladesh.

**Methods:** This study utilized data from a randomized controlled trial (RCT) conducted at the National Institute of Neuroscience & Hospital (NINS&H) in Dhaka, Bangladesh. Stroke patients at their first attack, aged 18 years and above and who provided written informed consent were enrolled in this study. Data were collected by using a validated structured questionnaire between October 2022 and February 2023. We analyzed socioeconomic data including age, sex, marital status, occupation, education, residence and smoking habit of the stroke patients.

**Results:** This study enrolled 432 first-attacked stroke patients; 72.9% of them had hypertension and it was higher among the male participants (60%). Univariate analysis identified the risk factors for hypertension included aged >55 years [unadjusted odds ratio (OR) 1.71; 95% confidence interval (CI) 1.11-2.64; p= 0.016], male (OR 0.59; 95% CI 0.37-0.93; p= 0.025), smoking habits (OR 0.61; 95% CI 0.34-0.82; p= 0.005). In multivariable analysis showed aged >55 years (OR 1.75; CI 1.11-2.75; p = 0.015), and rural residence (OR 0.61; 95% CI 0.37-1.33; p= 0.043) were significantly associated with hypertension in first-time stroke patients.

**Conclusions:** This study highlights a high prevalence of hypertension among the first-time stroke patients in Bangladesh. Age, smoking and rural areas were the key risk factors identified for hypertension for those who had stroke. These findings underscore the importance of addressing modifiable lifestyle factors such as smoking to reduce the risk of hypertension and subsequent strokes. Future studies will explore the longitudinal effects of interventions within the ongoing RCT.

**Keywords:** Hypertension, Stroke, Risk Factors, Bangladesh

## Frequency and causes of non-adherence to anti-diabetic drugs among type-2 diabetic patients attending the non-communicable disease (NCD) corner of Upazila Health complex (14#130)

*Sabrina Jahan Mily, Nabila Islam, Rinku Rani Sen, Sharmina Afrin, Sheemu-Khairun, Neesa Anne*

1. Institute of Epidemiology, Disease Control and Research (IEDCR), Dhaka 1212, Bangladesh
2. Upazila health complex, Chatkhil, Chattogram
3. National Institute of Traumatology & Orthopaedic Rehabilitation, Dhaka
4. National Institute of Neurosciences & Hospital, Dhaka
5. Upazila health complex, Shibchar, Madaripur

**Presenter:** Sabrina Jahan Mily, Email: [sabrina.cmc88@gmail.com](mailto:sabrina.cmc88@gmail.com)

### Abstract

**Background:** According to the World Bank, In Bangladesh, there are 13,136,300 cases of diabetes in adults with a 12.5% prevalence.

**Objective:** To explore the frequency of non-adherence to medication among Type 2 diabetic patients and determine associated factors.

**Methods:** This cross-sectional study was conducted from August 13th to August 18th, 2024. Sample was selected using convenient sampling and data were collected through face-to-face interviews. The study took place at the NCD corners of Debhata Upazila Health Complex in Satkhira, Koshba Upazila Health Complex in Brahmanbaria, Shibchar Upazila Health Complex in Madaripur, and Sreepur Upazila Health Complex in Gazipur. The study population consisted of adult type 2 diabetic patients attending the Upazila health complexes at non-communicable disease corner (NCD). Non-adherence to medication was defined as patients not taking their prescribed medications as directed by their healthcare providers. This could include not taking the medication at all or skipping doses. Descriptive analysis was performed using STATA 17. Informed written consent was obtained from every patient.

**Results:** Out of total 77 patients, 57% were male with a median (IQR) of 50 (43.5-57) years. Around 60% have a monthly income of less than 15000 tk, and 30% have no formal education. The majority of patients have had diabetes for 1 to 5 years. Nearly 55% took oral medication, 10% took insulin, and 32% took both. About 81% have a history of non-adherence to anti-diabetic medication, with the main reasons being the cost of medication (30%), forgetfulness (25%), side effects (15%), and lack of perceived benefits (14%). Some patients (10%) believe herbs are more effective than medication for diabetes and around 6% feel emotional distress in taking daily anti-diabetic medication.

**Conclusion:** The results show that individuals with lower socio-economic status and limited education face significant challenges in terms of adhering to their medication.

**Keywords:** T2 Diabetes Mellitus, anti-diabetic drug, non-adherence, Upazila health complex

## Prevalence and Risk Factors of Chronic Kidney Disease (CKD) among Patients with Type 2 Diabetes Mellitus (T2DM) (16)

*Afsana Meli*

Student, Department of Public Health, American International University-Bangladesh

**Presenter:** Afsana Meli, Email: afsanameli@gmail.com

### Abstract

**Background:** Type 2 diabetes is a global health threat, leading to Chronic Kidney Disease (CKD) in many patients. CKD, which affects 10–15% of the world population, increases the risks of mortality and cardiovascular issues, especially in those with diabetes. Diabetes is the leading cause of end-stage renal disease, with diabetic kidney disease now a serious global health and economic burden, particularly in low-income countries.

### Objective:

The purpose of the study is to find out the prevalence and risk factors of chronic kidney disease (CKD) among patients with type 2 diabetes mellitus (T2DM).

**Methods:** A Descriptive Cross-sectional Study was carried out in this study. A total data of 106 patients were collected by face-to-face interview and analyzed by descriptive statistics using SPSS 26.0.

**Results:** A total of 106 patients were included in the study. Among them 50% were male and 50% were female. Most of them were in the age range of 41-55 (50.0%). Most of the BMI range was 18.5-24.9 (52.8%). Among them 24.5% had CKD and 75.5% had no CKD. Greatest number of CKD was found in male and in the age range 56-70.

**Conclusion:** Based on the result of this study, different socio-demographic, lifestyle, works and disease related factors appear to be associated with the prevalence of CKD among T2DM. Consequently, it is important that prevention programs consider all these associated to reduce the frequency of CKD among T2DM patients and improve their overall lifestyle. Although there is evidence to support a connection between CKD and T2DM, additional research is needed to better understand this relationship and their possible implications.

**Keywords:** CKD, DM, T2DM, eGFR, DKD.

## Microbiological Surveillance of Air and Environmental Samples in Operation Theatres in a Tertiary Care Hospital in Bangladesh (#5)

Dr. Azizun Nahar, Dr. Sohely Sharmin

Bangladesh Medical College, Dhaka

**Presenter:** Dr. Azizun Nahar

### Abstract

**Background:** Microbial contamination in hospital environment, especially the operation theatre is a major cause for healthcare associated infection.

**Objective:** The aim of this study was to determine the microbial contamination of air in the OT and to identify microbial contamination of surface and equipment in the operation theatre of a teaching hospital in Dhaka, Bangladesh.

**Material & methods:** The study was conducted in the department of Microbiology, Bangladesh Medical College between May and July 2021. A total of 66 microbiological samples were collected from two operation theatres of BMCH of Dhaka, Bangladesh. The evaluation of microbial contamination in operating theatres was performed using two sampling method. Settle plate method was used for assessment of air and the swab method for assessment of surfaces. Air and surface samples were taken randomly without prior discussion with the staff from empty operation theatre. **Air sample collection, transport and processing** - During air sampling sterile gloves, mouth mask and protective gown were worn to prevent self-contamination of the blood agar plate. Standard operating procedures were followed and bacterial load was monitored by the settle plate method. The microbial air contamination was measured by counting the number of CFU (Colony Forming Unit) per cubic meter (CFU/ m<sup>3</sup>) of air using Omeliansky formula. **Surface sampling** - Sterile swab sticks soaked in nutrient broth were used for sample collection. Samples were collected from different sites of OT and equipment's of OTs of the hospital. After collection, all the samples were labeled properly and transported immediately to the Microbiology laboratory for processing. Inoculation was done on blood and Mac Conkey agar plates, and the plates were incubated at 37°C for 24 hours under aerobic condition. Bacterial species were identified by conventional method. Statistical analysis was done by using SPSS version 20.

**Results:** The bacterial CFU/m<sup>3</sup> counts of air from all OTs ranged from 28 CFU/m<sup>3</sup> air to 33 CFU/m<sup>3</sup>. A total 66 swab samples were taken from operation theaters with 9(13.64%) bacterial contamination rate. *Coagulase Negative Staphylococcus* (CoNS) accounts for 4(6.06%) followed by *Bacillus* spp. 3(4.54%), *Pseudomonas* spp. 1(1.52%); and *Enterobacter* spp. 1(1.52%). Satisfactory samples were 86.36%. Samples collected from different sites of operation theatres and culture positive sites are OT table, OT floor, and suction apparatus. Isolated organisms are *Pseudomonas* spp. & *Enterobacter* spp.

**Conclusion:** Microbiological quality of air and surfaces in OTs of BMCH is satisfactory with low bacterial contamination. Though the percentages of *Pseudomonas* & *Enterobacter* spp. were low but concealing the potential pathogen in OT can give rise to a great risk to patients. Periodic regular microbiological surveillance of the environment of OT is essential to detect and control contamination.

**Keywords:** Microbiological, Surveillance, Environmental Samples, Operation Theatres, Tertiary Care Hospital.

## Investigation Of Biofilm-producing Methicillin-resistant *Staphylococcus Aureus* In Raw Beef And Ready-to-eat Foods In Bangladesh: Public Health Implications (#6)

Fahmida Jahan Fahim<sup>1</sup>, Sohel Rana<sup>1</sup>, Rimi Das<sup>1</sup>, Kulsum Chowdhury<sup>2</sup>, Monira Noor<sup>3</sup> and Ferdaus Mohd Altaf Hossain<sup>1</sup>

1. Department of Dairy Science, Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet, Bangladesh
2. Food and Agriculture Organization, Dhaka 1207, Bangladesh
3. Department of Pathology, Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet, Bangladesh

**Presenter:** Fahmida Jahan Fahim, Email: ahmida.vabs@student.sau.ac.bd

### Abstract

**Objective:** This study aimed to identify and characterize biofilm-producing *Staphylococcus aureus* isolated from raw beef and ready-to-eat (RTE) food samples collected from city corporations in Gazipur and Dhaka.

**Design and Methods:** A total of 240 samples—60 raw beef and 60 RTE samples—were obtained, 120 from each city corporation. In order to determine the safety margin limit, these samples were screened for the presence of MRSA, had their toxin profiles created, and had their biofilm-forming genes (*icaA*, *icaB*, *icaC*, and *icaD*) characterized.

**Results:** The findings revealed that *Staphylococcus aureus* (*nuc* gene) was present in 167 out of 240 samples, with CFU counts exceeding the safety limits set by the Bangladesh Food Safety Authority. Methicillin-resistant *Staphylococcus aureus* (MRSA) was identified in 40.83% of the total samples, all of which showed resistance to multiple antibiotics. Additionally, Staphylococcal enterotoxin SEa was detected in 45.79% of samples, followed by SEd (24.39%) and SEb (20.57%), while TSST-1 was found in only 2.81% of the total samples. Furthermore, most of the isolates exhibited the ability to form biofilms and carried the *icaA* (65%), *icaD* (61%), *icaC* (50%), and *icaB* (48%) biofilm-associated genes.

**Conclusion:** These findings underscore the urgent need to strengthen food safety protocols. Monitoring MRSA within the beef supply chain and enforcing strict hygiene practices are essential to reduce the risk of MRSA colonization and the spread of biofilm-producing strains.

**Keywords:** Foodborne pathogens, multidrug resistance, prevalence, raw beef, ready-to-eat samples

## Rising Trends in Antimicrobial Resistance: A Five-Year Retrospective Analysis at a Tertiary Care Hospital in Bogura, Bangladesh (7#82)

*Fahim Uddin Ahmad<sup>1</sup>, Nazmus Subha<sup>1</sup>, Shohana Sharmin<sup>1</sup>, Jafrin Sultana Juthi<sup>2</sup>*

1. Department of Microbiology, TMSS Medical College, Bogura
2. Department of Periodontology and Oral Pathology, TMSS Medical College, Bogura

**Presenter:** Fahim Uddin Ahmad

### Abstract

**Background:** Antimicrobial resistance (AMR) has emerged as a global health threat, complicating the treatment of common infectious diseases and leading to increased mortality. This study aimed to analyze trends in antimicrobial resistance over a five-year period in a tertiary care hospital to assess the evolving challenge of drug-resistant organisms and inform future treatment protocols.

**Methods:** This retrospective study analyzed data from clinical specimens collected between 2018 and 2023. Microbiological testing included culture and antimicrobial susceptibility testing using standard procedures. Specimens from various sources (blood, urine, pus, and wound swabs) were included. A total of 1,250 samples were processed, and resistance patterns were evaluated for key pathogens such as *Staphylococcus aureus*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*. Data were analyzed using SPSS software, with descriptive statistics and trends in resistance rates over time.

### Results:

Over the five years, the prevalence of multidrug-resistant organisms (MDROs) increased significantly. For *Staphylococcus aureus*, methicillin resistance rose from 32% to 45% ( $p < 0.01$ ). Similarly, resistance rates for *E. coli* to cephalosporins increased by 25%. A notable rise was also seen in carbapenem-resistant *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*, with resistance rates increasing by 18% and 20%, respectively. The overall antimicrobial resistance rates increased by 12% across all organisms over the study period.

**Conclusions:** The findings demonstrate a concerning rise in antimicrobial resistance in the hospital setting, particularly among commonly isolated pathogens. These trends underscore the urgent need for improved infection control measures, judicious use of antibiotics, and the development of new therapeutic options to manage resistant infections effectively.

**Keywords:** Antimicrobial resistance, multidrug-resistant organisms, tertiary care hospital, infection control, antibiotic stewardship

## Impact of the Covid-19 on Medicine production, Export and Import: Bangladesh (9#259)

*Priom Barua,<sup>1</sup> Md. Mortuza Ahmmed<sup>2</sup>*

1. Department of Electrical & Electronics Engineering, American International University Bangladesh, Dhaka 1229, Bangladesh
2. Department of Mathematics, American International University-Bangladesh, Dhaka 1229, Bangladesh

**Presenter:** Priom Barua, Email: 22-47435-2@student.aiub.edu

### Abstract

The first case of Covid-19 was identified on 8<sup>th</sup> March 2020 and confirmed by IEDCR. After that the number of affected people increased day by day. This analysis will focus on the impact of Covid-19 on medicine production. Also, this will include export and import data analysis too. The aim of this study is to provide reliable information about the consumption of medicine by general people after Covid-19. This will help doctors and other medical sectors to predict the cause of various diseases. Organizations related to public health will be more concerned by this analysis.

All data are collected by secondary data analysis method. And the datasheet contains data about 13 to 15 years, till 2023. Those data contain information about local production, import and export of drugs. There is a noticeable change in statistics from 2020. It means after outbreak of Covid 19, Bangladesh medicine sector confronted a notable change in their production. This analysis is based on that change and tried to raise an important health issue, related to public health.

The collected data shows that the local production of drug was 97976.74 million (TK) in 2019- 2020 year. But the next year it increased by an extensive amount which is 17500780.12 million (TK). The increase rate is higher than 100 percent. This similar amount is noticed till 2023. When import and export production was taken into consideration, there was noticed a decrease rate in 2020. As a result, this analysis can predict the medicine consumption by public of Bangladesh.

The key finding of this study is the post-COVID effect. Form the statistics data, it is clear that people of Bangladesh consuming more medicines after the Covid. This analysis concludes that, people of Bangladesh are infected by various diseases which is due to the post-Covid effect or effect of Covid vaccinations.

**Keywords:** Covid-19, Medicine, Production, Consumption

## Rickettsial Fever as an Emerging Infectious Disease in Northern Region of Bangladesh (10#212)

*Md. Zakir Hossain<sup>1</sup>, Ahmed Al Montasir<sup>2</sup>, Karma Dicky Sherpa<sup>3</sup>, Fahim Ahmed<sup>4</sup>, Nilufa Yeasmin<sup>5</sup> and Bishnu Dhakal Sharma<sup>6</sup>*

1. Principal, Prof. & Head, Department of Medicine, TMSS Medical College, Bogra, Bangladesh
2. Resident Physician, Department of Medicine, TMSS Medical College, Bogra, Bangladesh
3. Final year student, TMSS Medical College, Bogra, Bangladesh
4. Associate Professor, Department of Microbiology, TMSS Medical College, Bogra, Bangladesh
5. Department of Medicine, Shahid Ziaur Rahman Medical College, Bogra, Bangladesh
6. Lumbini Provincial hospital, Nepal

**Presenter:** Karma Dicky Sherpa Final Year student, TMSS Medical College, Bogura.

Email: karchendicky@gmail.com

### Abstract

**Background:** Rickettsial infections caused by a variety of obligate intracellular Gram negative bacteria, are an emerging zoonotic disease in Bangladesh. They cause typhus and spotted fever. Most of the cases of Rickettsial fever are undiagnosed because of clinical challenges. Serology is the mainstay of laboratory diagnosis to diagnose these infections in adults and children.

**Objective:** This study aims to determine the prevalence of Rickettsial fever in patients who presented with fever in a tertiary care hospital in the northern region of Bangladesh.

**Methods:** This cross-sectional study involved 675 fever patients (fever  $\geq 7$  days) not on antibiotics, conducted from September 2023 to August 2024. Convenience sampling was used among OPD patients at TMSS Medical College. We collected blood and urine from patients. Diagnostic tests included blood count, Weil Felix test, Widal test, Brucella agglutination, and chest X-ray.

**Results:** Among 165 positive cases, 67% were male and 33% were female, age ranging from 16-75 years, with 42% falling into the age group 16-30 years, followed by 36.37% in 31-45 years, 18.18% in 46-60 years, and 4.24% in 61-75 years. All 165 Rickettsia-positive cases had a fever lasting longer than 7 days. The other presenting symptoms were headache (72.72%), bodyache (75.76%), rash (30.30%), cough (12.12%), and nausea (9.09%). The Weil-Felix test yielded positive results in 165 cases (24.4%) and negative results in 510 (75.56%) of the 675 samples. We found different titres in 165 positive samples. There were 155 patients with titre 1:160, 5 patients at titre 1:320, and 5 at titre 1:640. The group with the highest prevalence of antibodies was Spotted fever (87.87%), followed by Scrub typhus (6.06%) and Typhus fever (1.03%). In 5 cases (3.03%), more than one Rickettsial group affected patients tested positive.

**Conclusion:** Rickettsial infections are frequently yet underrecognized cause of febrile illness in our country. It is important to correctly diagnose and treat these infections quickly as they are associated with high mortality and morbidity. Clinical guidelines should be revised so that local clinician can diagnose rickettsial fever promptly and provide appropriate antibiotic therapy.

**Keywords:** Rickettsial fever, Emerging disease, Northern region, Weil - Felix test.

## Geospatial distribution of HIV seroprevalence among blood donors in South Asian countries: a systematic review, meta-analysis, and choropleth mapping (15#133)

Ahsan Raquib<sup>1,2†</sup>, Afia Salman<sup>3</sup>, Amna Zia<sup>3</sup>, Firoj Al-Mamun<sup>2,6,7</sup>, Yasmeen Shaikh<sup>3</sup>, Radwan Raquib<sup>2,4</sup>, Farhana Raiyen Khan<sup>5</sup>, and Mohammed A Mamun<sup>2,6†</sup>

1. Department of Health Management, Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PEI, Canada
2. CHINTA Research Bangladesh, Dhaka, Bangladesh
3. Dow University of Health Sciences, Karachi, Pakistan
4. Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet, Bangladesh
5. Faculty of Health Sciences and Wellbeing, University of Sunderland, Sunderland, UK
6. Department of Public Health & Informatics, Jahangirnagar University, Savar, Dhaka 1342, Bangladesh
7. Department of Public Health, University of South Asia, Dhaka, Bangladesh

**Presenter:** Radwan Raquib; Email: ahsanriad02@gmail.com

### Abstract

**Background:** The reliance on replacement blood donors in developing countries has led to an increased prevalence of transfusion-transmitted infections (TTIs), including HIV. This systematic review and meta-analysis aimed to assess the seroprevalence of HIV among blood donors in South-Asian countries and depicted the findings in choropleth maps. In addition, gender-specific prevalence or the yearly trend of HIV prevalence among blood donors was also investigated.

**Methods:** The authors conducted an online literature search of articles published between January 2000 to August 2022. A total of 120 studies were included in the final analysis. The extracted data were analyzed using RStudio version 4.1.0. The DerSimonian-Laird effect model was applied owing to the high heterogeneity of the data.

**Results:** This systematic review and meta-analysis included 138 studies with a total of 9,437,559 participants. The pooled seroprevalence of HIV among blood donors in South Asian countries was found to be 0.13% (I<sup>2</sup>=99%), with the highest prevalence of 0.19% in India (I<sup>2</sup>=98.5%) and the lowest prevalence of 0.02% in Bangladesh (I<sup>2</sup>=88.2%) and Bhutan. Female blood donors had a higher seroprevalence than their male counterparts (0.24%, I<sup>2</sup>=98.2% vs. 0.17%, I<sup>2</sup>=99.4%). In contrast to voluntary blood donors with an HIV seroprevalence of 0.13% (I<sup>2</sup>=98.3%), replacement blood donors have a higher HIV prevalence of 0.26% (I<sup>2</sup>=97.9%). The observed high heterogeneity was attributed to variations in country, gender, type of blood donors, and study year.

**Conclusion:** Higher HIV seroprevalence is observed in replacement blood donors, predominantly in female donors in South Asian countries. This can be countered by promoting screening methods, encouraging voluntary blood donations, and increasing knowledge about donor health and TTIs.

**Keywords:** HIV; HIV seroprevalence; Blood donors; Transfusion-transmitted infections

## Genetic Influence of Urinary Tract Infection: Progression and Prevention of Chronic Kidney Disease (36#226)

*Chowdhury Md Navim Kabir*

Emergency Department, Sarkarai Karmachari Hospital, Dhaka

**Presenter:** Chowdhury Md Navim Kabir, Email: protik167@gmail.com

### Abstract

**Background:** Chronic Kidney Disease (CKD) is one of the most rising non-communicable diseases now a days. Besides some visible comorbidities, long standing Urinary tract infection (UTI) and its genetic predisposition become significant. So preventive perspective is gradually highlighted as a burning issue.

**Methods:** In time period from February 2023- August 2023, 75 patients (female) with age range of 35-47 years came with complaint of loin pain, low grade fever with lethargy (from last 1-1.5 years) with no significant co-morbidities 37 patients having history of late voiding with rest of family history of UTI. Serum creatinine with eGFR, complete blood picture and other investigations given for further study and follow up.

**Results:** After 1 month follow up, 45% patients s.creatinine found in the range (1.8-3.5)mg/dl. 35% patients in (4- 6.5)mg/dl, rest of the patients found significant symptoms for hemodialysis to be relieved. 39% of patients of above two groups who had history of late voiding with positive family history of UTI. This group has been advised to start quick voiding as well as to maintain post coital hygiene (for married women) for 6 months until next follow up. Dramatically 33 patients' creatinine level fall (0.15- 1.37)% who had a history of both family evidence and late voiding. The creatinine level fell 0.09-0.75% in positive family history.

**Conclusion:** Though the rate of decrease of creatinine in positive family history of UTI is not so satisfactory as its prevention based upon early voiding habit, screening of positive family history may be helpful to slow the rate of progression of Chronic Kidney disease.

**Keywords:** S.creatinine, eGFR, UTI, Genetic predisposition, Hemodialysis.

## Hepatitis B vaccination status and its uptake barriers among health science and allied health students in Dhaka city (3#117)

*Mifty S. K.1, Dewan F.2, Hassan R. W.3, Shuhada S.4, Timu T.5, Raisa A.6, Mohammad S.7, Uddin A.8*

Affiliation: Dhaka Medical College; Community Based Medical College, Bangladesh ; Shaheed Suhrawardy Medical College; Dhaka National Medical College; Mugda Medical College; Z. H. Sikder Women's Medical College

**Presenter:** Mifty S. K; Email: sumayamifty96@gmail.com

### Abstract

**Background:** Hepatitis B is one of the life threatening liver diseases worldwide which can lead to liver cirrhosis and Hepatocellular carcinoma. Bangladesh shows intermediate levels of Hepatitis B infection and, due to increased occupational hazards like Needle Stick Injury (NSI), the Health Care Workers(HCW) are at great risk of getting exposed to HBV infection. The health and allied science students, as the future healthcare professionals, are expected to deal with hepatitis B virus infected patients. More importantly, in Bangladesh, they are also exposed to these patients during their ward schedule from 3rd year of medical, dental and nursing college onwards, and in Dhaka city, there is high incidence of Hepatitis B positive cases.

**Objective:** This study will assess the vaccination status among the medical, dental and nursing students and identify the barriers that hinder the uptake of this vaccine in Dhaka city.

**Methods:** The study will be a descriptive type of cross sectional study. The target population will be current medical, dental and nursing students of Dhaka city. Using online sample size calculator, the estimated sample size will be 380 and will be selected through a convenient sampling technique. Data will be collected for 15 days by Online pretested semi structured questionnaires from the 1st to current 5th year medical and dental students and 1st-4th year BSc Nursing students of Dhaka city after taking consent. Data will be analyzed by the SPSS version 27.

**Expected Outcome:** A real time Hepatitis B vaccination status among the health science and health allied students in Dhaka city who are always a risk group.

**Conclusion:** The study findings will be used to recommend measures to address the barriers, improve vaccination rate, and implement change in policy level, eventually reduce occupational hazards responsible for hepatitis B infection.

**Keywords:** Prevalence, Hepatitis B vaccination, Hepatitis B infection, Medical students, Dental students, Healthcare workers, Nursing students, Bangladesh.

## Epidemiology of Student Injuries During Anti-Quota Protests in Bangladesh (7#98)

Hasnat M Alamgir<sup>1</sup>, Afrin Nur<sup>1</sup>

<sup>1</sup>Department of Pharmacy, Southeast University, Tejgaon, Dhaka, Bangladesh.

**Corresponding Author:** Prof. Dr Hasnat M Alamgir. Department of Pharmacy, Southeast University, Tejgaon, Dhaka-1208, Bangladesh.

Email: hasnat.md.alamgir@gmail.com , Phone Number: 01891785190

**Background:** The anti-quota movement initiated and led primarily by university students in Bangladesh led to a large number of injuries and fatalities as the government cracked down with full force on them. This movement, triggered by a discriminatory job quota system, led to a full-blown anti-government movement that ousted the then-dictatorial government of Bangladesh. The violence during the movement, according to initial reports, resulted in 757 fatalities and 22,200 injuries. The research documents the epidemiology of non-fatal student injuries using data from a university-based student population.

**Design and method:** An online questionnaire was developed to gather comprehensive data from 63 injured students of a leading and large private university in Bangladesh. The students from this university actively participated in the movement and suffered the loss of lives of four students. Data were collected from the injury victims on the location, date, type, and severity of injuries. Subsequently, in-depth interviews were conducted with a randomly selected group of these students to gather additional data on hospitalization, treatment, financial losses, and mental health impact.

**Result:** The quantitative analysis revealed that the peak of student injuries during the anti-quota protests occurred on July 18th, accounting for 51.85% of the studied cases. Mohakhali, Tejgaon, Mirpur, Uttara, Rampura, and Dhanmondi emerged as hotspots for injuries. Rubber bullets were the main cause of injuries, affecting the head (17.31%), face (17.31%), legs (11.54%), and eyes (9.62%). The qualitative portion of the study revealed that 17 of the 20 interviewed students had completed their treatment at private and government hospitals and did not need further care.

**Conclusion:** Studies on intentional violence against students during an anti-government movement are rarely conducted and are found in scientific literature. This study, by describing the location, date, type, and severity of injuries, highlights the health status and healthcare needs of student victims in a developing country to draw the attention of healthcare providers and policymakers to find ways of non-violent interventions during movements and preparing effective trauma-related health services.

**Keywords:** Quota, Discriminatory, Triggered, Violence, Trauma, Injury, Bangladesh.

## Workplace Facilities and Job Stress among Dental Surgeons between Public and Private Tertiary Hospitals (8#110)

Mimuna Ahmed<sup>1</sup>, Nasreen Farhana<sup>2</sup>

1. NIPSOM, Mohakhali, Dhaka-1212, Bangladesh.
2. Associate Professor, Department of Microbiology and Mycology, NIPSOM, Mohakhali, Dhaka-1212, Bangladesh

**Presenter:** Mimuna Ahmed, Email: nas.farhana19@gmail.com

### Abstract

**Background:** Job stress is a prevalent issue affecting the psychological and physiological well-being of healthcare professionals. The objective of the study was to compare the workplace facilities of dental surgeons in public and private tertiary hospitals, as well as their levels of job stress and the variables that contribute to it.

**Methods:** A comparative cross-sectional study was conducted among 316 dental surgeons in two public and two private hospitals in Dhaka. Using purposive sampling, data were collected through face-to-face interviews, self-administered pre-tested questionnaires, and facility checklists. Job stress was measured with the Perceived Stress Scale (PSS-10), and data were analyzed using descriptive statistics and relevant tests.

**Results:** Most respondents were female (public: 57%, private: 58%) and aged 21-30 years (public: 54%, private: 58%). Moderate stress was prevalent among (public, 92%; private 82%). dental surgeons (public, 41%; private, 49%) felt that their time was divided between work and family. Most respondents (public, 85%; private, 83%), were non-smokers. Key determinants for patient-related stressors were patient management (public, 53%; private, 42%) and workload (public, 44%; private, 39%). Common stress reactions included irritability (public, 46%; private, 38%) and panic (public, 14%; private, 19%). Organizational stressors included a lack of qualified assistants (public, 49%; private, 38%) and performance appraisals (public, 49%; private, 42%). Significant associations ( $p < 0.05$ ) were found with female gender, high workload, time constraints, patient appreciation, and health issues. All hospitals had good facilities, although private hospitals had better sterilization practices.

**Conclusion:** The insights from this study could guide healthcare policy planners and hospital administrators to develop context-specific occupational health policies and stress management initiatives to promote dental surgeons' well-being and performance across the public and private sectors, and it will help to provide better quality health services to the nations.

**Keywords:** Job stress, workplace facilities, dental surgeons, tertiary hospitals, Bangladesh.

## Medical Negligence and Malpractice in Bangladesh: Issues and Legal Remedies (9#122)

*Kaniz Tania Bint-E-Basar, Arman Hossain, Shaikh Shohag Hossain*

1. Assistant Professor, Bangladesh University, Dhaka, Bangladesh.
2. Lecturer, Bangladesh University, Dhaka, Bangladesh.
3. Lecturer, National University, Gazipur, Bangladesh.

**Presenter:** Kaniz Tania Bint-E-Basar

### Abstract

**Background:** Trust is the foundation of healthcare, but when negligence occurs, this trust is broken, often with irreparable harm to patients. Medical negligence and malpractice are pressing concerns in Bangladesh, where a significant portion of the population, both rich and poor, faces challenges in accessing quality healthcare. Public hospitals, intended as a safety net for the economically disadvantaged, often fail to provide satisfactory care, while private healthcare providers also fall short of maintaining acceptable standards. The lack of accountability, rampant corruption, and shortage of healthcare professionals exacerbate these issues. As a result, patients are frequently exposed to inadequate or harmful medical treatment, leading to severe injuries or fatalities.

**Design and Methodology:** This study adopts a qualitative research approach, incorporating primary and secondary data. Legal statutes, medical malpractice cases, and media reports on healthcare corruption are analyzed to examine the scope and impact of medical negligence in Bangladesh. Additionally, in-depth interviews with victims, healthcare professionals, and legal experts are conducted to gain insight into the systemic issues within the healthcare system. Relevant laws, including the Penal Code and the Medical and Dental Council Act, are reviewed to assess existing legal remedies.

**Results:** The research highlights significant gaps in healthcare quality and legal accountability. Public hospitals, which serve as the primary healthcare providers for the underprivileged, are plagued by inefficiencies, understaffing, and corruption. With only 0.6 doctors per 1,000 people, Bangladesh needs to have more workforce in the Health sector. Furthermore, private hospitals are often profit-driven, leading to unnecessary treatments and inflated costs for patients. The study also identifies a lack of robust legal frameworks for addressing medical negligence, leaving many victims without proper recourse.

**Conclusion:** To address the pervasive issue of medical negligence, Bangladesh must enact more robust legal frameworks, enforce existing laws, and establish specialized medical tribunals to handle negligence cases. Additionally, healthcare professionals must receive better training in ethical practices, and public healthcare facilities must be reformed to provide equitable, accountable care. By strengthening medical and legal accountability, Bangladesh can work towards a more just and effective healthcare system.

**Keywords:** Medical negligence, Malpractice, Legal remedies, Healthcare accountability, Bangladesh.

## Barriers to Report Adverse Drug Reaction by Hospital Doctors in Dhaka, Bangladesh: A Cross Sectional Study (13#165)

*Sharmila Huda, Mahfuza Mazeda Rowshan, Farida Yesmin, Mohammad Abul Bashar, Rehnuma Tasnim Chowdhury, Ashrafun Naher Dina*

1. Bangladesh Medical College
2. Sir Salimullah Medical College
3. Gonoshasthya Samaj Vittik Medical College
4. Enam Medical College

**Presenter:** Dr. Sharmila Huda, Email: sharmila.bmc@gmail.com

### Abstract

**Background:** Spontaneous reporting of Adverse Drug Reaction (ADR) is a crucial tool in pharmacovigilance, but its effectiveness relies heavily on the cooperation and motivation of prescribers. Under-reporting of ADRs by prescribers is a widespread issue. This study aims to assess the knowledge and barriers to reporting ADR among hospital doctors at four different medical hospitals in Dhaka, to understand the underlying causes of under-reporting.

**Methodology:** The study was conducted by a questionnaire consisting of 30 questions (5 demographic questions, 12 on knowledge, and 17 on barriers) and was distributed to 400 hospital doctors. Statistical analysis was conducted using SPSS.

**Results:** The response rate among postgraduate doctors ((56.3%) was higher than that of doctors who had not completed their post-graduation yet (43.8%). 93.5% of respondents were familiar with the term 'ADR', and the majority knew that ADR reporting is part of Pharmacovigilance (PV) (81.5%), while only 17.2% had reported ADR before. 72.9% were aware of the drugs being banned in the world due to ADR, despite, 40.9% shared information regarding ADR with others. The preferred source to gather information on ADR was textbooks (81.8%). The main reasons for under-reporting included lack of information on how (88.8%) to report, as well as not having complete information for making the report (80.2%).

**Conclusion:** Although hospital doctors are aware of ADRs and their significance in reporting, under-reporting and a lack of knowledge about the reporting system are apparent. Increasing awareness about ADR reporting and simplifying the reporting process could help improve spontaneous reporting.

**Keywords:** Adverse Drug Reaction (ADR), Barriers, Hospital doctors, Dhaka.

## Status of Current Health Problems among the Selected Victims of Collapsed Rana Plaza Building (15)

*Nazir Arifeen*

Student, Department of Public Health, American International University-Bangladesh

**Presenter:** Nazir Arifeen, Email: nazirarifeen@gmail.com

### Abstract

**Background:** The 2013 Rana Plaza collapse caused severe injuries among survivors, resulting in long-term physical and psychological health issues. This study examines the prevalence of these ongoing health challenges to inform necessary support and rehabilitation efforts.

**Objective:** This study aims to assess the current health status of selective survivors of the Rana Plaza building collapse.

**Methodology:** This cross-sectional study was conducted among 50 purposively selected Rana Plaza victims. Data were collected via a structured questionnaire, featuring both closed and open-ended questions, administered through face-to-face interviews. Data analysis was performed using Microsoft Excel 2010 and SPSS version 17.

**Results:** The study reveals a high prevalence of physical, medical, and psychological health issues among survivors. Among physical conditions, 68% reported spinal pain, 18% knee pain, and 6% each suffered from shoulder, hip, wrist, and elbow pain. Medical conditions were also prominent: 70% of respondents experienced gynecological problems, 44% respiratory issues, and 14% eye-related problems. Psychological assessments showed a significant impact, with 70% experiencing severe psychological distress, likely attributed to trauma from the collapse.

**Conclusion:** The findings underscore persistent and serious health and mental health issues among Rana Plaza survivors, with a substantial impact on their quality of life. This study highlights the critical need for long-term support and rehabilitation services to address ongoing physical and psychological challenges. Public health responsibility includes not only immediate disaster response but also continuous support for affected individuals to improve their quality of life over time.

**Keywords:** Proportion, PTSD, Rana Plaza, Victims, Health Outcomes.

## Local Government In Primary Health Care And Community Engagement In Nepal (16#258)

*Md Khurshid Alam Hyder*

Former Public Health Administrator, World Health Organization, Nepal

**Presenter:** Dr Md Khurshid Alam Hyder, Email: khurshidalamhyder@gmail.com

Nepal's Constitution of 2015 adopted federalism as a key principle, providing considerable powers and functions to local governments. The Constitution also established health as a fundamental right and stipulated public health as a concurrent function amongst all three levels of government. Operational and review of various documents Nepal Health Sector Strategy 2023-2030; Nepal Health Policy 2019; Public Health Act and Regulation 2018 and WHO Country

Cooperation Strategy 2023-2027 reveals the functions of primary health care accelerated by the ownership of local governments.

As a result each local unit or municipality should also have its health care centre a 15-bed hospital. These serve a population of about 10 000 to 25 000. Beneath these are basic health units, also known as health posts, located in vadas (villages or wards). Many of these are five or 10 bed community hospitals, which also come under the administration of local governments. A health post, covering a population of about 5000 would have six staff, two of whom should have auxiliary nurse or midwife qualifications, one is an 18-month trained auxiliary health worker, and the head should be equipped with a three-year training with a diploma in general medicine (health assistant). There are about 98 medicines available in each basic health unit. By law and by the National Health Policy of 2019 all care, including drugs and diagnostics in the basic package, are free.

Regarding primary-level health care, all peripheral health facilities in Nepal have a local health facility management committee to manage funds, human resources, and health programmes, based on the principle of health sector decentralisation. Each health facility management committee comprises nine to 13 representatives from the village development committee or municipality. In order to ensure everyone has a voice in the health facility management, membership needs to include the clinic manager, the village development committee chairperson, and elected members, including school teachers, female community health volunteers.

Nepal's recent experiences with decentralisation have involved a considerable amount of energy and community engagement, but it is also faced with several challenges, the more so as the programme extends beyond basic health services to address a more comprehensive health care package.

**Keywords:** Governance, Leadership, Primary Health Care and Community Engagement.

## Medical Law and Professional Ethics in Bangladesh: Issues and Implications (10#123)

*Arman Hossain, Kaniz Tania Bint-E-Basar, Shaikh Shohag Hossain*

1. Lecturer, Bangladesh University, Dhaka, Bangladesh
2. Assistant Professor, Bangladesh University, Dhaka, Bangladesh.
3. Lecturer, National University, Gazipur, Bangladesh.

**Presenter:** Arman Hossain

### Abstract

**Background:** The intersection of law and ethics in medical practice forms the foundation of trust between healthcare providers and patients. In Bangladesh, the effective regulation and enforcement of medical law and ethics are not just important, but urgent for safeguarding patient rights and ensuring accountability among healthcare professionals. However, significant gaps exist in both legal frameworks and ethical enforcement, which hinder the progress of healthcare in the country.

**Methodology:** This paper adopts a qualitative approach, using content analysis of laws, policies, and academic literature on medical law and ethics in Bangladesh. Interviews with healthcare professionals, legal experts, and patients provide further insight into the practical challenges of implementing these laws and ethical standards. The study also reviews statistical data to contextualise the scale of medical negligence, ethical breaches, and healthcare access disparities.

**Results:** The findings reveal a fragmented healthcare system in Bangladesh, characterized by an uneven distribution of medical resources and professionals, particularly in rural areas. With only 0.472 physicians per 1,000 people, Bangladesh faces a critical shortage of healthcare providers. The study underscores the prevalence of medical negligence, exacerbated by weak regulatory oversight and the absence of specific legislation addressing malpractice. A significant area for improvement is the need for more integration of medical ethics in the professional training of doctors and healthcare workers, as the lack of it leads to ethical dilemmas in patient care and a growing public distrust in the healthcare system.

**Conclusion:** Addressing the challenges of medical law and ethics in Bangladesh requires a multifaceted approach. There is an urgent need to codify laws governing medical negligence, strengthen the regulatory authority of the Bangladesh Medical and Dental Council (BMDC), and embed ethical education in medical training programs. Equitable distribution of healthcare resources, improved workforce allocation, and stricter enforcement of medical laws are critical for fostering a more accountable and patient-centred healthcare system. Ultimately, the reform of medical law and professional ethics will promote not just compliance, but the elevation of healthcare standards across Bangladesh.

**Keywords:** Medical Law, Professional Ethics, Healthcare Governance, Medical Negligence, Ethical Standards, Bangladesh, Health Policy

## Health-Related Challenges and Quality of Life of Women with Spinal Cord Injury (16#148)

*Dr. Banossree Saha<sup>1</sup>, Kazi Sazia Afrin<sup>2</sup>, Konok Chandra Barman<sup>3</sup>, Dr. Ropak Chandra Roy<sup>4</sup>, Md Mokhlesur Rahman<sup>5</sup>, Sujan Mahamud<sup>6</sup>, Prof. Dr. Ashok Kumar Saha<sup>7</sup>, Shyam Sundar shaha<sup>8</sup>, Md Mohiuddin<sup>9</sup>, Sumon Chandra Debnath<sup>10</sup>*

1. PhD (fellow), Department of Pharmacy, Jahangirnagar University, Savar, Dhaka, Bangladesh.
2. Senior Physiotherapist, CRP, Chittagong, BD.
3. Intern Physiotherapist, CRP, Savar, BD.
4. Faculty Member, Physiotherapy Department, Gono Bishwabidyalay (GB), Savar, Dhaka, Bangladesh.
5. Lecturer, Medical Physics and Biomedical Engineering Department (MPBME), GB, Savar, Dhaka, Bangladesh.
6. Lecturer, Medical Physics and Biomedical Engineering Department (MPBM), GB, Savar, Dhaka, BD
7. Professor, Department of Psychology, Jagannath University, Dhaka, BD.
8. Associate professor, Department of Biochemistry & Molecular Biology, (GB), Savar, Dhaka, BD.
9. Assistant professor, Dhaka college of Physiotherapy, Dhaka, BD.
10. Senior Health Education Officer, Civil Surgeon Office, Moulvibazar

**Presenter:** Dr. Banossree Saha, Email: bonosree.mbbs1867@gmail.com

### Abstract

**Background:** Spinal cord injuries (SCI) represent a significant global health challenge, leading to lifelong disability or death. Common causes include falls, road traffic accidents, physical assaults, tumors, and congenital conditions. The global prevalence of SCI is approximately 15-40 per million, with annual incidence rates between 10.4 and 83 cases per million.

**Objectives:** This study aimed to assess the health-related issues and quality of life (QOL) of women with SCI, focusing on their physical, psychological, social, and environmental well-being using the WHOQOL-BREF questionnaire.

**Methods:** A cross-sectional design was employed, involving 97 women who had undergone rehabilitation at a community-based facility. Data were collected via a structured questionnaire, with QOL assessed through the WHOQOL-BREF. Quantitative analysis was conducted using SPSS software (version 26.0), and associations were evaluated using Chi-square and Pearson t-tests.

**Results:** The mean age of participants was 33.14 years. The majority (53.6%) sustained injuries from road traffic accidents, followed by falls (21.6%), heavy lifting (14.4%), and assaults (10.3%). Urinary incontinence was prevalent, with 10.3% reporting stress UI, 28.9% urge UI, and 35.1% mixed UI. Additionally, 73.2% experienced menstrual cessation, with 18.6% having amenorrhea, 8.2% dysmenorrhea, and 26.8% menopause. Hygiene maintenance was reported by 70.1% of participants. A significant relationship was found between the duration of injury and psychological status, which impacted QOL.

**Conclusion:** The findings highlight that SCI significantly detrimentally affects quality of life, particularly in physical and psychological domains. It is crucial to implement strategies aimed at improving the physical, psychological, social, and environmental conditions of individuals with SCI to enhance their overall quality of life.

**Keywords:** Spinal Cord Injury (SCI), Women's health, Quality of life (QOL), WHOQOL-BREF, Menopause

## **Body Roundness Index and Metabolic Syndrome risks among Asian Indian adults of diverse geo-climatic setups (23#170)**

*Partha Sarathi Datta and Rajesh K. Gautam*

Department of Anthropology, Dr. Harisingh Gour Vishwavidyalaya (Central University), Sagar, Madhya Pradesh, India

**Presenter:** Partha Sarathi Datta; E mail: dattaps.biomed@gmail.com

### **Abstract**

**Background:** The Body Roundness Index (BRI) is an anthropometric measure developed to predict body fat and fat distribution. It represents an overall perception of obesity-based risks of health consequences better than traditionally applied measures, such as the Body Mass Index (BMI). This study links BRI to the risk of Metabolic Syndrome (MetS) among adults from diverse geo-climatic regions of West Bengal, India.

**Methods:** A cross-sectional study was conducted in 1021 adult males and females aged 21-60 years from five geo-climatic areas like hill, plateau, plains, delta, and coastal regions of West Bengal, India from February 2023 to June 2024. BRI was assessed with the help of height and waist circumference and participants were categorized into quartiles based upon the BRI values. MetS was diagnosed according to the National Cholesterol Education Program-Adult Treatment Panel III criteria. Multivariate logistic regression analysis was conducted to examine the relationship between BRI and MetS in age, sex, and physical activity stratified subsets.

**Results:** The overall prevalence of MetS was 32.2%, with the highest rates observed in the plain region, followed by plateau, coastal, delta, and hill regions. Participants in the highest quartile of BRI had a significantly higher risk for MetS than participants in the lowest quartile (OR=3.15; 95% CI: 2.07-4.78,  $p<0.001$ ). Even when adjusted for the confounders, the association continued to be significant (AOR=2.89; 95%CI: 1.94-4.34,  $p<0.001$ ). In this regard, the strength of the prediction by BRI for MetS was more pronounced than that allocated by BMI.

**Conclusion:** It has been significantly associated with the risk of MetS in adults from diverse geo-climatic regions of West Bengal. BRI can become a potential marker for the selection of subjects at higher risk of MetS, particularly in populations from diverse geographic and lifestyle backgrounds.

**Keywords:** Body Roundness Index, Metabolic Syndrome, Asian Indian adult

## **Diagnostic Accuracy of Visual Inspection with Acetic Acid (VIA) for Cervical Cancer and Precancerous Lesions (24#171)**

*Pervin MS, Razia S, Poly NN, Habiba U, Rashid UH, Sultana S*

Department of Obstetrics and Gynecology, TMSS Medical College, Bogura, Bangladesh.

**Presenter:** Dr. Mst. Shohela Pervin; Email: drshohela17@gmail.com

### **Abstract**

**Background:** Cervical cancer remains a leading cause of morbidity and mortality among women in low- and middle-income countries (LMICs), particularly in Bangladesh. Visual Inspection with Acetic Acid (VIA) has emerged as a cost-effective and feasible screening method for early detection of cervical lesions in resource-limited settings. This study evaluates the diagnostic accuracy of VIA in detecting cervical cancer and precancerous lesions, with histopathology as the gold standard.

**Methods:** This observational study was conducted among 210 women presenting with multiple indications of cervical cancer in Bangladesh. Data were collected and analyzed using SPSS version 25. Descriptive statistics were used to summarize demographic and clinical characteristics. Sensitivity, specificity, accuracy, positive predictive value (PPV), and negative predictive value (NPV) were calculated using standard diagnostic values, holding histopathological diagnosis as the gold standard.

**Results:** Of the 210 participants, 74.76% (n=157) tested positive with VIA, and 25.24% (n=53) tested negative. Histopathological analysis showed that 30.48% had normal findings, 24.29% had atypia, 20.95% had CIN-1, and 11.43% had CIN-2. VIA demonstrated a sensitivity of 95.89%, specificity of 73.44%, accuracy of 89.05%, PPV of 89.17%, and NPV of 88.68%. While VIA showed high sensitivity, its moderate specificity indicated the potential for false positives.

**Conclusion:** VIA is a highly sensitive and practical screening tool for cervical cancer in low-resource settings like Bangladesh. However, its moderate specificity and the presence of false positives suggest the need for improved diagnostic protocols, potentially involving adjunctive tests. The integration of VIA into national screening programs could enhance early detection rates and contribute to reducing cervical cancer-related mortality in LMICs.

**Keywords:** Cervical cancer, VIA, sensitivity, specificity, low-resource settings, Bangladesh, cervical lesions, diagnostic accuracy

## **Journey of Pulmonary Rehabilitation in Bangladesh (32#203)**

*SM Rowshan Alam, Ruhana Yesmin*

Bangladesh Primary Care Respiratory Society (BPCRS), Asthma & COPD centre, Rangpur

**Presenter:** Dr. SM Rowshan Alam, Email: drrowshanalam@yahoo.com

Pulmonary rehabilitation as “a comprehensive intervention based on a thorough patient assessment followed by patient-tailored therapies that include, but are not limited to, exercise training, education, and behavior change, designed to improve the physical and psychological condition of people with chronic respiratory disease and to promote the long-term adherence to health-enhancing behaviors”. Pulmonary rehabilitation is a highly effective treatment for people with chronic respiratory (CRD) diseases but remains underused across the world. Recent years have seen the emergence of new program models that aim to improve access and uptake, including tele rehabilitation and low-cost, home-based models.

Pulmonary rehabilitation is supervised exercise training, education, self-management strategies, and support delivered to groups of patients at least twice a week for 8 weeks or more in an outpatient primary care setting by a multidisciplinary team. It is evidence-A supporting the benefits of pulmonary rehabilitation for Chronic Obstructive Pulmonary Disease (COPD), including improved exercise capacity, reduced dyspnea, improving quality of life, and reduced hospital admissions. Pulmonary rehabilitation to improve similar outcomes in other Chronic Respiratory Conditions( CRD), including interstitial lung disease , bronchiectasis , and pulmonary hypertension ,post tuberculous fibrosis, post covid-19 fibrosis. Pulmonary rehabilitation is effective and significant reductions in hospital admission Now; it is increasing nationwide, which is a milestone for NCD-respiratory.

**Keywords:** Pulmonary Rehabilitation, COPD, Bangladesh

## **Assessment of Quality of Life in hypertensive patients using the WHOQOL-BREF instrument in post-pandemic era: An analytical cross-sectional study (34#216)**

Nasrin Akter<sup>1</sup>, Bilkis Banu<sup>2</sup>, Farhana Faruque<sup>1</sup>, Fatema Afrin<sup>1</sup>, Sujana Haque Chowdhury<sup>1</sup>, Sarder Mahmud Hossain<sup>1</sup>

1. Department of Public Health, Northern University Bangladesh, Dhaka, Bangladesh;
2. Department of Public Health, State University Bangladesh

**Presenter:** Nasrin Akter; Email: nasrin.ddc@gmail.com

### **Abstract**

**Background:** To combat the growing prevalence of hypertension in Bangladesh, it is pivotal to have an in-depth understanding of quality of life (QOL) among hypertensive people.

**Objective:** This study aimed to measure QOL among hypertensive people in a selected tertiary hospital in Dhaka city, and its association with the basic characteristics of the patients.

**Methods:** This cross-sectional study was conducted among randomly selected 300 hypertensive patients from two cardiac departments of Square Hospitals Limited. Data were collected through the face-to-face interview method. WHOQOL-BREF questionnaire was used to assess the QOL. Descriptive statistics were used to examine mean scores of quality of life. Cronbach's alpha coefficient and Pearson's correlation coefficient were applied to estimate the internal consistency, and the level of agreement among different domains of WHOQOL-BREF, respectively. Chi-square tests followed by binary regression analyses were used to measure the association between QOL domains and independent variables.

**Results:** Both overall QOL and domains had a good internal consistency, ( $r = 0.13-0.77$ ,  $p < 0.01$ ). The QOL among hypertensive patients was found to be poor in the psychological (71%) and social (74.7%) domains and good in the environmental (63%) and physical (65%) domains. Backward binary regressions revealed that being older ( $p=0.01$ ), diabetic ( $p=0.02$ ), having history of COVID-19 ( $p=0.01$ ), and poor monthly income (USD  $\leq$ 853.14) ( $p=0.01$ ) were significantly associated with poor QOL in all domain. Moreover, older age ( $p=0.01$ ) and poor lifestyle ( $p=0.02$ ) were significantly associated with poor overall quality of life and poor general health perception.

**Conclusion:** The results revealed low QOL in the psychological and social domain including significant factors associated with the poor QOL in all domains. To enhance the quality of life for hypertensive patients—especially those who are older, diabetic, have lower incomes, experienced COVID-19, and maintain poor lifestyles—effective interventions and health system strengthening are crucial.

**Keywords:** Quality of Life, hypertension, WHOQOL-BREF, analytical cross-sectional study

## **Assessment of socio-demographic and clinical characteristics of stroke patients at a Tertiary Hospital in Bangladesh (37#237)**

*Sree Shib Shankar Devnath Debu, Ryadul Alam*

Department of Public Health, North South University<sup>1</sup>

Department of Public Health & Informatics, Jahangirnagar University<sup>2</sup>

**Presenter:** Ryadul Alam; Email: asmriyad1086@gmail.com

### **Abstract**

**Background:** Stroke is a major public health concern with significant socio-economic implications. Understanding the sociodemographic and clinical characteristics of stroke patients is essential for effective prevention, management, and planning of healthcare services. This study aims to assess the socio-demographic and clinical profiles of stroke patients in a tertiary hospital in Bangladesh.

**Methods:** This cross-sectional study was conducted at a tertiary hospital with 200 stroke patients, using purposive sampling. Data was collected via face-to-face interviews and medical record reviews using a semi-structured questionnaire. Variables included socio-demographics, clinical factors, and stroke characteristics.

**Results:** This study examined the socio-demographic, clinical, and risk factors associated with stroke in a sample population. The findings reveal that 57.0% of the respondents were over 60 years old, with females comprising 54.0% of the total. Most respondents (45.5%) were housewives, and 91.0% were married. Hemorrhagic stroke was more prevalent than ischemic stroke, with 37.0% of respondents having hemorrhagic lesions on their CT scans. In terms of risk factors, diabetes and dyslipidemia were significantly associated with hemorrhagic stroke ( $p < 0.05$ ). Specifically, diabetic respondents were nearly three times more likely to experience hemorrhagic stroke (AOR = 2.99,  $p = 0.027$ ), and those with dyslipidemia were also at a threefold higher risk (AOR = 2.88,  $p = 0.012$ ). Other factors, such as hypertension, smoking habits, and previous stroke history, were not significantly associated with stroke type.

**Conclusion:** This study provides valuable insights into the socio-demographic and clinical characteristics of stroke patients in a tertiary hospital in Bangladesh. The findings underscore the importance of stroke prevention strategies, including effective management of risk factors of diabetes and dyslipidemia. The study contributes to the existing literature on stroke in Bangladesh and emphasizes the importance of tailored interventions and further research to improve stroke outcomes in the country.

**Keywords:** stroke, socio-demographic characteristics, clinical characteristics, risk factors, Bangladesh, tertiary hospital, prevalence, hypertension, diabetes, dyslipidemia, stroke type, symptoms, healthcare services.

## Mutation in Exon 7 of BRCA1 Gene in Bangladeshi women with Triple Negative Breast Cancer (39#200)

Prianka Saha<sup>1</sup>, Tonmoy Burmon<sup>2</sup>, Maskura Benzir<sup>1</sup>, Nur A Farhana Islam<sup>1</sup>, Muhammad Kibriya<sup>1</sup> Monzarin Mahal<sup>3</sup>

1. TMSS Medical College, Bogura, TMSS Medical College, Bogura
2. Shaheed Ziaur Rahman Medical College, Bogura
3. University of Chicago, USA, Dhaka Medical College, Dhaka

**Presenter:** Dr. Prianka Saha, Email: dr.prianka.saha@gmail.com

### Abstract

**Background:** Triple negative breast cancer (TNBC) is an invasive subtype of breast cancer associated with various risk factors and poor prognosis due to lack of targeted therapies. About 60-80% of patients carrying BRCA1 gene mutations have TNBC. In Bangladesh, very few studies are conducted and it reveals the incidence of TNBC is about 27%.

**Objective:** To identify the mutation in exon7 of BRCA1 gene in Bangladeshi women with TNBC.

**Method:** This cross-sectional descriptive study was carried out in the Department of Biochemistry, Dhaka Medical College, Dhaka in collaboration with Institution for Population and Precision Health, The University of Chicago, USA from January 2022 to December 2022. Total thirty-four (34) Bangladeshi female TNBC patients were selected. Two ml venous blood was collected from arm vein, kept in EDTA containing tubes, preserved at -20C and sample was sent to the University of Chicago on Dry ice. The DNA library was prepared by using Twist Library Preparation EF Kit 2.0. For mutation detection, Next-generation sequencing method was used.

**Result:** The mean  $\pm$  SD age of patients was 43.71 $\pm$ 9.84 years and BMI was 23.95 $\pm$ 3.38. About 52.9% of females had a history of taking contraceptive methods and 70.6% patients were multiparous, remaining 14.7% were nulliparous and 14.7% primiparous. 5.9% patients had positive family history and No mutation was found in exon 7 of BRCA1 gene. The frequency of mutation was 0.0%, as my study population was relatively small.

**Conclusions:** This result suggests that Bangladeshi women suffering from TNBC have no mutation in exon 7 of BRCA1 gene. A large-scale investigation needed to establish these findings.

**Keywords:** BRCA1=Breast cancer susceptibility gene 1, TNBC= Triple negative breast cancer. EF= Enzymatic fragmentation. BMI= Body mass Index.

## Seven Days Monitoring of Systolic and Diastolic Blood Pressure: Preventive Perspective of Pseudo hypertension Induced Anxiety (40#242)

*Chowdhury Md Navim Kabir*

Emergency Department, Sarkarai Karmachari Hospital, Dhaka

Email: Protik167@gmail.com

### Abstract

**Background:** Now a days hypertension is one of most common non communicable diseases among different age group patients. Though patients above 40 years of age are usually affected, people in their mid 20s and 30s also are in the risk zone. Sudden raised blood pressure leads a person to become worried as it is one of the most vital causes for cardiac and cerebrovascular disease. Proper monitoring of systolic and diastolic blood pressure can be a preventive measure for decreasing maiden hypertensive induced morbidity.

**Method:** 120 patients came to emergency from February 2024- July 2024 who had been diagnosed as maiden hypertensive during primary vitals checking. Among 120 patients 65 patients don't have hypertension. 39 patients were female and 26 were male whose average age range (33-39)+\_2 years. Patients were advised to measure the systolic and diastolic blood pressure (SBP & DBP) three times in a day up to 7 days for follow up.

**Result:** After 7 days, during follow up, 35 patients monitored their blood pressure 3 times in each day. 18 patients measured their blood pressure twice in a day and the rest of 12 patients found no monitoring. Among 23 male patients their average maiden (before follow up) SBP 142 mmHg and DBP 93 mmHg with numbness, headache. After follow up SBP 125 mmHg and DBP 73 mmHg. In SBP, percentage of decreasing was 88.02 % and in DBP it was 78.49%. In twice in a day monitoring patients, percentage of decrease in SBP was 76.80% and DBP it was 73.15%. In case of no monitoring, percentage of decrease in SBP was 60.78% and DBP it was 56.35%.

**Conclusion:** Hypertension diagnosis in time is helpful for the patients to become aware of future systemic disease. Proper monitoring of blood pressure can decrease hazardous anxiety as well as establish preventive remedy. Here preventive association can be blessings for us.

**Keywords:** cerebrovascular disease, SBP, DBP, systemic, anxiety

## Statistical Assessment of Air Quality Impact on Respiratory Health in Dhaka: A Study on Hospital Admission Trends (13)

*Hasin Almas Sifat<sup>1</sup>, Ashiqur Rahman Saron<sup>2</sup>, Md. Mortuza Ahmmed<sup>3</sup>*

1. Department of Computer Science, American International University – Bangladesh, 22-48679-3@student.aiub.edu
2. Department of Computer Science, American International University - Bangladesh , Dhaka 1229, Bangladesh, 22-48697-3@student.aiub.edu
3. Department of Mathematics, American International University - Bangladesh (AIUB). mortuza@aiub.edu

**Presenting :** Hasin Almas Sifat, Undergrade Student, Department of Computer Science, American International University – Bangladesh

### Abstract

**Background:** The air quality in Dhaka, Bangladesh, is among the highest in the world, heated by the fast development of population and urbanization, together with industrial operations. The air quality has been a persistent problem for the people living in this highly populated metropolis of the globe, suffering an alarming quantity of respiratory health cases such as Asthma, Bronchitis, and Chronic Obstructive Pulmonary Disease (COPD). Despite the established danger, the situation is still not examined as necessary for comprehending the situation of the hospital reporting respiratory difficulties related to air pollution.

**Methodology:** To analyze the problem, this study investigates the influence of air pollution in Dhaka on respiratory health by monitoring the Air Quality Index (AQI) and pollutant levels like PM<sub>2.5</sub>, PM<sub>10</sub>, O<sub>3</sub>, SO<sub>2</sub>, acquired from Bangladesh Meteorological Department, IQAir, WHO. Besides, disease data were utilized from different hospitals of Dhaka to analyze the respiratory department's patient's history from open sources. For Statistical analysis, this study uses correlation, regression, time series analysis between the air quality index and the medical conditions of the population of Dhaka. The seasonal inspection is also made to understand the effect of seasonal air quality situation and admission rate in Dhaka city.

**Results:** The research demonstrates a clear correlation between heightened pollution levels and a greater frequency of respiratory-related hospital cases during that peak seasonal period. The low air quality index has been related to an increase in respiratory illnesses. Vulnerable populations, particularly kids and the elderly, have an influence, as demonstrated by larger suffering rates. The time series analysis shows a particular trend in Dhaka city with population growth and air quality relation resulting in the respiratory diseases increase.

**Conclusion:** The studies indicate an important and disturbing component of urban life, particularly in Dhaka City. The air quality has an unfavorable influence on human health. The information and analytics may lead to a favorable move from the policymakers to give some vital policy modifications to ensure the air quality, therefore assisting to handle the respiratory issues.

**Keywords:** Type-2 Diabetes, Mobile Health, Health Literacy, Quasi-experimental Study, Digital Health Interventions.

## Occurrence of Allergic Rhinitis in association with *Parthenium hysterophorus* L. in and around Rajshahi City (1#83)

Zoha Mohammad Meherwar Hossain; drzoha@gmail.com

**Presenter:** Zoha Mohammad Meherwar Hossain

### Abstract

*Parthenium hysterophorus* L. is a weed, which is very much injurious to the environment. It causes allergic rhinitis to human health (including other manifestations of allergic problems, in addition to its adverse effects upon animal's health, production of crops and also biodiversity). This study was designed to find out the relation of the occurrence of allergic rhinitis in the human population with the presence of *Parthenium hysterophorus* in the community.

**Methodology:** It was a cross-sectional type of analytical study. 262 respondents were selected purposively from *Parthenium* -infested areas and 263 in the same way from *Parthenium* -free areas of Rajshahi city. People of all ages and both the sexes were included in the study. Data were collected by face-to-face interview with the help of a semi-structured questionnaire and the symptoms were checked by a Doctor (researcher himself) with the help of a check-list. Equipment used were a stethoscope, a rhinoscope, a magnifying glass and a torch.

**Results:** It was seen that allergic rhinitis were present in 70.73% of the exposed respondents, whereas it was only 29.27% in the unexposed ones. The difference was found highly significant by the chi-square test ( $X^2 = 16.8610$ ,  $df = 1$ ,  $p < 0.001$ ). The problem was seen in 70.73% of male respondents out of a total 32 affected ones and 46.05% female respondents out of 50 affected female respondents. Here no statistically significant difference was found at  $p < 0.05$ . Comparing the problems of the males between the two areas, the difference was found significant as 75% males of the exposed areas and 25% of the unexposed areas suffered from the disease. ( $X^2 = 8.0402$ ,  $df=1$ ,  $p = 0.004575$ ). Likewise comparing occurrence of allergic rhinitis in the females from the two areas, statistically significant difference was found ( $X^2 = 9.667$ ,  $df=1$ ,  $p = 0.001876$ ).

**Conclusion:** This study revealed that *Parthenium* has a strong association with the occurrence of allergic rhinitis in the human population and it occurs irrespective of sex differentiation.

**Keywords:** *Parthenium*, Allergic Rhinitis, Rajshahi

## **Knowledge Regarding Extreme Heat and Heat Related Illness among Outdoor Labourers at Bogura Sadar, Bogura (6#231)**

*Tahsina Nasrin, Akhiruzzaman, Kutbul Zannat, Shamim Ahmed Choudhury*

TMSS Medical College, Bogura

**Presenter:** Dr. Akhiruzzaman, Email: akhiruzzaman.88@gmail.com

### **Abstract**

**Background:** Bangladesh is currently facing extreme heat with temperature rising to above 40°C in different areas. Globally extreme heat is one of the damning natural hazards causing heat related illness and death also. Outdoor day labourers are one of the vulnerable groups, directly facing the health related consequences from extreme heat. So knowledge regarding this aspect is important for this group.

**Objective:** This study was conducted to assess the knowledge regarding extreme heat and heat related illness among outdoor labourers at Bogura Sadar.

**Methods:** This descriptive type of cross-sectional study was conducted at Bogura Sadar for the duration of six months. About 219 outdoor day labourers were selected purposively irrespective of gender who were more than 18 years old and fulfilled other inclusion and exclusion criteria. Data was collected by face to face interview through a pretested semi-structured questionnaire after taking verbal consent. Data were analyzed according to the objectives by using SPSS software (version 27).

**Results:** The majority of the respondents belonging to the 18-27 age group (24.7%) and 44.7% were illiterate, with most engaging in moderate physical activity (68.0%) under direct sunlight for 4 to 5 hours per day (57.1%). Around 85.4% respondents know about climate change and 90.9% of the respondents recognized an increase in heat levels in recent years mostly caused by deforestation (72.6%). About 96.3% acknowledged that excessive heat could cause illness, and symptoms such as excessive sweating (66.2%), weakness (62.2%), and dizziness (62.6%) are common. Preventive measures like drinking sufficient water (75.3%), resting in cool places (59.8%), and consuming ORS (57.1%) were identified. In terms of rapid response to heat-related illnesses, respondents think that, pouring water on the head and face (67.6%), bringing the person to a cool place (57.1%), and hospitalization (70.8%) should be done.

**Conclusion:** Study reveals that respondents has significant knowledge regarding extreme heat and heat-related illnesses but enhancing education and other resources is needed to mitigate the impacts of excessive heat among them. So that they would able to live safe and healthy life

**Key words:** Knowledge, Extreme Heat, Heat Related Illness, Prevention, Outdoor Labourers

## **Exposure to Freeway Air Pollution and its Health impacts on Slum dwellers in Dhaka, Bangladesh (5#205)**

*Md. Rezaul Karim Ripon*

**Presenter:** Md. Rezaul Karim Ripon

### **Abstract**

**Background:** Because they are close to freeway air pollution, urban slum residents are particularly susceptible to detrimental health effects. The aim of this cross-sectional study, taking place in the slums of Dhaka, is to clarify how exposure to highway air pollution is related to a variety of behaviors and health outcomes.

**Objective:** To evaluate the effects of highway air pollution on health behaviors and the prevalence of chronic diseases among slum residents of Dhaka, Bangladesh. Demographic and health factors are considered moderators.

**Methodology:** From February 25 to May 6, 2023, a survey of 488 slum residents was conducted using the Community Assessment of Exposure and Health of Highways (CAFEH) questionnaire, along with additional queries on chronic conditions and health behaviors.

**Results:** Men had a higher risk of unfavorable medical outcomes than women ( $p=0.001$ ), and individuals with no education had a higher risk than individuals with higher educational levels ( $p=0.002$ ). Participation in physical activity was inversely related to the health effects of air pollution ( $aOR=0.382$ ,  $p=0.043$ ). Also, air pollution exposure increased the likelihood of unfavorable health outcomes due to air pollution exposure ( $OR=2.958$ ,  $p=0.001$ ;  $aOR=3.044$ ,  $p=0.010$ ). The greatest impact of air pollution on health promotion activities was found by structural equation modeling ( $B=0.150$ ) and physical exercise ( $B=0.191$ ).

**Conclusions:** The results highlight the importance of taking specific measures to reduce exposure to air pollution and promote healthier lifestyles in vulnerable urban areas. Future policies should consider environmental factors that affect health and include community strategies to promote health and prevent chronic diseases.

## **Microbial Characteristics of Poultry Dressing Water in diverse Bangladeshi Regions (8#265)**

*Md Shajadul Islam<sup>1</sup>, Md Khaleduzzaman<sup>1</sup>*

<sup>1</sup>Department of Food Microbiology, Faculty of Nutrition and Food Science, Patuakhali Science and Technology University, Bangladesh

**Presenter:** Md Khaleduzzaman, Email: iam.khaleduzzaman@gmail.com

### **Abstract**

**Background:** Poultry meat can be contaminated by different types of microorganisms during processing in processing shops.

**Objective:** The study evaluates the microbial quality of dressing water used in poultry processing shops.

**Methods:** Two types of water samples (40) such as normal water (20) (used after removing feathers for washing the poultry) and hot water (20) (used after slaughtering for loosen of feathers) were collected from local poultry processing shops in Dumki and Patuakhali Sadar. Standard plate count method was applied for the enumeration and detection of total aerobic bacteria, total coliform, and biochemical identification along with antimicrobial sensitivity tests.

**Result:** The results showed that, the highest bacterial count was observed  $6.20 \times 10^6$  cfu/ml in sample 8 and the lowest bacterial count was found  $2.00 \times 10^5$  cfu/ml in sample 17 of normal water. In case of hot water, the highest count was found  $3.78 \times 10^6$  in sample 6 followed by  $3.00 \times 10^6$  cfu/ml in sample 3,  $2.56 \times 10^6$  cfu/ml in sample 5 and the lowest count was enumerated as  $1.00 \times 10^5$  cfu/ml to  $3.78 \times 10^6$  cfu/ml. In case of normal water, the highest TCC was found  $8.90 \times 10^2$  cfu/ml in sample 17 and the lowest range was  $5.00 \times 10^1$  cfu/ml in sample 9. With regard to hot water, the highest TCC was found  $2.5 \times 10^2$  cfu/ml in sample 4 followed by  $1.9 \times 10^2$  cfu/ml in sample 8,  $1.25 \times 10^2$  cfu/ml in sample 10. Several samples did not contain any coliform in hot water like sample 1, 2, 5, 11, 12, 13, 16, 18, 19, 20. It was notable that 100% of the samples were contaminated with total bacteria and 75% of the samples were coliform contaminated. The present study isolated bacteria from normal water was *Escherichia coli* (5.55%), *Enterococcus faecalis* (11.11%), *Bacillus* spp. (16.65%), *Staphylococcus epidermidis* (5.55%), *Proteus mirabilis* (5.55%), *Acromonas hydroplia* (5.55%), *Citrobacter freundii* (11.11%), *Listeria monocytogenes* (11.11%). Additionally, *Bacillus subtilis* (11.11%), *Campylobacter* (5.55%), *Staphylococcus aureus* (5.55%), and *Salmonella* (11.11%) were found in hot water samples. All bacterial isolates were resistant to Penicillin (10 µg), Metronidazole (5 µg) and Ampicillin (10 µg) except *E. faecalis*, *S. epidermidis* and *Listeria monocytogenes*. Most of bacteria were sensitive against Ciprofloxacin (5 µg) and Doxycycline (30 µg).

**Conclusion:** Employing safe and hygienic water can help farmers to avoid microbiological contamination.

**Keywords:** Poultry, Processing water, Microbial quality, Biochemical identification, Antibioqram

## **Knowledge about Radiation Hazards and its Preventive Measures among the Nursing Students of TMSS Nursing College, Bogura, Bangladesh (9#27)**

*Priya Debi<sup>1</sup> and Mst.Amena Khatun<sup>2</sup> and Md.Sazzad Hossain<sup>3</sup> and Mst. Nilufar Yesmen<sup>4</sup> and Md. Kaoser Bin Siddique<sup>5</sup>*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Lecturer, TMSS Nursing College, Bogura
4. Asst. Professor, TMSS Nursing College, Bogura
5. Coordinator, Research & Training, TMSS Health Sector, Bogura

**Presenter:** Mst. Nilufar Yesmen; nilufaryesmen@gmail.com

### **Abstract**

**Background:** Radiation hazards refer to the potential risks associated with exposure to ionizing radiation, affecting human health and the environment. This energy can be emitted as alpha particles, beta particles, gamma rays, and X-rays. Understanding these hazards is essential for safety in medicine, industry, and nuclear energy.

**Objective:** To explore the knowledge about radiation hazards and its preventive measures among the Nursing Students

**Methodology:** A cross-sectional descriptive study was conducted from July to December 2023 among the nursing students at TMSS Nursing College, Bogura. A total of 100 students were purposively selected, and data was collected using a structured questionnaire.

**Results:** The study included 100 respondents aged 21-23 years, mostly female, enrolled in the 3rd year of a Diploma in Nursing Science & Midwifery program. Most respondents resided in urban and semi urban areas. The researcher developed the questionnaire based on literature reviews. The overall knowledge score was 11.72 out of 22, and the prevention score was 8.59 out of 15, indicates that the nursing students have moderate levels of knowledge about radiation hazards and its preventive measures.

**Conclusion:** The research highlights that while nursing students have a foundational understanding of radiation hazards, there are significant gaps in their detailed knowledge and application of safety measures. The majority of students exhibit a moderate level of knowledge and prevention regarding radiation hazards.

**Keywords:** Knowledge, Radiation, Radiation hazards, Prevention, Nursing Students

## **Dhaka's Water Savior: The Dasherbandi Sewage Treatment Plant (11#65)**

*Tahmid Rahman, Sarika Kifayat Islam, Sajidul Haque*

Population and Public Health Sciences, Department of Social Relations, East West University

**Presenter:** Tahmid Rahman, Email: rahmantahmid995@gmail.com

### **Abstract**

**Background:** The Dasherbandi Sewage Treatment Plant (DSTP), South Asia's largest, symbolizes Dhaka's strides toward environmental sustainability and public health. This China-funded project, managed by Dhaka WASA, treats 500 million liters of wastewater daily, significantly improving water quality in key areas like Hatirjheel and the Balu River.

**Objective:** This study explores the plant's technological advancements, its impact on public health, and the economic and environmental benefits that have transformed Dhaka's landscape.

**Methods:** The research follows a mixed-methods approach, combining qualitative and quantitative data. Primary data was collected through field surveys, interviews with plant operators, and community residents. A sample size of 150 respondents was chosen from affected communities around the DSTP, with stratified random sampling used to ensure diversity in responses. The study's research question focuses on how the DSTP has influenced water quality, public health, and economic opportunities for residents. Objectives include assessing the plant's effectiveness in reducing waterborne diseases, examining its technological innovations, and understanding its broader socio-economic impact.

**Result:** Findings suggest that the DSTP's advanced treatment processes—including screening, grit removal, biological treatment, and disinfection—have drastically reduced water contamination. Notably, waterborne diseases have decreased by 40% in nearby communities. The DSTP's automated systems not only optimize operations but also convert sewage sludge into fly ash, a byproduct with industrial applications. This innovation reduces environmental waste and enhances industrial sustainability. Moreover, job creation linked to the plant has spurred economic benefits for local residents. Despite these successes, challenges during construction and ongoing operation include technical difficulties, high operational costs, and the need for future capacity expansion. Plans are already underway to increase the plant's output and explore the use of treated water for agriculture and industry.

**Conclusion:** The DSTP stands as a critical piece of Dhaka's infrastructure, significantly improving water quality, public health, and environmental sustainability. Further research and development are needed to scale its impact across the city.

**Keywords:** Dasherbandi Sewage Treatment Plant (DSTP), Water Quality Improvement, Wastewater Treatment, Public Health, Environmental Sustainability

## **Assessment of Occupational Health Hazards Knowledge among Registered Nurses in Bangladesh (12#60)**

*Samiron Mridha, Biplab Halder*

Lecturer, Khulna Nursing College; Lecturer, Manikgonj Nursing College

Lecturer, Manikganj Nursing College, Faculty of Nursing, Dhaka University

**Presenter:** Biplab Halder, Email: [biplabshilpi@yahoo.com](mailto:biplabshilpi@yahoo.com)

### **Abstract**

**Background:** Globally, occupational health hazards are a significant concern for healthcare personnel, particularly nurses, who often serve as the frontline healthcare providers. The risk of exposure to these hazards has increased due to advancements in science and technology, and this issue is particularly pronounced in developing countries. Common occupational hazards include biological, physical, and chemical risks, as well as needle-stick injuries. Study was conducted to assess the level of knowledge regarding occupational health hazards among the registered nurses at the hospital.

**Objective:** The study investigates the level of knowledge of occupational health hazards among registered nurses at a 250-bed general hospital in Manikgonj, Bangladesh.

**Design and Methods:** A descriptive cross-sectional study was conducted, with data collected at the 250-bed general hospital in Manikgonj. Purposive sampling technique was employed. Data were gathered using structured and semi-structured questionnaires, which were divided into two sections: socio-demographic information and knowledge on occupational health hazards. The study was conducted between June to December 2023.

**Results:** The study revealed that 83.34% of the participants demonstrated knowledge of concepts related to occupational health hazards. Additionally, 71.67% had knowledge of risk factors, 69.93% understood the causes, and 75.83% were aware of preventive measures. The average knowledge score was 75.19, reflecting a good overall level of understanding. However, only 39% of participants scored well on knowledge related to preventive measures for occupational health hazards.

**Conclusion:** The findings suggest that while the overall knowledge of occupational health hazards among nurses was good, there is a need for targeted training to enhance their understanding, particularly in preventive measures. Regular assessments and ongoing supervision in this area are recommended.

**Keywords:** Knowledge, Occupational Health Hazards, Registered Nurses, Bangladesh

## **Key Drivers of Suicide in Bangladesh: A Study on Mental Health, Family Stress, and Economic Distress (8)**

*Saifa Naziat Nawmi<sup>1</sup>, Sumshun Nahar Eity<sup>2</sup>, Ayon Kumar Ghosh Pappu<sup>3</sup>, Md. Mortuza Ahmmed<sup>4</sup>*

<sup>1</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>2</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>3</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>4</sup>Associate Professor, Department of Mathematics, American International University-Bangladesh, Dhaka, Bangladesh

**Presenter:** Saifa Naziat Nawmi, 24-56971-1@student.aiub.edu

### **Abstract**

**Background:** Suicide is a big public health problem in Bangladesh, leading to around 10,000 deaths every year. This study wants to figure out what mainly causes people to think about suicide, looking at things like mental health issues, family troubles, and unemployment. The hypothesis is that these things raises the risk of suicide and might affect each other in different ways over time, highlighting how important it is to have good strategies to help lower these rates.

**Design and Methods:** This study used a cross-sectional design to look at the main reasons for suicide in Bangladesh, drawing on data from national health surveys and records of suicides. It focused on mental health issues, family stress, and unemployment, tapping into medical records and psychological tests. Even logistic regression analyses is done to see how important these risk factors are and how they relate to suicidal behavior.

**Results:** The graph below shows the suicide rate in Bangladesh along with key associated covariates such as mental health issues, economic status, and family stress, based on research data:

The graph shows three important indicators from 2016 to 2022: Mental Health Issues (%), Unemployment Rate (%), and Family Stress Incidents (%). While the unemployment rate has remained stable, mental health issues and family stress incidents have generally increased during the study period.

**Conclusions:** Mental health struggles, family stress, and money issues are important risk factors for suicide. Improving mental health services, along with better economic support, could help lower the rates. It's important to have targeted prevention plans in place.

**Keywords:** Suicide, mental health issues, family stress, unemployment

## **Stress and Stressor among Nursing Students: A Cross-Sectional Study (15#37)**

*Sweety Rani and Md. Sabbir Hassan and Mst. Nilufar Yesmen and Md. Azfarul Habib*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Asst. Professor, TMSS Nursing College, Bogura
4. Professor, Department of Community Medicine & Public Health, TMSS Medical College, Bogura.

**Presenter:** Sweety Rani; sweetyrani.tt@gmail.com

### **Abstract**

**Background:** Stress among nursing students is a well-documented concern, leading to potential mental health issues, academic struggles, and program attrition. Common stressors include heavy academic workloads, time management challenges, and the emotional burden of clinical experiences. This study aims to assess the level of stress and its stressors among nursing students at TMSS Nursing College, Bogura.

**Objective:** To assess the level of stress and its contributing stressors among nursing students.

**Methods:** A cross-sectional descriptive study was conducted from July to December 2023. Data was collected from 81 nursing students using a structured questionnaire. Participants were selected using a purposive sampling technique.

**Results:** This study found out of the 81 respondents, 97.53% (79) were aged 21-23 years, and 72.84% (59) were female. Most respondents (34.57%) reported their father's occupation as a businessman, and 53.08% (43) lived with friends or roommates. The monthly family income for 30.87% (25) of the participants ranged from 15,001 to 20,000 TK.

Stress levels were assessed across 11 domains, with significant stressors including academic workload (mean score = 4.08) and actions taken to reduce stress (mean score = 4.12). The overall mean score for stress and stressors was 24.47 out of 48, indicating a moderate level of stress.

**Conclusion:** The study underscores the moderate level of stress experienced by nursing students at TMSS Nursing College. Key stressors include academic demands, clinical duties, and personal challenges. Despite the availability of institutional resources, awareness and use of stress management facilities were low, suggesting the need for improved support systems to address student stress. This aligns with global findings, where 60-80% of nursing students report significant stress levels, highlighting the importance of stress-reduction strategies within nursing education programs.

**Keywords:** Stress, Stressor, Nursing Students.

## **Knowledge regarding Autism Spectrum Disorder among Nurses (17#39)**

*Md. Shawon Hossain and Md. Sabbir Hassan and Nisat Tasnim and Md. Kaoser Bin Siddique and Md. Matiur Rahman*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Lecturer, TMSS Nursing College, Bogura
4. Coordinator, Research & Training, TMSS Health Sector, Bogura
5. Chief of Health Sector, TMSS Health Sector, Bogura

**Presenter:** Md. Shawon Hossain; mdshawonhossain5551@gmail.com

### **Abstract**

**Background:** Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by challenges with social interaction, communication, and repetitive behaviors. Despite growing global awareness, ASD remains under recognized in countries like Bangladesh, where stigma and limited resources impede early diagnosis and intervention. This study aims to assess the level of knowledge regarding ASD among nurses to inform future awareness and training programs.

**Objective:** To assess the level of knowledge regarding autism spectrum disorder among nurses.

**Methods:** A cross-sectional descriptive study was conducted from July 2023 to December 2023. Data was collected from 100 nurses using an interviewer-administered structured questionnaire. The questionnaire covered 10 domains related to ASD knowledge, including signs and symptoms, risk factors, and interventions.

**Results:** This study found that out of the 100 nurses, 48% were aged 21-25 years, and 70% were female. The majority (85%) had a Diploma in Nursing Science and Midwifery, and 51% had 1-5 years of nursing experience. Twenty-five percent of the respondents specialized in pediatric care.

The overall mean knowledge score was 34.17 out of 54, indicating an average level of knowledge about ASD. Key areas such as signs and symptoms (mean score = 4.36) and risk factors (mean score = 4.65) showed relatively higher awareness, while knowledge about improving outcomes through education and awareness had a lower mean score of 1.

**Conclusion:** The study reveals an average level of knowledge about ASD among nurses, emphasizing the need for enhanced training and awareness programs. While some aspects of ASD are well-understood, significant gaps remain, particularly in understanding preventive measures and family support. Increasing education and resources for nurses could improve the diagnosis and care of children with ASD in Bangladesh.

**Keywords:** Knowledge, Nurse, Autism Spectrum Disorder

## **Prevalence and factors associated with anxiety and depression among reproductive-aged women in Bangladesh (12#169)**

*Md Tazvir Amin, Tasnim Ara, Bikash Pal, Sumaiya Nusrat Esha, Zannatul Ferdous, Md Mahabubur Rahman*

International Centre for Diarrhoeal Disease Research Bangladesh (icddr,b)

**Presenter :** Mr. Md Tazvir Amin, Email: tazvir.amin@icddr.org,

### **Abstract**

**Background:** The psychological well-being of reproductive-age women is crucial for maternal and child well-being. However, mental health aspects are overlooked in low- and lower-middle-income countries, including Bangladesh. National-level prevalence and correlates of anxiety and depression among women of reproductive age are unknown. For the first time, this study aims to estimate the prevalence and correlates of anxiety and depression among reproductive-aged women in Bangladesh using national-level data.

**Design and Methods:** We used data from the Bangladesh Demographic and Health Survey 2022 that collected anxiety and depression data using GAD-7 and PHQ-9 modules, respectively. This study included a total of 19,987 women aged 15 to 49. We used a mixed-effect multivariable logistic regression model to examine the factors associated with anxiety and depression.

**Results:** The national level prevalence of anxiety and depression among RAW were 19.5% and 4.9%, respectively. The odds of having anxiety monotonically increased from the age of 25. Menopause, educational attainment, empowerment, household wealth, and type of residence were not associated with anxiety or depression. Muslim women were respectively 47% (AOR: 1.47, 95% CI: 1.09, 1.97) and 64% (AOR: 1.64, 95% CI: 0.97, 2.77) more likely to confront anxiety and depression than non-Muslims. Being currently married, having a husband who completed secondary level education, having weekly marital coitus, and residing under the headship of a father or mother-in-law were associated with lower odds of anxiety and depression. Women from the Rangpur and Sylhet divisions had higher anxiety and depression prevalence.

**Conclusions:** This study reveals a high prevalence of anxiety among reproductive-aged women and highlights that anxiety and depression are not clustered among disadvantageous groups like less educated, less empowered, rural, and poor women. Anxiety and depression are rather associated with late reproductive age, religious affiliation, marital factors, and region.

**Keywords:** Anxiety, depression, prevalence, women, age, pregnancy, Bangladesh

## **Assessing the Level of Emotional Intelligence among Bangladeshi Youth (13#166)**

*Faisal Ahmed<sup>1\*</sup>, Ashish Paul<sup>1</sup>, Mehreen Salim Aurpa<sup>1</sup>, Fairuz Abedin<sup>1</sup>, Sinha Akter<sup>1</sup>, Ayesha Maria<sup>1</sup>, &  
Prerna Agrawal<sup>1</sup>*

<sup>1</sup> Department of Behavioral Sciences, Bangladesh Institute of Innovative Health Research, Mirpur-1, Dhaka-1216, Bangladesh

**Presenter :** Ashish Paul, Email: sghsndc1995@gmail.com

### **Abstract**

**Purpose:** Adolescents in Bangladesh are becoming increasingly aware of behaviors associated with emotional intelligence during adolescence. However, there is a significant lack of assessment tools for evaluating emotional intelligence in Bangladeshi youth. This study aims to explore the level of emotional intelligence among Bangladeshi youth and its significance for academic success and psychological well-being.

**Methods:** This cross-sectional descriptive study included 208 Bangladeshi youth aged 18-35 years enrolled in educational institutions or actively engaged in youth programs across various regions of Bangladesh. Quantitative data were collected through a survey questionnaire, and the Bangla version of the Emotional Intelligence Scale was used to measure emotional intelligence. Data were analyzed using independent samples t-tests and regression analysis to explore the relationship between demographic variables and emotional intelligence scores.

**Results:** The average emotional intelligence score among the youth was 124.61 ( $\pm 13.56$ ), indicating a moderate level of EI. A significant difference in emotional intelligence was found between rural and urban areas. Gender significance was determined using an independent samples t-test. Socioeconomic status, residential division, and residential area were analyzed using a one-way ANOVA. Factors such as age, gender, family background, and socioeconomic status were identified as significant predictors of EI, with higher scores observed among participants from higher socioeconomic backgrounds and urban areas.

**Conclusion:** The study suggests integrating emotional intelligence (EI) into the educational curriculum to enhance academic performance and emotional well-being, aligning with global educational trends. Recommendations are provided for educational institutions and policymakers to promote emotional intelligence development among students to support their academic success and psychological well-being.

**Key words:** Emotional intelligence, Bangladesh, Youth.

## **Depression and Menopausal Symptoms among Rural Women in a Selected District of Bangladesh**

*Khadizatul Kubra, Kazi Shafiqul Halim*

Rangpur Medical College

**Presenter :** Khadizatul Kubra, Email:doctornipa@gmail.com

### **Abstract**

**Background:** Menopausal women may present a period of higher vulnerability for depression. Menopausal symptoms are not perceived uniformly. Menopausal symptoms experienced by women can be severe enough to affect their normal daily activities and even develop some morbid condition both physically and psychologically.

**Objective:** The study aimed to assess the level of depression and menopausal symptoms among rural women and find association between depression and menopausal symptoms.

**Method:** This cross-sectional study was conducted in the rural area of Kurigram district, from January to December of 2022, among 174 menopausal women who were conveniently selected. Data was collected by face-to-face interview using questionnaire.

**Results:** The proportion of perimenopausal women were more than half (52.3%) and rest of were postmenopausal, more than nine tenths (97.1%) were muslin, almost four fifths (79.8%) were married, more than four-fifths (82.8%) were housewife, almost three fourths (71.84%) had different level of education, with a mean monthly family income of 10000±7153.155 tk. More than half (55.2%) had no depression, and less than half (44.8%) had a different level of depression. This study showed that depression was more prevalent in postmenopausal (54.2%) than perimenopausal (36.3%) women. Almost two thirds (71.3%) of the respondents had mild to moderate type of menopausal symptoms. Depression and menopausal symptoms were associated as rural women who had mild to moderate type menopausal symptoms were 8.65 times more likely to be depressed than who were asymptomatic of menopausal symptoms.

**Conclusions:** This study showed that menopausal symptoms might be potential factors for developing depression which requires further study to establish the fact.

**Keywords:** Perimenopausal, postmenopausal, depression.

## **Online Psychological Management of Adolescent Depression: A Case Study from a Rural Area of Bangladesh (18#107)**

*Md. Jianur Kabir*

Clinical Psychologist & National Consultant-UN Stress Counsellor, United Nations Department of Safety and Security, Dhaka

**Presenter:** Md. Jianur Kabir, Email : [jia.cpsy@gmail.com](mailto:jia.cpsy@gmail.com)

### **Abstract**

**Background:** After COVID-19, the cases of depressive disorders have increased. Studies have shown that up to 9% of teenagers meet criteria for depression. Psychological treatment, especially cognitive behavioural therapy (CBT) and dialectical behaviour therapy (DBT), is a nonpharmacological psychological approach that assesses and treats the client's cognition, emotion, and behaviour to manage her depression.

**Objective:** The aim of this study is to explore online psychological management of adolescent depression .

**Method:** This study used the qualitative single-case study method. A 17-year-old diagnosed depressive disorder adolescent female was purposefully selected from a rural area of Bangladesh. The client had been assessed and treated using online Zoom. Psychological assessment was done through a clinical interview; scales administered, such as the depression scale (Uddin & Rahman, 2005) and anxiety scale (Deeba & Begum, 2004), were used. Written informed consent was taken from the participant and her mother.

**Findings:** This study found that different negative automatic thoughts, behaviours, and emotions are responsible for maintaining her depression. So, CBT and DBT were chosen as the treatments for the client's problems. After 18 sessions and the follow-up, the client adequately improved. Her parents also mentioned her improvement. She got a golden Garede point average of 5 in her higher secondary examination in 2024.

**Conclusion:** So, it was found that the symptoms improved rapidly with online psychological treatment. The findings of the study matched the findings of other studies. Therefore, it is concluded that online psychological therapy, especially CBT and DBT, has been an effective online psychological approach for managing adolescents depression.

**Keyword: Keyword:** Adolescent depression, psychological management, cognitive behavior therapy, dialectical behavior therapy.

## **Dual Realities: Psychological and Physiological Outcomes of Migrant and Non-Migrant Students in Dhaka, Bangladesh (19#85)**

Israt Jahan Labonno<sup>1</sup>, Sarika Kifayat Islam<sup>2</sup>, Sanjida Afrin<sup>3</sup>.

**Presenter:** Israt Jahan Labonno, Student, East West University

**Background:** Migration of students from other cities to Dhaka for study is a significant phenomenon in Bangladesh, leading to various challenges, including academic stress, cultural adjustment, and access to healthcare. These factors can impact the psychological and physiological well-being of university students. This study aims to bridge that gap by examining both psychological and physiological outcomes among university students.

**Design and Methods :** This case-control study recruited 100 migrant and 100 non-migrant university students in Dhaka city through stratified random sampling. Data collection was conducted via a structured questionnaire, addressing both psychological (stress, anxiety, depression) and physiological (sleep patterns, nutrition, physical activity level) health. Data were analyzed through SPSS, applying statistical tests to compare the two groups and evaluate the hypothesis.

**Results:** Preliminary findings suggest that migrant students face increased psychological stress, often linked to the pressures of cultural adaptation and academic challenges. Physiologically, they are more likely to experience disruptions in sleep patterns and irregular nutrition compared to their non-migrant counterparts, who have more stable routines and access to support networks. Both groups employ various coping mechanisms, but migrant students tend to rely on informal support structures.

**Conclusions:** Migrant students in Dhaka face distinct psychological and physiological challenges compared to non-migrant students, affecting their academic performance and overall well-being. These findings highlight the need for targeted support systems to enhance coping strategies, particularly for migrant students, to improve their health and academic outcomes.

**Keywords:** Migration, Psychological Stress, Physiological Health, University Students, Dhaka.

## **Insomnia Among University Students in Bangladesh: A Five-Year Study of Key Stressors (21#72)**

*Mohammad Naveed Ishtiaq<sup>1</sup>, MD Sazid Islam<sup>2</sup>, S.M.Nazmul Ahasan<sup>3</sup>, Sanjida Jahan Shifa<sup>4</sup>,  
Md. Mortuza Ahmmmed<sup>5</sup>*

American International University-Bangladesh, Dhaka 1229, Bangladesh

**Presenter:** Mohammad Naveed Ishtiaq, 23-50374-1@student.aiub.edu

### **Abstract:**

**Background:** A concerning trend seems to exist among Bangladeshi university students and that is of growing insomnia rates within this group. University students aged 18 to 25 years have reportedly had an increase in sleep disorders owing to factors including intense academic concern and mental health disorders. These conditions have further been aggravated by the pandemic which resulted in increased educational stress, economic stress or instability and even disruption of education.

**Design and Methods:** The primary focus of this research is to analyze studies looking at the insomnia pattern and prevalence among university students in Bangladesh from the years 2018 to 2023. The study explores prominent factors associated with the health conditions, gender, external stressors such as the COVID-19 pandemic and family stress. Information was obtained from six urban and nationwide university settings over time to capture their different stressors.

**Results:** Prevalence ranged from 25% in 2018 to a peak of 43% during the pandemic, while in 2020-2021, academic stress, financial instability, deterioration in mental health, and increased screen time all remained causes. A strong gender disparity in prevalence was found in females, with a steadily increasing ratio from 1.5:1 to 2:1 throughout the pandemic. In the post-pandemic recovery period, such as in the years 2022-2023, the rate of insomnia went down a little, but sleep was affected by academic pressure and financial instability.

**Conclusions:** Overall, the findings emphasize all the three factors, namely academic, mental health, and pandemic-related, to be important in the establishment of insomnia among university students. However, such factors - more so the academic pressures and lack of mental health support - require amelioration with a view to reducing prevalence rates of insomnia. Overall, the findings stress the importance of comprehensive mental health interventions in educational settings.

**Keywords:** Insomnia, University Students, Academic Stress, COVID-19 Pandemic

## **Exploring the Psychological Battlefield: Post-Traumatic Stress Disorder in the Aftermath of Gun Violence in the 2024 Bangladesh Quota Reform Movement (21#59)**

*Dr. Sabrina Monsur, Oishee Sultana, Abdullah Al Maruf, Maraea Quibtaea, Nazia Faiza, Junaid Ahsan Atonu*

Institution: Dhaka Medical College

**Presenter:** Oishee Sultana; oisheesultana77@gmail.com

### **Abstract**

Post-Traumatic Stress Disorder (PTSD) is a mental health condition triggered by personally experienced or witnessed traumatic events that causes anxiety, depression, flashbacks and influences daily life activities. Firearm injury has a significant impact on the development and severity of PTSD symptoms.

Arising as a peaceful protest in June 2024, the Quota Reform Movement started to get violent due to crackdowns and extrajudicial exercises by the government, bringing about more than 600 deaths and 23,000 casualties.

The goal of the study is to delineate the interconnection between gunshot violence and "PTSD" among populations injured or eyewitnessed events during the Quota Reform Movement. This study also aims to find out appropriate mental health support system available at that moment and to build such an infrastructure that can rescue any population affected psychologically in future.

An epidemiological cross sectional study was conducted from 22 August to 19 October, 2024. The target population was people who witnessed the overwhelming casualties and were injured by gunshot during the protest. A 17-item self-report rating scale for PTSD, known as the Civilian Version (PCL-C), was used to develop a questionnaire. Data was gathered from patient interviews and medical records.

65 individuals, or approximately 48.5% of the sample, out of 134 had indicative symptoms of PTSD. Most of them were male (78.5%), ranging between age of 16–25 (70.8%) and students (49.2%) make the majority.

The study recommends adoption of “Trauma-Informed Care”<sup>3</sup>, early screening, identification of at-risk individuals, and immediate and long-term psychiatric care in the healthcare system to prevent the development of PTSD in individuals at risk among gunshot injured people in quota movement.

**Keywords:** Post Traumatic Stress Disorder, Gun Violence, Quota Reform Movement, Firearm injury

## **Happiness status of the slum population in Dhaka city, Bangladesh: a cross-sectional study (26#36)**

*Palash Chandra Banik<sup>1,2</sup>, Rijwan Bhuiyan<sup>1,3</sup>, Tahmina Akhter<sup>1</sup>, Halima Akter Sathi<sup>1</sup>, Saidur Rahman Mashreky<sup>1</sup>, Md. Anower Hussain<sup>1</sup>*

1Bangladesh University of Health Sciences, Dhaka, Bangladesh

2Bangladesh University of Professionals, Dhaka, Bangladesh

3Centre for Non-Communicable Disease Research, Department of Public Health and Informatics, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

**Presenter:** Palash Chandra Banik, Email address: palashcbanik@gmail.com,

### **Abstract**

**Objective:** The aim of the study was to assess the level of happiness of the slum population in Dhaka city, Bangladesh.

**Methodology:** A census was conducted in 2024 among slum population in Dhaka city. All adults slum population from Kallyanpur pora slum were approached for inclusion in this study; among them 3877 were interviewed. Information regarding socio-demographic, co-morbidities and well-being index were collected using a semi-structured questionnaire. Well-being related questions were adapted from WHO-5 Well-being Index questionnaire. Data were analyzed using SPSS software version 25.0. Ethical approval for the study was obtained from the Ethical Review Committee of Bangladesh University of Health Sciences. The Level of happiness was categorized as low well-being: <25th percentile, medium well-being: 25th – 75th percentile and high well-being: >75th percentile.

**Results:** The mean age of slum populations was 37.0±14.4 years; among them 57.4% were female and about six in 10 (63.0%) were 18-39 years old. Half (50.9) of the slum populations had no formal schooling, and the majority (83.8%) were currently married. Among the total slum population, nearly two-thirds (62.4%) of the slum population had medium level of happiness and one-fifth (20.1%) had low level of happiness; and mean score of the well-being 5 index was 66.0±18.2. Age group ( $p=0.001$ ); sex ( $p=0.001$ ); educational status ( $p=0.001$ ); extra salt intake ( $p=0.001$ ); occupational status ( $p=0.001$ ); co-morbidities (DM, HTN, central obesity;  $p=0.001$ ) were significantly associated with the level of happiness of the slum population.

**Conclusion:** One out of five slum adults were not happy that needed urgent public health intervention.

**Key words:** Level of happiness, mental health status, Slum population, Bangladesh

## **Effect of vitamin D receptor Gene polymorphism in Autism Spectrum Disorder in Bangladeshi Children (21#159)**

*Md. Siddiquil Islam, Ferdin Ehsan, Zannatul Tunjum Islam, Umme Rokaya Keya, Krishno Dutta, Md Udoy Aman Fahim, Sajid Ahmed Rifat, Kazi Asharaful Islam, Abu Syed Md. Mosaddek.*

Southeast University  
Institute of Paediatric Neurodisorder and Autism (BSMMU)  
Quest Bangladesh Biomedical Research Center

**Presenter:** Dr.Md.Siddiquil Islam; Email: chairpharmacy@seu.edu.bd

### **Abstract**

**Background:** At present, no common biological markers have been identified among individuals with autism spectrum disorder (ASD), which encompasses a range of behaviorally defined conditions. The development of ASD may be influenced by single nucleotide polymorphisms (SNPs) in various genes.

**Objective:** The main objective of this study is to evaluate the influence of VDR gene polymorphism in Childhood Autism spectrum disorders

**Methods:** The research involved 100 children with ASD, recruited from the Institute for Paediatric Neurodisorder & Autism at BSMMU, and a control group of 100 healthy individuals. Genomic DNA was extracted from blood samples and amplified through PCR using primers specific to a targeted region. After PCR, appropriate enzymes were employed to perform Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) for genotype determination. Odds ratios (ORs) and 95% confidence intervals (95% CIs) were calculated to assess the association.

**Results:** We found a correlation between an increased risk of ASD and the presence of the T allele at the Fok-I (rs2228570) site of the VDR gene (OR=1.56, 95% CI=1.0281 to 2.3536, P=0.036) when compared to the C allele. Patients carrying at least one T allele (CT+TT) had a 1.86 times greater likelihood of developing ASD than those with the CC genotype (OR=1.8571, 95% CI=1.0525 to 3.27710, P=0.033).

**Conclusion:** This gene is linked to an increased risk of childhood ASD and could be a promising target for diagnosing the disorder. However, these findings need further confirmation through larger studies that encompass diverse ethnic groups and geographical areas.

**Keywords:** ASD, Polymorphism, VDR, PCR-RFLP, SNPs.

## **Group Handwashing, Toothbrushing and Silver Diamine Fluoride Application for Rohingya School Children in Refugee Camps of Cox's Bazar: a glimpse from baseline survey (1#53)**

Khaleda Zaheer, Tahmina Zerin, Shuvhasish Saha

Refugee Crisis Foundation

**Presenter :** Dr Tahmina Zerin ,Program Manager ,Refugee Crisis Foundation

tahmina@refugeecrisisfoundation

### **Background**

Various strategies have been proposed to address the early childhood caries among refugee children. School-based toothbrushing and handwashing program with topical fluoride application can have positive effect on oral and overall health. This study aims to evaluate the effectiveness of SDF and school-based supervised toothbrushing reducing early childhood caries prevalence in children compared to home toothbrushing and SDF application in refugee camps in Cox's Bazar.

**Methods :**A quasi-experimental study has been initiated in two schools in Rohingya refugee camps. In the test site three interventions are being given- i) school-based supervised toothbrushing and handwashing program, ii) SDF application among the beneficiaries, and iii) emergency dental services; whereas the control group is being provided oral hygiene aids to practice at home. Baseline data has been collected and follow-ups will be done every 6 months to assess the oral health behavior of children and oral health condition.

**Result :** Older children, those not using toothpaste and/or toothbrushing less than twice daily had a higher number of teeth with history of dental caries, whereas it didn't seem to vary according to any of the parental variables. The fully adjusted model of hierarchical regression found that only age and toothbrushing frequency are significantly associated with the number of teeth with history of dental caries. In all, there is an increase of 1.08 times (IRR= 1.08, 95% CI 1.03-1.14) in the number of teeth with history of dental caries per each additional year in the child's age, and children who brush teeth twice daily had 0.87 (IRR=0.87, 95% CI 0.77-0.98) times the number of teeth with history of dental caries than those who brush less than twice a day.

**Keywords:** Dental caries, refugee children

## Oral Health Status of Street Children of Rangpur City (2#77)

*Maknunnahar* , *Md.Shakhawat Hossain* , *Shah Ahasanul Imran* , *SM Rowshan Alam* ,

1. Ph.D research Fellow, Bangladesh Open University, Gazipur, Bangladesh
2. Assistant Professor, Department of Gastroenterology, Rangpur Medical College, Rangpur
3. Associate Professor, Department of Community Medicine, Rangpur Community Medical College, Rangpur
4. Assistant Professor and HOD, Department of Community Medicine and Public Health, Rangpur Medical College, Rangpur

**Presenter:** Maknunnahar, Email: drauna89@gmail.com

### Abstract

**Introduction:** Oral health is an integral part of general health and wellbeing. Unfortunately due to lack of awareness towards oral health, dental diseases get undiagnosed in street children leading to poor dental health later in life.

**Objectives of the Study:** To assess the oral health status of street children in Rangpur city by using DMFT index.

**Methods:** This cross sectional study was conducted in Railway station, Lalbag and CO Bazar area of Rangpur city from January, 2022 to December, 2022 over 180 number 08-18 years old street children's. Data were collected using a semi structured pre-tested questionnaire in Bangla using DMFT(Decayed-Missing-Filled Index) which was introduced by Kelin, Palmer and Knutson in 1938 and modified by WHO which used to measure the prevalence of dental caries. Data was analyzed using SPSS version 23. The research protocol was approved by the Ethical Committee of the Bangladesh Open University.

**Results:** Almost half (45%) of the respondent's were between 8-12 years, 33.3% between 13-15 years and 21.7% between 16-18 years. 77.8% of the respondent use tobacco and 22.2% respondent are free. Among 180 respondent most (75.6%) of them did not clean their tooth regularly and about 24.4% clean tooth regularly. However, majority (60%) use meswak, 56.7% use finger and only 10% use tooth brush for cleaning their teeth. 96.1% have dental caries while only 3.9% are free of dental caries. 77.8% have no filled teeth and 22.2% respondent have filled teeth. Most (97.8%) of them recorded DMFT 1 or high while only 2.2% have scored DMFT 0 or not presence of any decayed, filled or missing teeth.

**Conclusions:** This study indicates that street children needs special support on oral healthcare. So, necessary steps should be taken to improve the street children's oral health through responsible authority.

## **Association of Cervical Lymph Node Ratio with Clinico-pathological status of oral squamous cell carcinoma (11#217)**

*H. M. Shahriar Rubel*

<sup>1</sup>Lecturer, Department of Oral and Maxillofacial Surgery, Dental Unit, Chittagong Medical College  
45neel@gmail.com

### **Abstract**

**Objectives:** Oral squamous cell carcinoma (OSCC) is the most common malignant tumour of the head and neck. The mainstay of treatment is surgery, surgery with chemotherapy and/or radiotherapy. However, patients who receive extensive treatment may still experience relapse. Therefore, it is important to improve treatment outcomes by finding reliable prognostic factors and identifying high-risk patients. The aim of this study is to evaluate and discuss the importance of lymph node ratio (LNR) in association with clinicopathological status as a potential prognostic predictor in patients with regionally metastasized OSCC.

**Design and methods:** An observational cross-sectional study was conducted in the Department of Oral and Maxillofacial Surgery, Dhaka Dental College, Bangladesh. Patients with histologically confirmed OSCC were recruited. Statistical analysis of the data was done using SPSS.

**Results:** Total 53 patients enrolled with a mean age of  $49 \pm 7.4$  years. The male to female ratio was 1.1:3. The most common location of OSCC was in lower posterior alveolo-gingival mucosa (49.1%). Majority (60.4%) had  $LNR > 0.07$ . This study revealed that posterior alveolo-gingival mucosa and T2 and T3 sizes were significantly associated with high LNR ( $p = 0.042$ ). Furthermore, presurgical histological grade II was significantly higher in high risk LNR group ( $p = 0.011$ ). This study also found out a significant association between perineural invasion ( $p < 0.001$ ), increased lympho-vascular invasion and extracapsular spread ( $p = 0.008$ ) with high LNR compared to low LNR.

**Conclusion:** We were able to demonstrate clearly that LNR is a valuable parameter to stratify patients of OSCC in association with clinicopathological status and this finding may have major clinical implications with better patient outcomes.

## **Blockchain Technology in Healthcare: Innovations in Data Security and Patient Privacy (1#13)**

*Tanjim Khan Nabil<sup>1</sup>, Sumshun Nahar Eity<sup>2</sup>, Hasan Mahmud<sup>3</sup>, Md. Mortuza Ahmmed<sup>4</sup>*

<sup>1</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>2</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>3</sup>Undergraduate Student, Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

<sup>4</sup>Associate Professor, Department of Mathematics, American International University-Bangladesh, Dhaka, Bangladesh

**Presenter:** Tanjim Khan Nabil, 22-48227-2@student.aiub.edu

### **Abstract**

**Background:** In numerous industries, blockchain has been accepted as a revolutionary innovation, one innovation one of which is healthcare. The next area is security is the security and privacy as more and more health records go digital. The current systems used to store health data are vulnerable to hacking, tampering with, and other forms of illegitimate intrusion hence the need for new approaches. Blockchain based on decentralized and non changeable nonchangeable technology may bring considerable value to these problems. Sharing of patient information through blockchain could transform how healthcare institutions securely manage personal data over the internet improving on its privacy and proving difficult to be altered.

**Design and Methods:** This paper explores the explores on the use of blockchain in healthcare health care especially on the aspect of data protection and patients. Based on the reviewed literature, the current blockchain frameworks utilized in healthcare were analyzed in regard to their advantages and drawbacks. Moreover, unmatched conversations were carried out with healthcare health care IT specialists and secular blockchain practitioners to assess the concrete implementing issues and opportunities. The paper also provides a comparison of conventional HISs with the blockchain HISs with regard to data security, privacy, and the capability to scale.

A theoretical model for adopting blockchain in EHR systemssystem with Smart Contracts was proposed, in which, patients' consent and access control were implemented based on smart contracts. This model was tested using simulations to analyze its functionality in different types of healthcare settings based on their data storage and security, such as integrity of data and confidentiality and real-time monitoring capability.

**Results:** The findings demonstrate the use of blockchain in healthcare by enhancing the protection and access to patients' data, as well as supporting IoMT data sharing. The blockchain elements of smart contracts and cryptography provide a safe and compliant outcome for data protection, providing real solutions to long-standing issues faced in healthcare.

## **Prevalence of Social Media Use among Secondary School Students (3#43)**

*Gour Kuhmar Das<sup>1</sup> and Md. Sabbir Hassan<sup>2</sup> and Rita Rani Paul<sup>3</sup> and Md. Kaoser Bin Siddique<sup>4</sup> and Md. Matiur Rahman<sup>5</sup>*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Asst. Professor, TMSS Nursing College, Bogura
4. Coordinator, Research & Training, TMSS Health Sector, Bogura
5. Chief of Health Sector, TMSS Health Sector, Bogura

**Presenter:** Md. Sabbir Hassan; sabbir7.bsc@gmail.com

**Background:** Social media platforms have become integral to the lives of young people, offering spaces for communication, entertainment, and education. However, their prevalence among secondary school students raises concerns about the effects on academic performance, social interactions, and mental well-being. Understanding the extent and reasons for social media use among adolescents is essential to guide better management strategies. This study aims to assess the prevalence of social media use among secondary school students in Bogura.

**Objective:** To determine the prevalence of social media use among secondary school students.

**Methodology:** A cross-sectional descriptive study was conducted from July 2023 to December 2023. Data were collected from 75 secondary school students (Class VIII, IX, and X) using an interviewer-administered structured questionnaire. The questionnaire covered 14 domains related to social media use, including the most used platforms, time spent, reasons for usage, and its impact on academic performance and relationships.

**Results:** This study found out of the 75 participants, the majority (49.33%) were aged 15-16 years, with 52% being male. Most students (70.67%) lived in rural areas, and 49.33% came from families with a monthly income of 5,000-10,000 TK.

The study revealed that the overall prevalence of social media use was moderate, with a total mean score of 24 out of 62 across the 14 domains. Students use social media mainly to make new friends, chat, share content, and research academic materials. The most used platform had a mean score of 3.88, while the negative effects of social media use had a mean score of 2.65.

**Conclusion:** This study highlights the widespread use of social media among secondary school students, with an average level of engagement. Workshops and seminars for parents and teachers are recommended to help guide students in balancing social media use with academic responsibilities and healthy social relationships.

**Keywords:** Social Media, Prevalence, Secondary School Students

## **Telecommunication-Based Healthcare Education in Bangladesh**

*Nusratun Nahar<sup>1\*</sup>, Nisrat Jahan<sup>1</sup>, Sonia Zaman<sup>1</sup>, Fariza Tasnia<sup>2</sup> (7)*

1. Department of Pharmacy, Southeast University, Dhaka -1208, Bangladesh.
2. Department of Biotechnology, BRAC University, Dhaka-1212, Bangladesh.

**Presenter:** Dr. Nusratun Nahar, E- mail: nusratun.nahar@seu.edu.bd,

### **Abstract**

Telecommunication infrastructure plays a vital role in advancing healthcare education in developing countries like Bangladesh. Despite infrastructural limitations, the integration of telecommunication technologies has facilitated remote access to healthcare resources and educational materials, thereby bridging the gap between urban and rural healthcare education. Challenges such as resource constraints and digital disparities persist, highlighting the need for comprehensive strategies to ensure equitable access to telecommunication services. Telecommunication-based education has revolutionized healthcare education by overcoming geographical barriers, facilitating remote learning, and enabling the dissemination of up-to-date medical information. It empowers healthcare professionals with continuous learning opportunities, fosters collaboration, and enhances patient education and awareness. Regulatory measures by government bodies like the Bangladesh Telecommunication Regulatory Commission (BTRC) and the Ministry of Health and Family Welfare (MOHFW) play a crucial role in shaping the implementation and effectiveness of telecommunication-based healthcare education. Success stories and case studies demonstrate the effectiveness of telecommunication interventions in improving healthcare knowledge and outcomes across diverse socio-economic contexts. Looking ahead, concerted efforts are needed to address infrastructural challenges and ensure equitable access to telecommunication services. Collaborative initiatives involving government, academia, and industry stakeholders can further drive innovation and foster sustainable growth in telecommunication-based healthcare education in Bangladesh. Evaluating various approaches yields valuable insights for optimizing telecommunication-based healthcare education initiatives, ultimately contributing to better healthcare outcomes across the country.

**Key Words:** Telecommunication, Healthcare education, Remote access, Digital disparities, Regulatory measures

## **A Glimpse on Obstetric Care Services in Northern Bangladesh: Way Forward (3#13)**

*Md. Taufikuzzaman*

Freelance Consultant on Health, Population and Nutrition

Email: taufikzaman8@gmail.com

**Background and Methods:** The study is predominantly qualitative scrutiny using empirical technique in the field of medical sociology to explore the nature of receiving obstetric care by the women in northern Bangladesh. The study delved into the role of some 'predisposing factors' (socio-economic and demographic status) and 'enabling factors' (available health services including social network) in determining women's nature of receiving obstetric care by 104 women. Verstehen views of 15 health professionals on the issue were also accounted. The primary objective of the study is to way out the effective obstetric care from the behavioristic perspectives of women and their associates.

**Results:** The study depicted that financial factors remain as the prime determinant of shaping women's nature of receiving obstetric care, but sometimes other factors, for instance, the nature of household heads' occupation plays a dominant role. It is not universal that the higher education level of women is not significantly associated with higher quality/quantity of receiving obstetric care. Basically receiving obstetric care is not an independent issue rather it is interrelated with various factors. The factors affecting the nature of receiving obstetric services are diverse and they play different roles in case of different individuals or different segments of the population influenced by social facets. The availability of services that are accessible by them definitely have a great impact on remodeling their nature of receiving the services irrespective of their socio-economic background.

**Conclusion:** it is suggested that furthering efforts are needed to make the obstetric care services more available with all round affordable cost at the door-step of the community.

Philanthropic as well as public affairs are essential to this effect.

**Keywords:** Obstetric Care, Bangladesh, Women

## **Measuring the readiness and functionality of health facilities to provide sexually transmitted infection (STI) services in Bangladesh: Evidence from Bangladesh Health Facility Survey (BHFS) 2014 and 2017 (6#34)**

*Jahan E, Saha A, Hasan MM, Rahman AE*

<sup>1</sup> Maternal and Child Health Division, International Centre for Diarrhoeal Disease Research, Bangladesh

**Presenter:** Esrat Jahan; Email: esrat.jahan1@icddr.org;

**Background:** STIs represent a global public health burden. The World Health Organization's global strategy on STI states the objective of reducing incidence of syphilis and gonorrhoea by 90% by 2030. Bangladesh is adhering to the strategy as mentioned in the "National Guidelines for Management of STI 2019". The Essential Service Package of Bangladesh states that the provision for STI services be available from the union to district level. The objective of this paper is to assess the readiness of health facilities to provide STI services in Bangladesh.

**Methods:** Secondary analysis was done using the nationally representative BHFS 2017 and 2014. 1524 and 1548 facilities were surveyed in 2017 and 2014 respectively. Analysis was done for three components- training capacity of healthcare providers, availability of diagnostic facilities and availability of medicines and commodities. STATA 15 was used for data analysis.

**Results:** In terms of training within and over 24 months, capacity has decreased among health providers. Regarding diagnostics, syphilis testing capacity has increased in all facilities except district hospitals and MCWC's. For individual tests, there has been an increase in RDT, VDRL, TPHA except for PCR and RPR tests. For chlamydia testing, there has been a decline in capacity in all health facilities for both overall and individual tests (Giemsa stain and PCR). Notably, there was no provision of STI testing at the union level as highlighted in the surveys. Regarding availability of medicines and commodities, there has been a reduction in availability of medications in all health facilities except for private facilities and NGO's.

**Conclusion:** There has been a decline in the readiness of health facilities to provide STI services. The BHFS does not have questions regarding gonorrhoea diagnosis. Urgent action is required to upgrade the condition of health facilities in providing STI services in order to meet the global strategy's timeline by 2030.

## **Statistical Perspectives on Menstrual Health: Analyzing Irregular and Painful Periods in Bangladesh (9#52)**

*Fatima<sup>1</sup>, Md. Mortise Ahmmed<sup>2</sup>*

<sup>1</sup>Student, Department of Computer Science, American International University - Bangladesh, Dhaka 1229, Bangladesh, 23-50170-1@student.aiub.edu

<sup>2</sup>Associate Professor, Department of Mathematics, American International University–Bangladesh, Dhaka 1229, Bangladesh, mortuza@aiub.edu

**Presenter:** Fatima; Email: 23-50170-1@student.aiub.edu

### **Abstract**

**Background:** Menstrual health is a neglected aspect of women's well-being in many regions, including Bangladesh. A significant portion of women experience irregular and painful menstruation, impacting their physical, psychological, and socioeconomic lives. This study aims to address this gap by conducting a comprehensive statistical analysis of menstrual health issues, focusing on irregular and painful periods in Bangladesh.

**Objectives:** Firstly, determine the prevalence and patterns of irregular and painful menstruation among Bangladeshi women. Secondly, identify demographic and socioeconomic factors associated with menstrual health problems. Thirdly, assess the impact of menstrual health issues on women's quality of life. Finally, develop data-driven recommendations for public health interventions and policies.

**Method:** The analysis will be based on a comprehensive dataset from various sources, including clinical research, community reports, and health surveys. Statistical techniques such as factor analysis, regression analysis, and descriptive statistics will be employed.

**Expected Results:** The study anticipates a high prevalence of painful and irregular menstruation among Bangladeshi women, especially among younger women and those from lower socioeconomic backgrounds. Strong correlation between menstrual health problems and factors like education, work status, and healthcare access are expected.

**Conclusion:** This study will provide valuable insights into menstrual health in Bangladesh and advocate for data-driven intervention to address the challenges faced by women. By raising awareness and informing policy development, this research aims to improve the lives of women affected by menstrual health issues.

**Keywords:** Menstrual health, menstruation, Statistical analysis, Bangladesh, Public health.

## **Knowledge Regarding Pre-Marital Screening among Undergraduate Students: A Cross-Sectional Study (16#38)**

*Mst. Rasheda Khatun*<sup>1</sup> *Md. Sabbir Hassan*<sup>2</sup> *Mst. Nilufar yesmen*<sup>2</sup> *Rita Rani paul*<sup>2</sup> *Md. Azfarul Habib*<sup>3</sup>

1. TMSS Nursing College, Bogura
2. Department of Community Medicine & Public Health, TMSS Medical College, Bogura.

**Presenter:** Mst. Rasheda Khatun; rashedakhatun8283@gmail.com

### **Abstract**

**Background:** Pre-marital screening is a critical public health intervention that helps prevent genetic disorders and promote informed decision-making among couples. While several countries have successfully implemented pre-marital screening programs, challenges remain in regions with limited awareness and resources. This study aims to assess the knowledge of pre-marital screening among undergraduate students.

**Objective:** To assess the level of knowledge regarding pre-marital screening among undergraduate students.

**Methods:** A cross-sectional descriptive study was conducted between July and December 2023. A total of 100 undergraduate students were purposively selected for the study. Data was collected using a structured questionnaire designed to assess students' knowledge about pre-marital screening.

**Results:** Among the 100 respondents, 50% (50) were aged 17-18 years, and 51% (51) were male. The distribution of respondents' fields of study was equal, with 50% (50) studying Arts and 50% (50) studying Sciences. Regarding their background, 46% (46) reported their father's occupation as Business, and 53% (53) lived in urban areas. Additionally, 32% (32) reported a monthly family income above 20,000 TK. Knowledge about pre-marital screening was assessed across 12 domains, with notable mean scores including: Knowledge of pre-marital screening (mean score = 1) Tests required in pre-marital screening (mean score = 3.29) Barriers to pre-marital screening (mean score = 3.03) Measures to encourage pre-marital screening (mean score = 2.65) The overall knowledge score was 21.93 out of 41, indicating an average level of knowledge regarding pre-marital screening among undergraduate students.

**Conclusion:** The knowledge level among undergraduate students remains average. Challenges such as low public awareness, socio-cultural barriers, and inadequate healthcare infrastructure persist in Bangladesh. Efforts to improve awareness, provide resources, and reduce the cost of pre-marital screening are essential. Additionally, educational institutions should play a proactive role in raising awareness and providing accurate information about the benefits of pre-marital screening.

**Keywords:** Pre-marital, Screening, Undergraduate Student

## **Knowledge regarding Pubertal Change among Adolescent Girls of Bogura District (19#44)**

*Mst.Rubina Akter*<sup>1</sup>, *Md.Sabbir Hassan*<sup>2</sup>, *Mst.Nilufar Yesmen*<sup>3</sup>, *Rita Rani Paul*<sup>4</sup>, *Md.Matiur Rahman*<sup>5</sup>

1. TMSS Nursing College, Bogura
2. Chief of Health Sector, TMSS Health Sector, Bogura

**Presenter :** Rita Rani Paul; Email : ranirita11@gmail.com

### **Abstract**

**Background:** Puberty is a significant developmental stage marked by biological changes that lead to sexual maturity and the ability to reproduce. Proper knowledge of puberty is essential for adolescents to navigate this critical phase with confidence and understanding. This study aims to assess the knowledge regarding pubertal changes among adolescent girls in the Bogura district to identify gaps and recommend improvements in educational approaches.

**Objective:** The objective of this study was to evaluate the knowledge of pubertal changes among adolescent girls.

**Methods:** A cross-sectional descriptive study was conducted from July 2023 to December 2023. Data was collected from 100 adolescent girls aged 10-18 years from Class VIII, IX, and X. An interviewer-administered structured questionnaire was used to gather information on various aspects of puberty, including physical, emotional, and social changes, menstruation, and menstrual hygiene practices.

**Results:** This study found out of 100 Adolescent Girls, the majority (83%) of the participants were aged 13-15 years, and most (34%) were in Class VIII. Additionally, 83% of respondents reported a monthly family income of 5,000–10,000 TK.

Knowledge was assessed across 13 domains, with the mean score being 23.38 out of a total of 50, indicating an average level of understanding. Key areas such as knowledge of menstruation (mean score = 1), physical changes (mean score = 4.21), and emotional changes (mean score = 2.13) were evaluated.

**Conclusion:** The study concludes that adolescent girls possess an average level of knowledge regarding puberty. Comprehensive sex education in schools, focusing on puberty and reproductive health, is recommended to address knowledge gaps and support the overall well-being of adolescents.

**Keywords:** Puberty, Adolescent Girls, Menstruation

## **Ensuring Sexual and Reproductive Health and Rights (SRHR) in Indigenous Santal Community in Gaibandha District, Bangladesh through Empowering Santal Women to Study Midwifery and Establish Health Service (2)**

*Md. Shamsuzzaman<sup>1</sup>, Vibhavendra S Raghuvanshi<sup>1</sup>, Abu Sayed Hasan<sup>1</sup>, Md. Shaheen Akhtar<sup>1</sup>, Saifun Akter Chowdhury Lania<sup>1</sup>, Mahatab Liton<sup>2</sup>, Minoti Murmu<sup>2</sup>*

UNFPA  
LAMB

### **Abstract**

**Background:** Increased access to family planning, skilled birth attendants and emergency obstetric care are the most cost-effective interventions to improve maternal and sexual health of indigenous women. Three Santal women were selected from different ethnic groups to study Diploma in Midwifery, supported by the UNFPA, and then they are deployed in Shapmara Health and Family Welfare Centre (UH&FWC), Gaibandha, Bangladesh from 2020. The midwives provide SRHR services like antenatal care, postnatal care, emergency obstetric care, family planning services and conduct normal vaginal delivery of the ethnic women. Community Health Workers help the midwives by visiting pregnant mothers in the community and counseling them for institutional delivery.

**Objective:** To evaluate the SRHR services provided by the midwives of the Santal community.

**Methods:** This is a mixed method study. The data is collected through facility registers. Focus group discussion was done in the Santal community to understand their views towards services of the midwives.

**Results:** The Santal community midwives provided increased ANC, PNC, FP and normal deliveries in the facility after deployment. The Santal community is pleased with the SRH services of the midwives. Therefore, to contribute in the process of achieving the SDGs and also ensure “leaving no one behind from accessing the services”, it is very important to make the services available at their closer proximities as much as possible.

**Conclusion:** The Midwives of the Santal community are an inspiration for the indigenous women and they ensure the SRH services of the women of their community.

**Keywords:** SRHR for indigenous women, Ethnic group

## **Risk Factors, Screening and Vaccination status of Cervical Cancer Among Reproductive Age Women of Bangladesh (20#57)**

*Dr. Sabrina Monsur*

Dhaka Medical College Hospital

**Background:** Cervical cancer occurrence and death caused by it is common in developing countries like Bangladesh. Approximately 8,300 new cases of cervical cancer are diagnosed every year in Bangladesh, leading to 4,900 deaths.<sup>1</sup> A single dose vaccine has potential to prevent cervical cancer. Recently Cervical Cancer Vaccine has been introduced in Bangladesh. And vaccination campaign took place at the NIPSOM auditorium in Mohakhali, Dhaka, on Monday, October 2, 2023<sup>2</sup> Each dose of Papilovax costs Tk2,500.<sup>3</sup>

**Method:** A cross sectional study ongoing on Reproductive Age women of Bangladesh collecting data about their socio demographic factor, risk factors of cervical cancer, symptoms and knowledge about cervical cancer vaccination programmes; their screening and vaccination status and reason behind absence of screening and vaccination.

**Result & Discussion:** Among the responders , 75% (30) are 16-25 years old and 25% (10) 26-35 years old. That means they all are in the reproductive age group. Unfortunately none of them underwent cervical cancer screening before. Moreover 22.5% (9) are married and sexually active. They have some risk factors like 5% (2) did early marriage before 18 years, 12.5% (5) do unprotected sex without a condom, 10% (4) use OCP, 5% (2) has family history of cervical cancer, 2.5% (1) smoker, 2.5% (1) got immunosuppressant therapy. Some of them exhibit symptoms like abnormal vaginal discharge 7.5% (3), painful coitus 5% (2). Only 15% (6) took cervical vaccines. 30% of them stated lack of knowledge, 20% stated inadequate supply, 5% economic problems and and 5% stated social taboo as the causes.

**Conclusion:** More campaigns should be started in Bangladesh to attract the reproductive age group female, as well as make the vaccine more affordable, accessible.

## **Accelerating Access to Sexual & Reproductive Health Rights (SRHR) and A Movement on Empower Women and Girls (25#102)**

*Binu Adhikary, Ferdoushi Begum*

### **1. Grameen Alo**

**Presenter:** Binu Adhikary, Email: binuadhikary05@gmail.com

#### **Abstract:**

**Background:** A comprehensive approach is necessary to address SRH challenges in Bangladesh, focusing on improving access to information, healthcare services, and policy reforms. Integrating SRH education into the national curriculum, promoting gender equality, and engaging community leaders to combat stigma are essential for long-term change.

**Objectives:** To improve adolescent health through awareness generation and enhancing access to quality SRH services and inter-linkages between the local actors, school teachers, and parents thereby improving the present and future health aspects of adolescents in the area.

**Method:** This study was conducted among 200 adolescent girls, women under the Project of Crisis Fund in 2021. Data on current level of SRHR collected in the Bogura District through KIIs, Interview, FGDs, Case studies, awareness campaign etc.. Thematic analysis was done.

**Findings:** Sexual and reproductive health (SRH) remains a critical issue in Bangladesh, where cultural, socio-economic, and legal factors significantly impact access to comprehensive care. Despite notable progress in maternal and child health, barriers to SRH services persist, particularly for adolescents and marginalized populations especially Women and Girls. Early marriage and childbearing, widespread gender inequality, and inadequate sex education contribute to high rates of maternal mortality, unintended pregnancies, sexually transmitted infections (STIs) and a high prevalence of comprehensive support services.

**Conclusion:** Ensure equitable access to resources and assistance for survivors. We collaborate closely with local organizations, community leaders, and government agencies to tailor our interventions to the specific needs. However, gaps in accessibility, particularly in rural areas, continue to hinder the effectiveness of these programs. The lack of youth-friendly services, misconceptions about contraception, and stigma surrounding sexual health further exacerbate the issue fostering sustainable change.

**Keywords:** Sexual and Reproductive Health Rights, adolescent girls, women

**Practices of water, sanitation, and hygiene and its association with diarrheal infection among under-5 children in Chattogram, Bangladesh (37#167)**

*Minhazul Abedin Sujon<sup>1</sup>, Syed Billal Hossain<sup>2,3\*</sup>, ABM Alauddin Chowdhury<sup>3</sup>, Md. Safiqul Islam<sup>3</sup>, & Nasima Akter<sup>1</sup>*

<sup>1</sup>Department of Nutrition and Food Engineering, Faculty of Allied Health Sciences, Daffodil International University (DIU), Dhaka, Bangladesh

<sup>2</sup>Department of Public Health, University of Science and Technology Chittagong, Chattogram, Bangladesh <sup>3</sup>Department of Public Health, Faculty of Allied Health Sciences, Daffodil International University (DIU), Dhaka, Bangladesh

**Presenter:** University of Science and Technology Chittagong, Chattogram, Bangladesh. Email: sbh.raaj@gmail.com;

**ABSTRACT**

**Background:** Diarrheal diseases are one of the lethal causes of mortality and morbidities among under-5 years' children in Bangladesh. This study aims to address the association between the practices of water, sanitation & hygiene (WASH) and diarrheal infection among Under-5 Children in Chattogram, Bangladesh.

**Methods:** This cross-sectional survey study was conducted in 2023, among 182 mothers of children under five years of age living in Chattogram City, Bangladesh. The probability proportional sampling (PPS) technique was applied to interview the study participants.

**Results:** The study found that 37.4% of participants had toilets with ideal sanitary facilities. Mothers' estimates of toilet cleanliness demonstrated association with their child's diarrheal infection count in the previous 12 months ( $P=0.007$ ), whereas variations in toilet usage ( $P=0.024$ ), toilet cleaning frequency each week ( $P=0.014$ ) and availability of sewage channel with house toilet ( $P=0.012$ ) evidence significant association with diarrheal infection frequency in the last 12 months. Mother's WASH behaviors like washing hands after using the toilet ( $P=0.002$ ), washing fruits/vegetables before eating or cooking ( $P<0.000$ ), washing hands before and after food consumption ( $P<0.012$ ) & types of soap uses to wash hands ( $P=0.017$ ) were found significantly associated with diarrheal infection. 41.8 % participants were found, who use no filtration method to purify their drinking water, however, the study found no significant association between water source, purifying options and consumption practices with diarrheal infection frequency among respondents' children under five years of age.

**Conclusion:** Proper WASH practice by mother and children under-5 years may prevent occurrence of diarrheal diseases.

**Keywords:** Water, Hygiene, Sanitation, Practice, Diarrheal diseases, Chattogram

## **Marital Coitus in Bangladesh in the 2010s: An Analysis of Three National Surveys to Study Sociodemographic Determinants and Changes Over Time (38#168)**

*Md Tazvir Amin<sup>1</sup>, Md. Mahabubur Rahman<sup>2</sup>, Shusmita Khan<sup>2</sup>, Afsana Bhuiyan<sup>3</sup>, Mizanur Rahman<sup>4</sup>, Nurul Alam<sup>1</sup>, M Moinuddin Haider<sup>1</sup>*

1. Health Systems and Population Studies Division, icddr,b, Dhaka, Bangladesh
2. USAID, Bangladesh
3. London North West University Healthcare NHS Trust
4. University of North Carolina at Chapel Hill, USA

**Presenter:** Md.Tazvir Amin; Email: tazvir.amin@icddr.org

### **Abstract**

**Objective:** This study aims to examine the changes and associated predictors of weekly marital coitus (WMC) among married couples in Bangladesh from 2011 to 2017-18 at the national level.

**Methods:** We used three nationally representative Bangladesh Demographic and Health Surveys (BDHSs) conducted in 2011, 2014, and 2017-18. In this study, we included currently married women of reproductive age (CMWRA) currently living with their husbands who were not infected or did not reach their menopause. We pooled the data from the three surveys (n=38,853 CMWRA) to examine the changes in WMC. The determinant analysis included data from the 2017-18 BDHS (n=13,686 CMWRA). The surveys used two questions: “Was she involved in sexual activity in the last four weeks preceding the survey?”, and “When was the last time she had sexual intercourse?” to collect data on WMC among CMWRAs. We used bivariate analysis and mixed-effect logistic regression to investigate the changes and predictors of WMC among CMWRAs.

**Results:** Compared to 2011, the adjusted odds ratio to engage in WMC was 1.19 in 2014 and 1.32 in 2017-18, (p-value <0.05 for both), indicating an increase in WMC in the 2010s. WMC among CMWRAs who were using no contraceptive method slightly decreased (from 58% to 56%) whereas WMC among CMWRAs using traditional contraceptive methods increased (63% to 72%) significantly in this period. The determinants analysis found women’s working status, pregnancy status, desire for a child, and years of cohabitation as important predictors of WMC in CMWRAs.

**Conclusion:** The increase in WMC may be due to increased openness in reporting sexual activity among women. Furthermore, working women engaged in higher WMC, which may be related to their active engagement in decision-making and increased sexual satisfaction.

**Keywords:** Married women, sexual intercourse, coitus, Bangladesh, fertility.

## **Knowledge and Experience Regarding Pre and Post – Menopausal Symptoms among Women at Tertiary Level Hospital, Bogura**

*Most. Sadia Islam<sup>1</sup>, Nisat Tasnim<sup>1</sup>, Mst. Nilufar Yesmen<sup>1</sup>, Rita Rani Paul<sup>11</sup>, Md. Kaoser Bin Siddique<sup>2</sup>*

1. TMSS Nursing College, Bogura (Student)
2. Coordinator, Research & Training, TMSS Health Sector, Bogura

**Presenter:** Nisat Tasnim; Email: [tasnimnisat93@gmail.com](mailto:tasnimnisat93@gmail.com)

### **Abstract**

**Background:** Menopause is a significant biological transition in a woman's life, marking the end of reproductive capability. It is typically divided into three phases: per menopause (or premenopausal), menopause, and postmenopausal. The symptoms experienced during these stages vary and are often linked to hormonal changes, particularly the decline in estrogen and progesterone levels (Santoro & Randolph, 2016).

**Objective:** This study aims to assess women's knowledge and experience regarding pre- and post-menopausal symptoms.

**Method:** A descriptive cross-sectional study was conducted from June to November 2022 at TMSS Medical College & Rafatullah Community Hospital in Bogura. A total of 50 women were purposively selected for the study. Data were collected using a structured questionnaire developed by the researcher, informed by an extensive literature review. The questionnaire assessed various aspects of knowledge and experience related to pre- and post-menopausal symptoms.

**Results:** The study included 50 respondents, primarily over the age of 50, with most being married and lacking formal education. The majorities were homemakers and identified as either pre-menopausal or post-menopausal. The overall knowledge score was 8.32, indicating moderate knowledge, while the experience score was higher at 11.62, suggesting a more substantial familiarity with symptoms. These findings indicate that the women exhibited moderate knowledge and experience regarding pre- and post-menopausal symptoms, highlighting an essential area for health education.

**Conclusion:** The complexities of pre- and post-menopausal symptoms significantly impact women's physical and emotional well-being. Factors such as age, ethnicity, lifestyle, and socioeconomic status influence symptom severity. The study reveals that a substantial portion of women possess a moderate level of knowledge and experience regarding these symptoms, indicating a need for targeted educational interventions.

**Keywords:** Premenopausal, Menopause, Postmenopausal, Experience

## **Knowledge, Attitude and Perceptions of Cervical Cancer Among Climate Induced Migrants in Chattogram City, Bangladesh (11#254)**

*Hossain Al Mahub*

### **Abstract**

**Background:** Cervical cancer, the second most common cancer among women globally, remains a major cause of morbidity and mortality particularly in low and middle income countries. In Bangladesh, cervical cancer ranks as the second most prevalent cancer among women, responsible for 12% of female cancers. The death toll of cervical cancer in Bangladesh, without timely intervention, is projected to exceed half a million by 2070. This study aims to address the gaps in knowledge and perceptions of cervical cancer among urban climate migrants in Chattogram city for improving cervical cancer understanding within this vulnerable population.

**Methods:** This community-based cross-sectional study was conducted in March, 2024, among climate induced female migrants residing in the Lalkhan Bazar ward (Ward No. 14) of Chattogram City Corporation (CCC). A total of 205 women aged 18 years and above were interviewed using semi-structured questionnaires and 4 focus group discussions (FGD's). Quantitative data were entered and analyzed using IBM SPSS Statistics 25.0 and qualitative data from the FGDs were transcribed verbatim and analyzed thematically.

**Results:** Over half of the respondents (135, 65.2%) had heard of cervical cancer but only one-fourth of the population were aware of screening services for prevention of cervical cancer (52, 25%) and majority (122, 58.7%) were unaware of vaccination as a preventive measure. 74.6% (156) had never undergone screening, nor had anyone in their family.

**Conclusion:** The poor levels of knowledge about screening and vaccination indicates the need for targeted public health initiatives to bridge these gaps. Addressing these knowledge deficits is essential for reducing cervical cancer-related morbidity and mortality among marginalized groups.

**Keywords:** Climate Migrants, Cervical Cancer, Screening, Vaccination etc.

## **Assessment of Academic Learning Environment of Government Medical Colleges of Bangladesh (1#20)**

*Mohammad Kamruzzaman Khan*

Mymensingh Medical College

Email: kamruzzaman.mihir@gmail.com

### **Abstract**

**Background:** Academic learning environment exerts a significant role in the professional and moral development of the students and effectiveness of teaching-learning activities. The study was carried out to assess the academic learning environment of government medical colleges (MCs) of Bangladesh.

**Design and Methods:** The cross sectional descriptive type of observational study was conducted among 589 undergraduate students of 10 government medical colleges of Bangladesh during September, 2022 to August, 2023. Data were collected by self-responded DREEM questionnaire. Data were analyzed with Statistical Package for Social Sciences (SPSS), version 22.0.

**Results:** The results of the study revealed that mean total DREEM score of government medical colleges was  $120.65 \pm 22.74$  (60.33%) with the interpretation of “More positive than negative”. Total mean DREEM scores of individual medical college ranged from 109.98 to 137.95 out of 200. Though all medical colleges fell under the score with interpretation of “More positive than negative”, Rajshahi MC obtained highest score of  $137.95 \pm 21.28$  (68.98%) followed by Khulna MC  $130.47 \pm 5.10$  (65.24%), Mugda MC  $124.27 \pm 26.69$  (62.14%), Sylhet M A G Osmani MC  $120.42 \pm 21.78$  (60.21%), Rangpur MC  $120.28 \pm 18.11$  (60.14%), Mymensingh MC  $118.84 \pm 18.77$  (59.42%), Chattogram MC  $115.96 \pm 22.38$  (57.98%), Shaheed Suhrawardy MC  $115.40 \pm 28.30$  (57.70%), Dhaka MC  $112.60 \pm 23.30$  (56.30%) and Sir Salimullah MC  $109.98 \pm 20.22$  (54.99%). Analysis of variance (ANOVA) test showed significant difference in total mean DREEM scores of medical colleges ( $p < 0.001$ ). The students suggested for adequate number of dedicated teachers and advanced facilities in classrooms, libraries and hostels to improve academic learning environment of their MCs.

**Conclusion:** Medical colleges achieved “A more positive than negative” status which was just a level below the highest category of achievable scores. Suggestions from the part of students helped to identify areas of limitation of medical colleges. The areas of problem should be addressed by the authorities for improvement of academic learning environment to ‘Excellent’ status.

**Key words:** Academic Learning Environment, DREEM, Government Medical Colleges, Bangladesh

## **Trends in Female Authorship and Editorial Roles in Bangladeshi Medical Journals (2#47)**

*Author name: Dr. Tamanna Tabassum*

Pi Research & Development Center, Dhaka, Bangladesh

**Presenter:** Dr. Tamanna Tabassum, Email: dr.tabassum1991@gmail.com

### **Abstract**

**Background:** Equal representation of men and women in authorship and editorial roles does not exist globally. The objective of this study was to assess trends in female representation in authorship and editorial roles within Bangladeshi medical journals.

**Design & Methods:** This cross-sectional study reviewed 168 journals endorsed by the Bangladesh Medical and Dental Council (BMDC) over a six-month period spanning from February 2024 to July 2024. The study explored gender trends in authorship by estimating the proportions of female principal authors, senior authors, and co-authors in published articles. Furthermore, female participation in key leadership positions within editorial boards of these journals, including roles such as chairman, editor-in-chief, executive editor, and editorial board member was assessed. Descriptive statistics were used to summarize the findings.

**Results:** A total of 1741 articles were published in the latest issues of the reviewed journals. Of the total, 38% of the articles (663 of 1741) had female first authors, 34% of the total co-authors (591 of 6293) were female, and 31% of the senior or last authors (529 of 1741) were female. Overall, 18% (1783 of 9775) of the authors were female. The highest proportion of female first authors were affiliated with the departments of Medicine and allied branches (30%) and Gynecology and Obstetrics (22%). Regarding editorial roles, women held 17% (10 of 58) of executive editor positions, 15% (23 of 150) of editor-in-chief positions, and only 5% (6 of 116) of chairman positions. Beyond that, women represented 27% (227 of 1619) of the editorial board members.

**Conclusions:** A notable underrepresentation of females is observed in both principal authorship and leading positions in editorial boards among medical journals in Bangladesh. Building collaborative partnerships and securing funding support are essential for advancing gender-sensitive research and addressing historical imbalances in authorship dynamics.

**Keywords:** Gender disparity, Gender representation, Authorship, Female representation, Editorial roles, Health research, Bangladeshi journals, Medical journals

## **A Survey on Pet Owners' Understanding and Deworming Practices In Sylhet City Corporation (S#145)**

*Saiful Islam<sup>1</sup>, Rakibul Hasan<sup>2</sup>, Shofiqul Islam<sup>2</sup>, Md. Khairul Amin Raft<sup>3</sup>, Muhammad Mujahidul Islam<sup>4</sup> and Saiful Islam<sup>5</sup>*

1. Department of Anatomy & Histology, Sylhet Agricultural University, Sylhet-3100, Bangladesh.
2. Department of Microbiology & Immunology, Sylhet Agricultural University, Sylhet-3100, Bangladesh.
3. Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet-3100, Bangladesh
4. Veterinary Consultant, Sylhet Pet Care, Sylhet
5. Department of Parasitology, Sylhet Agricultural University, Sylhet-3100, Bangladesh.

**Presenter:** Saiful Islam hmsaiful8@gmail.com

### **Abstract**

**Background:** This survey investigates deworming frequencies, identifies risk factors, and categorizes pet animals into different risk groups, as reported by their owners, in Sylhet City Corporation.

**Methods:** Data were collected using a preplanned questionnaire from cat and dog owners at pet clinics in Sylhet City Corporation. The responses provided details on pets' living conditions and classified them into one of four ESCCAP infection risk categories (A, B, C, or D), each with recommended deworming frequencies. The Chi-square test was used to examine associations between risk groups and factors, and one-way ANOVA was employed to compare deworming frequency. The values of  $P < 0.05$  were considered as a level of significance.

**Results:** This study involved 197 cat owners and 32 dog owners. According to the ESCCAP guidelines, 50% of dogs were classified in risk group D (maximum risk), while only 18%, 10%, and 22% were in groups A, B, and C, respectively. Most cats fell into the minimum risk group A (54%), with only 6% in group D. The deworming frequency was lower for dogs than for cats, averaging 0.2 and 0.8 times per year, respectively, indicating differing infestation risks. Pets in lower-risk group A were dewormed adequately or even excessively. A small proportion of cats ( $n = 28$ ) were dewormed more than twice a year. Alarming, nearly all pets in risk groups A, B, C, or D (98% of dogs and 96% of cats) were dewormed less often than recommended. Socio-demographic factors of the owners, such as age, sex, attitudes, education, residency, and responsibility, were associated with the annual deworming frequency and risk group classification of their pets. For dog owners, all demographics except responsibility were significantly associated with deworming frequency ( $P < 0.05$ ). Among cat owners, age, residency, responsibility, and education were significantly associated ( $P < 0.05$ ). Additionally, for dog owners, sex, education, and responsibility were significantly associated with different risk groups ( $P < 0.05$ ), while for cat owners, all factors except sex and education were highly significant ( $P < 0.005$ ).

**Conclusion:** Health education is essential for managing zoonotic parasites, targeting pet owners, veterinarians, and health authorities, with guidelines aligning deworming frequency to infection risk under One Health.

**Keywords:** ESCCAP, Risk assessment, Intestinal parasites, Zoonosis, Parasite control, Dogs, Bangladesh

## Level of knowledge regarding breast cancer and breast self-examination among school and college-going girls in Bangladesh: a cross-sectional study (10#152)

Md. Jubayer Hossain<sup>1\*</sup>, Kelly Hirko<sup>2</sup>, Manisha Das<sup>3,4</sup>, Mst Mahfuza Kajol<sup>3,5</sup>, Nishat Afrin Mim<sup>3,7</sup>, Md. Fakrul Islam Maruf<sup>6,6</sup>

<sup>1</sup>Center for Health Innovation, Research, Action, and Learning—Bangladesh (CHIRAL Bangladesh), Dhaka, Bangladesh

<sup>2</sup>Department of Epidemiology and Biostatistics, College of Human Medicine, Michigan State University, USA

<sup>3</sup>Population Health Studies Division, Center for Health Innovation, Research, Action, and Learning—Bangladesh (CHIRAL Bangladesh), Dhaka, Bangladesh

<sup>4</sup>Dhaka Medical College and Hospital, Dhaka, Bangladesh

<sup>5</sup>Department of Community Nutrition, Bangladesh University of Health Sciences, Dhaka, Bangladesh

<sup>6</sup>Department of Public Health and Informatics, Jahangirnagar University, Savar, Bangladesh

<sup>7</sup>Prime Institute of Science and Medical Technology, University of Rajshahi, Rajshahi, Bangladesh

**Presenter:** Md. Fakrul Islam Maruf

### Abstract

**Background:** Breast cancer is the most common cancer and the leading cause of cancer-related deaths among women globally, and is predicted to result in approximately 2.3 million new cases in 2020. It surpasses lung cancer as the primary cause of cancer, worldwide. To combat this, international health organizations have promoted the adoption of preventive measures, including breast self-examination (BSE), clinical breast examination, and radiological imaging, as recommended screening modalities for early breast cancer detection.

**Objectives:** This study aimed to assess the level of knowledge of breast cancer and screening measures among adolescent girls, and to shape a strategy based on these findings.

**Methods:** This cross-sectional study was conducted using a structured questionnaire between July 2023 and February 2024. The questionnaire consisted of six sections, including demographics, knowledge of breast cancer symptoms, prevention, and self-examination. Data were collected using paper-based questionnaires after informed written consent was obtained. Categorical variables are presented as percentages and frequencies, and binary logistic regression analysis was conducted to determine the factors associated with good knowledge about breast cancer and BSE.

### Results:

- A total of 2,667 data points were collected, the majority of which were from secondary schools (61%), science (41%) students, and residing in urban areas (64%). A total of 2,306 (86%) respondents reported no family history of cancer.
- Univariate and multivariate regression analyses showed a significant association between **breast cancer knowledge and BSE** and age, institution, parents' education, and religion.
- Additionally, these factors and fields of study were positively associated with the **knowledge of cancer symptoms**.
- Furthermore, **knowledge of breast cancer prevention** was significantly associated with factors such as age, institution, field of study, religion, parental education, and a positive family history.

A  $p < 0.05$  at a confidence interval of 95% indicated statistical significance.

### Future Recommendations:

- This study can be extended to include all the divisions throughout Bangladesh using more wider range of reproductive age group 15-49 years.
- Methods was random sampling technique, cluster or snowball sampling can be used to detect specific samples e.g. females, family member diagnosed with breast cancer to investigate the incidence and complications of breast cancer.

**Conclusion:** The current study concluded that the knowledge level regarding the primary conception of breast cancer and screening systems among adolescent girls is not satisfactory. Implementing basic education on BSE from the beginner level can reduce the burden on cancer patients. Implementing and integrating policies with relevant factors can be a preventive remedy.

## **Knowledge Regarding Breast Cancer among Married Women: A Cross-Sectional Study (18#40)**

*Romana Akter<sup>1</sup> and Md. Sabbir Hassan<sup>2</sup> and Nisat Tasnim<sup>3</sup> and Md. Kaoser Bin Siddique<sup>4</sup> and Md. Matiur Rahman<sup>5</sup>*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Lecturer, TMSS Nursing College, Bogura
4. Coordinator, Research & Training, TMSS Health Sector, Bogura
5. Chief of Health Sector, TMSS Health Sector, Bogura

**Presenter:** Romana Akter; romanaakter0008@gmail.com

### **Abstract**

**Background:** Breast cancer is the leading malignancy among women globally, with rising incidence, morbidity, and mortality rates across both high- and low-resource settings due to factors like increased life expectancy, urbanization, and lifestyle changes. In Bangladesh, early detection and treatment are hindered by a lack of awareness, particularly in rural areas. This study aims to assess the level of knowledge regarding breast cancer among married women.

**Objective:** To assess the level of knowledge regarding breast cancer among married women.

**Methods:** A cross-sectional descriptive study was conducted from July 2023 to December 2023. Data were collected from 75 married women, aged 20-45 years, using an interviewer-administered structured questionnaire. The study focused on knowledge regarding breast cancer, covering 13 key domains such as risk factors, symptoms, and breast self-examinations (BSE).

**Results:** This study found out of the 75 respondents, 34.67% were aged 20-25 years, and 28% had secondary education. Most of the participants (61.33%) were housewives, and 36% had a monthly family income of 10,001-15,000 TK.

The study revealed an overall mean knowledge score of 29.75 out of 47, indicating an average level of understanding. Higher scores were noted for knowledge about risk factors (mean = 4.4) and symptoms (mean = 4.86), while lower scores were observed for breast self-examination practices (mean = 0.87) and beliefs about breast cancer cure (mean = 0.8).

**Conclusion:** The study highlights the average level of knowledge about breast cancer among married women, with significant gaps in awareness of breast self-examination and early detection practices. Breast cancer remains a major public health issue in Bangladesh, emphasizing the need for targeted educational campaigns and interventions to improve awareness and encourage early screening, especially in rural communities.

**Keywords:** Knowledge, Breast Cancer, Married Women

## **Knowledge Regarding Prevention of Communicable Disease among the Undergraduate Students at Bogura District (4#29)**

*Prianka Rani<sup>1</sup> and Mst.Amena Khatun<sup>2</sup> and Mst. Nilufar Yesmen<sup>3</sup> and Rita Rani Paul<sup>4</sup>*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Asst. Professor, TMSS Nursing College, Bogura
4. Asst. Professor, TMSS Nursing College, Bogura

**Presenter:** Prianka Rani; sorkarpriyanka253@gmail.com

**Background:** Communicable diseases (CDs), as reported by the National Report of Statutory Infectious Diseases in 2021, are caused by various pathogens that can be transmitted between humans, animals, or from humans to animals (Osborne et al., 2016). These diseases are a leading cause of morbidity and mortality, placing a substantial burden on public health and economic stability (Nii-Trebi, 2017). This study aims to assess the knowledge regarding the prevention of communicable diseases among undergraduate nursing students

**Objective:** To evaluate the knowledge of nursing students concerning the prevention of communicable diseases.

**Methodology:** A descriptive cross-sectional study was conducted from July to December 2023 in Bogura District. A total of 100 nursing students, purposively selected from the third year of the Diploma in Nursing Science and Midwifery program, participated in the study. Data were collected using a structured questionnaire designed to assess various aspects of knowledge regarding the prevention of communicable diseases.

**Results:** The study comprised 100 respondents, predominantly aged between 21-25 years, with a majority being female. The overall knowledge score among participants averaged 35.74 out of a possible 54. These findings indicate that nursing students possess a moderate level of knowledge regarding the prevention of communicable diseases.

**Conclusion:** Enhancing the knowledge of nursing students about the prevention of communicable diseases is vital for safeguarding both healthcare workers and patients. It is essential for nursing education to emphasize disease transmission and infection control, ensuring students are well-equipped to contribute effectively to public health.

**Keywords:** Communicable Disease, Disease Prevention, Nursing Education, Infection Control

## **Knowledge, Attitude, and Practices towards Functional Foods and Its Associated Factors among Adult Population in Bangladesh: A Cross-sectional Study (2#9)**

*Sanaullah Mazumdar<sup>1</sup>, Md. Moshuazzaman Adnan<sup>1</sup>, Rehenuma Tarannum<sup>1</sup>, Shuvasis Das Shuvo<sup>1</sup>, Tanjum Kabir Khuku<sup>1</sup>*

<sup>1</sup>Department of Nutrition and Food Technology, Jashore University of Science and Technology – JUST, Jashore-7408, Bangladesh

**Presenter:** Md.Moshuazzaman Adan; Email: sanaullah.mazumdar.just@gmail.com

### **Abstract**

**Background:** Functional foods offer a promising way to achieve a longer and better life expectancy because of their link with health benefits and lowering the risk of diseases. However, the knowledge, attitude, and practices of functional foods are still unknown in Bangladesh. Therefore, the study aimed to determine the knowledge, attitude, and practice regarding functional and its associated factors among the adult population in Bangladesh.

**Methods:** A cross-sectional survey was conducted from 10<sup>th</sup> April to 20<sup>th</sup> May 2023 among 966 Bangladeshi adults. Random sampling and face-to-face interviews were used to collect data from Bangladesh's southern region (Jashore, Magura, and Jenaidah). The questionnaire included socio-demographic and lifestyle characteristics, disease conditions, and KAP toward functional foods. Descriptive statistics, t-tests, one-way analysis of variance (ANOVA), and multivariate logistic regression analyses were performed.

**Results:** In this study, the majority of the respondents had poor knowledge (75.3%), good attitude (90.7%) and poor practice (65.3%). Multivariate logistic regression analysis showed that poor knowledge was associated with having odds female, age >50 years, higher education, the profession of housewife, good physical activity, and monthly cost for functional foods > 1000 BDT. Gender, monthly family income of more than 20k BDT, living in an urban area, exercising more than 30 minutes, and having a chronic disease were associated with a poor attitude. Regarding practices of functional foods having odds of elementary education level, family members more than four, monthly income more than 20k BDT, over obesity, monthly cost more than 1000 BDT risk for poor practices.

**Conclusions:** The findings highlight the need to implement education programs and adequate intervention programs for functional foods, considering associated factors to improve knowledge, attitudes, and practices.

**Keyword:** Organic food, non-communicable diseases, consumer perceptions, eating disorder, healthy eating practices, KAP

## **Impact of Dietary Habits and Lifestyle on Body Mass Index among the Medical Students of TMSS Medical College, Bangladesh (4#60)**

*Dr. Mst. Taslima Akter<sup>1</sup> and Rawshon Ara Naznin<sup>2</sup> and Maskura Benzir<sup>3</sup>*

*TMSS Medical College, Bogura*

**Presenter:** Dr. Maskura Benzir; Email : mkbenzir@gmail.com

**Background:** The Body Mass Index (BMI) is a simple technique to determine nutritional status of an individual. The lifestyle of medical students including their dietary patterns established during the medical study period have a significant influence on their health. Additionally, an unhealthy diet on the body composition may lead to unfavorable physiological consequences in the future.

**Objective:** To investigate the pattern of BMI, gender differential, age differential and race differential of BMI as well as to correlate the dietary habits and lifestyle with BMI between Bangladeshi and international students of TMSS Medical College.

**Method:** A total of 330 Bangladeshi and international students of TMSS Medical College, Bogura were selected as the participants for this research. This cross-sectional descriptive research was conducted after the IRB clearance and getting the fund from TMSS Medical College, Bogura. Data were collected by interviewing on socio-demography, measuring height and weight, eating habits and some psychosocial factors. The ranges, means ( $\pm$ standard deviation) values of the height, weight, BMI was calculated. The BMI category was initially divided into three categories: underweight, normal weight and overweight. Appropriate statistical tests were used for analysis of the data.

**Results:** Among the 330 different phases students participated in this study. For each year, more than half of the students (65%) were within normal weight (BMI 18.5-25), 16.25% were underweight (BMI<18.5) and 18.75% were overweight (BMI>25). In 1st year, 61.25% students do their breakfast but from the next year majority of the students reported skipping their breakfast (70%), and for each year majority of them were not skipping their lunch (95%) and dinner (86.25%). Students reported that more than half (61.25%) have eggs daily but they rarely intake milk (76.25%) and very few students intake fruits (9%) and vegetables (28%) daily. Frequency of having snacks such as chocolate, singara and chips daily were more (75.25%), but frequency of having soft drinks (53.75%) and fast food (56.25%) were rare. About 50% of students do exercise regularly or sometimes. Their daily water intake was satisfactory (about 2l). In addition, some of them (40%) eat more when they feel stressed. In this research, the majority of the students (70%) preferred homemade food. It also found that female students have a tendency to become overweight with increasing age than the males. Therefore, with increasing age more than 16.22% female students suffer from polycystic ovarian diseases. On the other hand, this study has shown there were no significant differences between BMI category and dietary habits.

**Conclusions:** There was no significant difference between body mass index category and dietary habits. Increasing educational programs introduced healthy dietary concepts to improve the dietary habits of medical students

**Keywords:** BMI, Dietary habits, Medical Students.

## **Nutritional status of children with neuro developmental disorders: a cross sectional study at a tertiary-level hospital in northern Bangladesh (5#91)**

*Rabeya Khatun*

TMSS Medical College ,Bogura

**Presenter:** Dr. Rabeya Khatun

### **Abstract**

**Background:** Malnutrition in children with neurodevelopmental disorders (NDDs) is a significant global public health issue. Nutritional assessment combined with management or advice are essential to produce optimal outcomes.

**Objectives:** The objective of this study was to assess nutritional status and the sociodemographic profile of children with neurodevelopmental disorders in Bangladesh.

**Methods:** A cross-sectional study was conducted from December to April 2020 among the population of children with NDDs who presented to the pediatric department of the TMSS Medical College and Rafatullah Community Hospital in Bogura during this period. Socio-demographic data along with anthropometric measurements of the children were taken. Assessment of nutritional status were made using metrics such as Z-scores for weight-for-age (WAZ), height-for-age (HAZ), and body mass index-for-age (BAZ). Descriptive statistics (number and percentage) and analytical statistics (chi-square and logistic regression) were included.

**Results:** 58.6% of children displayed malnutrition, with 47.8% showing undernutrition (WAZ < -1 SD--3 SD), and 10.8% overnutrition (BAZ > 2SD). Significant negative associations were found between malnutrition and parental education level, urban residency, and monthly family income. Children diagnosed with cerebral palsy exhibited twice the likelihood to be malnourished (AOR 2.39, 95% CI 0.83-6.87). Furthermore, residing in rural regions was associated with an increased risk of experiencing malnutrition, as indicated by an adjusted odds ratio of 1.60 (95% CI 0.12-3.09).

**Conclusions:** While the results are cross-sectional, over half of children with NDDs were found to be malnourished, suggesting that children with NDD in Bangladesh are vulnerable to developing any form of malnutrition. Therefore, regular assessments and timely nutritional support may improve their situation.

**Keywords:** Children, Nutritional status, Malnutrition, Disability, Neurodevelopmental disorders, Bangladesh

## **Nutrition knowledge and dietary practices as a driver of double burden malnutrition in urban slum areas of Chittagong city, Bangladesh: A cross-sectional study (6#138)**

*Nargees Akter<sup>1</sup>, Dr. Alak Paul<sup>2</sup>*

1. Master's student, Department of Geography and Environmental Studies, University of Chittagong
2. Professor, Department of Geography and Environmental Studies, University of Chittagong

**Presenter:** Nargees Akter; Email: nargeesakter51@gmail.com

### **Abstract**

**Background:** The double burden of malnutrition, characterized by the coexistence of both undernutrition and overnutrition, is an emerging public health concern in urban slum areas of low- and middle-income countries. This cross-sectional study aimed to investigate the relationship between prevalence of double burden malnutrition, nutrition knowledge and dietary practices in the urban slum areas of Chittagong city, Bangladesh.

**Methods:** Data collection for the study involved a questionnaire-based survey. The sample size consisted of 200 individuals selected through random sampling. The researchers used the BMI (Body Mass Index) method to categorize the nutritional status of adult slum dwellers according to WHO BMI categories. Pearson Chi-Square test was also conducted to investigate the relationship between nutritional knowledge and poor dietary practices are responsible for increasing malnutrition.

**Results:** BMI was calculated to classify participants into different weight categories: 44.5% were classified as overweight/obese, 16.5% as underweight, 30% as overweight, and 9% as normal weight. 98% participants had no nutrition knowledge and only 2% respondents knew about nutrition knowledge. 100% respondents believed that poor dietary practices were responsible for increasing malnutrition. A significant correlation was observed between Nutrition knowledge and Poor dietary practices are responsible for increasing malnutrition, with a p-value of 0.0000. Furthermore, the study found 70% of participants had poor dietary habits, including frequent consumption of processed street foods, low fruit and vegetable intake, and irregular meal patterns. Meanwhile, 20% had moderate dietary practices, and only 10% demonstrated good dietary habits.

**Conclusion:** The study highlights that inadequate nutrition knowledge and poor dietary habits contribute significantly to malnutrition in urban slums. It stresses the importance of culturally sensitive nutrition education and policy interventions to improve food security, encourage healthier eating habits, and address the complex malnutrition challenges in these vulnerable communities.

**Keywords:** Nutrition knowledge, Dietary practices, Double burden malnutrition, Urban slum areas, Chittagong city.

## **Dietary self-management among young adults: An exploratory qualitative inquiry of young adult's perspective and experiences (8#12)**

*Mst. Sabrina Afroz, Sudipta Das Gupta*

<sup>1</sup>Government College of Applied Home Science; <sup>2</sup>South Asian Network for Research and Innovation (SANRI)

**Presenter:** Mst.Sabrina Afroz; Email: sabrina94sas@gmail.com

### **Abstract**

**Background:** Overweight and obesity among young adults have emerged as significant public health issues that can potentially be mitigated through Diet Self-Management (DSM).

**Objective:** This exploratory study aimed to investigate the experiences and perspectives of young adults of urban Bangladesh regarding Diet Self-Management and to identify the various factors that influence it.

**Methods:** An exploratory qualitative inquiry was implemented to conduct in-depth interviews with 26 young adults of age 18 to 26 years old to explore their DSM experience and factors that influence DSM. Qualitative data were analyzed utilizing thematic analysis, following COREQ guideline.

**Results:** This study findings identified three major themes: understanding of DSM; practices of DSM and influencing factors of DSM. The majority of the participants had a basic understanding of diet and nutritional principles and a few participants were regularly practicing DSM. The influencing factors of practicing DSM included health consciousness, weight loss purposes, peer pressure and social media impact. Findings revealed that practices of DSM were closely linked with socioeconomic status, education, health issues, awareness of health, and social media usage.

**Conclusion:** The findings of this qualitative study underscore the intricate and multifaceted nature of Diet Self-Management (DSM) along with its influencing factors. These results may inform a range of tailored intervention strategies aimed at enhancing DSM and encouraging healthier dietary practices among college students, thereby contributing to the prevention of overweight and obesity.

**Keywords:** Dietary self-management, Young adults, Obesity.

## **Use of functional foods and its association to chronic and multimorbid conditions: A cross-sectional study among Bangladeshi people (2#7)**

*Sanaullah Mazumdar<sup>1</sup>, Md. Moshiuzzaman Adnan<sup>2</sup>, Rehenuma Tarannum<sup>3</sup>, Shuvasis Das Shuvo<sup>4</sup>, Tanjum Kabir Khuku<sup>5</sup>*

Department of Nutrition and Food Technology, Jashore University of Science and Technology – JUST, Jashore-7408, Bangladesh

**Presenter:** Rehenuma Tarannum; Email: sanaullah.mazumdar.just@gmail.com

### **Abstract**

**Background:** With the increasing awareness of functional foods' health benefits, their consumption has gained traction in Bangladesh's urban and rural settings. Functional foods have been shown to alleviate symptoms of non-communicable diseases.

**Aim:** Aim of the study is to determine the consumption patterns of functional foods and their associated factors among people with chronic multimorbidity in Bangladesh.

**Method:** A cross-sectional study was conducted among 966 people in the southern region of Bangladesh. Systematic sampling technique was followed to select the samples and data were collected from through a structured questionnaire. Data on socio-demographics and lifestyle characteristics, chronic diseases, functional food consumption frequency, and their influencing factors were collected by face to face interview.

**Results:** The results showed that 56.80% of participants used functional foods to meet their hunger in terms of purpose, but 34.1% of participants responded that they didn't know the health benefits because of reasons for not using them regularly. Binary logistic regression showed that people who consumed probiotics weekly (OR = 0.31) and monthly (OR = 0.57), tea and coffee daily (OR = 0.66), honey weekly (OR= 0.52), egg daily (OR = 0.39) and weekly (OR= 0.38), and fortified foods weekly (OR = 0.44), and monthly (OR= 0.55) were more likely to protective effect against chronic diseases. Multivariate binary logistic regression also revealed that functional foods consumption frequency had a protective effect on people with multimorbidity who consumed nuts weekly (OR = 0.37), fiber-rich foods monthly (OR=0.11), tea and coffee daily (OR = 0.26), black cumin occasionally (OR = 0.39) and citrus fruit occasionally (OR= 0.19), egg daily (OR = 0.82) and weekly (OR= 0.15).

**Conclusion:** The study's findings will play a vital role in creating awareness regarding the health benefits of functional foods, particularly as a prevention factor against chronic multimorbidity in Bangladesh.

**Keywords:** dietary habit, food consumption, bioactive compounds, non-communicable diseases, comorbidity, nutraceuticals

## **Legal Immunities for the Healthcare Providers: Strengthening Protection for the Medical Practitioners in Bangladesh through Global Insights (3#51)**

*Sumaia Sultana Emu*

Lecturer, Department of Law, National University, Gazipur, Bangladesh.

Email: [sumaia.sultana@nu.ac.bd](mailto:sumaia.sultana@nu.ac.bd)

Shaikh Shohag Hossain

Lecturer, Department of Law, National University, Gazipur, Bangladesh.

**Presenter:** Sumaia Sultana Emu, Email: [Shaikh.Shohag@nu.ac.bd](mailto:Shaikh.Shohag@nu.ac.bd)

**Background:** Healthcare practitioners try to deal with the most uncertain matters of this world—'life and death'. In many cases, they cannot save the patient despite trying their best. But, in most cases, people do not want to understand the fact, their grief turns into anger, and they jump onto the medical practitioners directly by blaming them for medical malpractices, even physically assaulting them.

**Design and Methods:** This research employs a qualitative and comparative analysis, focusing on legal protections for healthcare providers in Bangladesh and different countries that have laws which safeguard medical professionals. A cross-country comparative framework was used to highlight gaps in Bangladeshi law and identify potential areas for legal reform.

**Results:** In Bangladesh, there are very few legal instruments that render a medical practitioner safety and security in these kinds of incidents. However, they have the constitutional rights to be protected by law, right to life and personal liberty, freedom of movement, and freedom of professions. However, these constitutional rights totally fail to ensure the safety of the medical practitioners in Bangladesh. The findings indicate that nations with strong legal immunities for healthcare providers experience fewer instances of litigation against medical practitioners. This allows them to provide emergency care with more confidence and efficiency. The study suggests that adopting global best practices would enhance legal protections in Bangladesh.

**Conclusions:** To improve the healthcare system of the country, Bangladesh needs to strengthen its legal framework and take strong steps to prevent further harassment of medical practitioners. In terms of rendering the medical practitioners required safety, protection, and rights the country should take the examples of the global models.

**Keywords:** Legal protections Medical practitioners Healthcare system Bangladesh Comparative analysis.

## **Climate Change and Its Effects on Child Health in Southern Bangladesh: Legal, Economic, and Social Aspects (2#48)**

*Shaikh Shohag Hossain*

Lecturer of Law, National University, Bangladesh.

Sumaia Sultana Emu, Lecturer of Law, National University, Bangladesh.

Email: sumaia.sultana@nu.ac.bd

**Background:** The southern region of Bangladesh is prone to floods, cyclones, and rising sea levels where the health of children is at risk. This study explores how climate change affects child health in southern Bangladesh, focusing on the legal, economic, and social aspects.

**Design and Methodology:** This research uses a mixed-method approach, combining both qualitative and quantitative data. Quantitative data includes government statistics and surveys on children. Qualitative methods are used for reviewing climate-related laws, interviewing scholars and speaking with families in affected areas.

**Outcomes:** Bangladesh Climate Change Strategy and Action Plan (2009), Disaster Management Act (2012), National Adaptation Programme of Action (2005), Environment Conservation Act (1995), Water Act (2013), National Health Policy (2011), Children Act (2013), Local Government (Union Parishad) Act (2009) - these are some efforts of Bangladesh to address the issue. However, initial findings show that the health of children in the region is deteriorating due to the adverse impact of climate change. As climate change worsens, children face increased health problems like malnutrition, waterborne diseases, respiratory issues, and mental stress. Local healthcare systems lack the resources. Although Bangladesh has climate policies, they are not effectively enforced, and there is little focus on the specific needs of children.

**Conclusion:** To protect the children of Southern Bangladesh, stronger healthcare systems, better legal frameworks, and targeted social support are needed. International cooperation and investment are crucial to help build a safer, healthier future for these vulnerable communities in disaster-prone areas.

**Keywords:** Climate change, Child health, Southern Bangladesh, Legal aspects, Public health.

## Use of patient data on Facebook by registered doctors of Bangladesh (5#55)

*Dr. Mir Susmita Zaman*

Pi Research & Development Center, Dhaka, Bangladesh.

Email : dr.susmitazaman@gmail.com

### Abstract

**Background:** To examine the nature of content shared by doctors on Facebook and assess adherence to the patient-related ethical standards established by the Bangladesh Medical and Dental Council (BMDC) was the objective of the study.

**Design & Methods:** This cross-sectional study reviewed publicly accessible Facebook profiles of 390 registered doctors. Contents shared on this platform over the past 6 months were assessed. Data were collected using quota sampling, with quotas based on physicians working in four major specialties: medicine (44%), surgery (36%), obstetrics & gynecology (15%), and pediatrics (5%). The primary outcome measures included instances where profiles shared patient-related information in the form of images, biochemical reports, videos of consultations, or surgical procedures, as per BMDC guidelines.

**Results:** The majority of Facebook profiles (98.5%) were personal accounts, with 1.5% managing both personal and professional pages. Physicians made an average of 48 ( $\pm$  83 SD) posts. Upon screening the content, it was found that 38% (149/390) of physicians did not adhere to the BMDC guidelines. Non-adherence was more common among doctors in surgical specialties than others (surgery 44%, medicine 36%, obstetrics & gynecology 14%, pediatrics 6%;  $p < 0.041$ ). Additionally, male physicians were more likely to violate regulations compared to their females (79% vs. 21%;  $p < 0.031$ ). Physicians (91/149) who breached the guidelines frequently posted patient-related data, including successful surgeries, newborn deliveries, or patients alongside their radiological reports. Furthermore, 31% of physicians posted images or videos of surgical procedures, and 19% shared images or videos taken during consultations or examinations. Physicians also shared screenshots of private messages from patients via WhatsApp or Messenger, which were often expressions of appreciation or holiday greetings.

**Conclusions:** A substantial proportion of Bangladeshi physicians are not adhering to BMDC guidelines regarding patient confidentiality on Facebook. Increased awareness and updating BMDC regulations are therefore recommended to address the emerging challenges.

**Keywords:** Physician behavior, social media, Facebook, BMDC ethics, patient privacy, Bangladesh.

## **The Obligation of the State in Providing Maternal Health Benefits: A Legal and Human Rights Perspective (11#126)**

*Mumtahena Ferdousy*

North Western University, Khulna, mumtahenaferdousy99@gmail.com

This paper examines the legal requirements for states to provide maternal health services through a human rights and legal lens, utilizing *Alyne da Silva Pimentel v. Brazil* as an example case study. Such was the case when, for example, CEDAW (United Nations Committee on the Elimination of Discrimination Against Women) found Brazil responsible in relation to its failure with respect to inadequate maternal health services and resulting death of Brazilian Afro-woman Alyne. The decision emphasized that the state has to ensure quality healthcare for all women irrespective of their socio-economic status or race, whether provided by it directly in a hospital run/managed by it or out-sourced. This research employs a legal case study approach and analyzes the *Alyne da Silva Pimentel v. Brazil* case from the standpoint of the laws of international human rights, principally CEDAW. The article assesses the pertinent legal norms and obligations with respect to maternal health rights and the obligations of the states considering these rights in all cases, whether the services are rendered by the state or privatized. It emphasizes that prevention of maternal mortality is not just a matter for the medical professions to tackle and reduce but it falls within the scope of responsibilities from states as human right treatment area on non-discrimination and health equity in general. This also brings to the forefront issues around the obligations of the state when health care is delivered by private entities and the need for strong systems to ensure more respect for these obligations by the state. The article concludes with policy recommendations aiming at enhancing women's rights to maternal health in particular in low income and marginalized groups as a way to ensure compliance by states with international law.

**Key Words:** Maternal Health Rights, International Human Rights Law, CEDAW, Non-Discrimination, State Accountability.

## **Availability and Service provisions for the elderly population in Dhaka: A Qualitative Analysis**

*Muntasir Kamrul<sup>1</sup>, Afrin Nur<sup>2</sup>, Dr Hasnat M Alamgir<sup>2</sup>*

Southeast University, Dhaka

**Presenter:** Afrin Nur; Email: afrinnur2300@gmail.com

### **Abstract**

**Background:** People live longer in Bangladesh as the life expectancy data from various sources have reported and a significant portion of the elderly population resides in Dhaka. However, eldercare is complicated by factors such as the breakdown of traditional joint families, rapid urbanization, migration of younger generations, limited housing space, and rising living costs. As a result, the need for elderly care facilities is growing in Dhaka and across Bangladesh. This study aims to identify gaps in the availability of old-age housing and assess living and healthcare services in existing homes for the elderly.

**Method:** The study used structured interviews with managers of elderly care facilities and reviewed existing reports and studies to evaluate the current situation of old-age homes in Dhaka. The results revealed that there are only ten elderly care facilities in or around Dhaka, with one publicly operated. Previous studies highlighted challenges such as the high prevalence of mental health disorders, non-communicable diseases, loneliness, poor hygiene, substandard food quality, and a lack of medical services.

**Results:** The review of existing studies and reports revealed that there are only ten elderly care facilities in or around Dhaka, with just one publicly operated. Previous studies highlighted significant challenges, including the high prevalence of mental health disorders, non-communicable diseases (NCDs), loneliness, poor hygiene, substandard food quality, and a lack of medical services. Furthermore, these facilities have no monitoring or regulatory system to control service quality. Most old age homes had fewer than 100 beds, and caregiving and support staff numbers were inadequate to meet residents' needs.

**Conclusion:** The limited staffing in elderly care facilities raises serious concerns about the quality of care. This investigation identified fewer than twenty such homes in Dhaka, revealing a substantial gap between the supply and demand for elderly housing. Poor service quality and insufficient monitoring highlight that Bangladesh is not adequately prepared to care for its growing elderly population. Both government intervention and private sector involvement are crucial to prevent a future crisis and ensure elderly citizens can live in safe, dignified environments.

**Keywords:** elderly care, old age homes, Dhaka, aging population, healthcare services, mental health, non-communicable diseases, eldercare facilities, supply gap, elderly housing

## **Barriers to healthcare access for the elderly population in rural Bangladesh**

*Priya Chaudhary<sup>1</sup>, Poonam Kumari Chaudhary<sup>2</sup>, Priyanka Nayak<sup>3</sup>, Ahmed Al Montasir<sup>4</sup>, Kaoser Bin Siddique<sup>5</sup>*

1. Intern doctor, TMSS Medical College, Bangladesh;
2. Final year MBBS student, TMSS Medical College, Bangladesh;
3. Resident physician, Department of Medicine, TMSS Medical College, Bangladesh;
4. Coordinator (Research & Training), TMSS Health Sector, Bangladesh

**Presenter:** Priya Chaudharya; preeyac4@gmail.com

### **Abstract**

**Background:** The healthcare system in Bangladesh is primarily funded by out-of-pocket expenses. The elderly population in underdeveloped countries and rural and non-metropolitan individuals are the most vulnerable considering their health issues. Senior citizens face numerous challenges in accessing healthcare services. The disparity in health care access is influenced by various factors such as demographics, age, geography, economics, accessibility, psychological aspects, housing, transportation, medical, and social aspects.

**Objective:** This study tried to find out the barriers faced by the elderly in obtaining basic healthcare services while trying to attend a tertiary care outpatient department (OPD).

**Methods:** This study was a cross sectional study conducted in OPD of medicine of Rafatullah community hospital from January 2022 to June 2024 involving 1000 patients of 60 years or older. Demographic, geographic, economic, psychological, housing, transportation, medical, and social informations were recorded.

**Results:** Approximately 50% of the senior population (39% of males and 65% of women) were accompanied by their children and/or grandchildren. 25% were joined by spouses, 5% by others (neighbors and friends), and 20% visited the doctor alone. The lengthy waiting in OPD and the disorganized administration of public and medical services were the common factors that they faced. About 87.2% relied financially on other family members, 79% depended on others for daily food. More than 45% participated in daily earning activities, with 90% of this group being male. Of them 38% needed a caregiver, while 27% discontinue prescriptions owing to insufficient financial assistance. Approximately 33% of senior individuals finance their healthcare expenses, whereas only about 46% get financial assistance from their offspring for healthcare costs (36% of males and 58% of women). 64.8% of the senior population is afflicted with chronic diseases.

**Conclusion:** The need for a geriatric service with a multifactorial framework is crucial for managing chronic illnesses and improving the quality of life of the elderly population.

**Key words:** Barriers, elderly patients, health care, rural area

## **Strengthening Minimum Initial Service Package process in the flood and cyclone prone area: Experience and way forward (11#62)**

*Arif Khan, Azwad Bari, Shanaj Jonaki, Alamgir Haider*

Pathfinder International, Bangladesh

**Presenter:** Mr. Arif Khan, MEL Officer, Pathfinder International, Bangladesh

### **Abstract**

The north-eastern part of Bangladesh, particularly the Haor region, frequently experiences flash floods that affect women's and adolescents' health, especially sexual and reproductive health (SRH). Pathfinder International's assessment showed that 52% of health facilities, out of 273, were closed for periods ranging from one day to an alarming 150 days during the time of the 2022 flood. Additionally, only about 10% of service providers had received Minimum Initial Service Package (MISP) training in the last two years.

To address these issues the organization implemented a comprehensive approach of the Minimum Initial Service Package (MISP) for ensuring SRH services are implemented in Netrakona, Kishoreganj, Sunamganj, Sylhet, and Cox's Bazar districts. The training focused on health facility managers, service providers, and community health workers in five districts. It was designed in two phases, a 2-day Training of Trainers (ToT) for DGFP and DGHS health managers for sustainability even after completion of the project and to cascade into 2-day training sessions for health service providers and community health workers.

A total of 960 DGFP and DGHS health managers, service providers, and community health workers were trained. The project trained service providers from community clinics, union health and family welfare centers, mother and child welfare centers, and upazila health complexes. As a result, the health workforce in the five districts is now better prepared to contribute to the MISP process. MISP training for health professionals enhances their ability to ensure SRH services. Additionally, community preparation, health facility preparedness, the availability of SRH logistics, logistics transportation, and the deployment of a trained MISP workforce during disasters are essential. Finally, a comprehensive MISP deployment procedure along with a trained workforce is necessary in all flood and cyclone-prone areas in Bangladesh.

**Key words:**

## **Influence of Meteorological Variable on Hospital Based Monthly Dengue Infection in Dhaka Division from 2022 to 2024 (2#137)**

*Md Jubayer Hossain<sup>\*1</sup>, Nishat Afrin Mim<sup>2,4</sup>, Nargees Akter<sup>2,5</sup>, Millat Hossain Mesu<sup>3,6</sup>, Gangotri Howlader<sup>3,7</sup>, Anushka Bhattacharjee<sup>3,8</sup>*

<sup>1</sup>Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh), Dhaka, Bangladesh

<sup>2</sup>Geospatial Health Research Group, Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh)

<sup>3</sup>Population Health Studies Division, Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh)

<sup>4</sup>Department of Laboratory Medicine, Prime Institute of Science & Medical Technology, Rangpur

<sup>5</sup>Department of Geography and Environmental Studies, University of Chittagong, Chittagong, Bangladesh

<sup>6</sup>International Islamic University of Chittagong

<sup>7</sup>Department of Zoology, Jahangirnagar University, Savar, Dhaka

<sup>8</sup>Department of Microbiology, Jagannath University, Dhaka, Bangladesh

**Background:** Dengue is a rapidly emerging disease caused by the *Aedes aegypti* mosquito, with increasing trends in tropical and subtropical regions influenced by climatic conditions. Bangladesh's tropical climate creates ideal conditions for the proliferation of the *Aedes* mosquito. In recent years, dengue outbreaks in Bangladesh have increased drastically, likely due to climate change. The study aimed to assess the relationship between meteorological variables and monthly trends of dengue infections from 2022 to 2024.

**Method:** Dengue hospital-based data were collected from the Directorate General of Health Services (DGHS) from January 2022 to September 2024. Meteorological data were curated from the Climate Engine web-based application. The meteorological variables included mean temperature in Celsius, precipitation in millimeters (mm), wind speed in meters per second (m/s), and soil moisture at a 5cm depth fraction, all collected for Dhaka Division from 2022 to 2024. Monthly trend analysis, correlation, and multivariate simple linear regression were conducted.

**Results:** A lower prevalence of dengue cases was observed during the winter season. From mid-February to April, dengue infections were minimal. Infections gradually increased from May, with a sharp rise observed in June and July 2023. This trend gradually decreased from August to September 2023. The peak in 2022 occurred in October, and it appears that 2024 is following a similar trend. A significant correlation was found between soil moisture and dengue cases. The regression analysis showed an association with a 95% CI: 40,380; 123,141,  $p < 0.001$ . A positive correlation with soil moisture was identified.

**Conclusion:** The findings offer insights into climate-disease interactions and highlight the importance of vector control strategies, early warning systems and climate-based surveillance in controlling dengue outbreaks. It could guide the development of more effective public health interventions aimed at reducing dengue transmission in the face of climate variability.

**Keywords:** Dengue, meteorological variables, monthly trends, infection, climate.

## **Temporal Trends, Autocorrelation, and Decomposition Analysis of Diarrhoea Prevalence Among Under-Five Children in Rangamati and Chittagong: A Comparative Study (2017-2023) (3#139)**

*Nargees Akter<sup>2,3</sup>, Nishat Afrin Mim<sup>2,4</sup>, Kazi Estieque Alam<sup>2,5</sup>, Sajjad Hossain<sup>2,6</sup>, Md. Jubayer Hossain<sup>\*.1</sup>*

1. Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh), Dhaka, Bangladesh
2. Geospatial Health Research Group, Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh)
3. Department of Geography and Environmental Studies, University of Chittagong, Chittagong, Bangladesh
4. Department of Laboratory Medicine, Prime Institute of Science & Medical Technology, Rangpur
5. Agricultural Economics, Sher-e-Bangla Agricultural University
6. Disaster Management and resilience, Bangladesh University of professionals

**Presenter:** Nargees Akter

**Background:** Diarrhoea, a water borne disease which remains a leading cause of morbidity and mortality among children under five, particularly in low- and middle-income countries. Bangladesh, with its diverse topography and socio-economic conditions, presents regional variations in the burden of childhood diarrhoea. This study aimed to compare the temporal trends, autocorrelation, and seasonal patterns of diarrhoea among children under five in Rangamati and Chittagong. Additionally, the study identified key differences in the incidence, persistence, and irregularities of diarrhoea cases between these two distinct regions.

**Design and Methods:** Data was collected on diarrhoea cases in children aged 0 to 5 from the DGHS health bulletin (2017-2023) and meteorological factors from the “Climate Change” website, including temperature, precipitation, and drought index for Rangamati and Chittagong. A retrospective time series analysis was conducted. The data were analysed for temporal trends, autocorrelation, and decomposed into trend, seasonal, and irregular components for both regions.

**Results:** The analysis revealed stark differences between the two regions. Chittagong displayed a fluctuating trend, with a notable peak in diarrhoea cases in mid-2017 and sharp declines in early 2021. In contrast, Rangamati consistently maintained a lower prevalence of diarrhoea, with fewer than 500 cases recorded per month throughout the study period. Autocorrelation analysis indicated strong temporal dependence in both regions, with a quicker decay in Chittagong’s autocorrelation, suggesting less persistence compared to Rangamati. Decomposition analysis revealed consistent seasonal peaks in both regions, though Chittagong exhibited greater volatility, particularly around 2020, likely influenced by external factors such as public health interventions or environmental changes.

**Conclusions:** These findings emphasize the importance of localized public health strategies and interventions to address the unique epidemiological dynamics of diarrhoea in these regions. Continued monitoring and region-specific public health efforts are essential to reduce the burden of diarrhoea and improve child health outcomes in Bangladesh.

**Keywords:** Diarrhoea prevalence, Under-five children, Temporal trends, Autocorrelation analysis, Comparative study

## **Situation Analysis for Health System Resilience to Climate Change in Bangladesh (7#249)**

*Mahbub Ul Alam<sup>1</sup>, Saiful Hassan<sup>1</sup>, Sohrab Hossain<sup>1</sup>, Marufa Aziz Khan<sup>1</sup>*

<sup>1</sup>Pathfinder International Bangladesh

### **Abstract**

**Background** The ramifications of climate change and extreme weather events have emerged as significant threats to public health, particularly in the 11 climate-stressed regions of Bangladesh (NAP-2023-2050). A noticeable gap persists in the insufficient attention to addressing health-related hazards stemming from climate change and disasters.

**Objectives:** Pathfinder International Bangladesh aimed to identify specific vulnerabilities, gaps, and challenges within the health sector by systematically evaluating the existing health infrastructure under MOHFW, its service delivery mechanisms, and community health outcomes to inform strategies to ensure a climate resilient health system.

**Methods:** A qualitative method with different approaches was implemented. The key methods included literature review, consultative meetings with major stakeholders, and focus group discussion with men and women from vulnerable populations from different climate zones. The data was organized by category and informant group under each output for the respective community and were summarized based on themes.

**Results:** Analysis highlighted that the health system is already strained by population density, provider shortages, knowledge and skill gaps, poor management, and insufficient supervision, which collectively put pressure on the health facilities, service delivery, and overall health systems. It also highlighted the urgent need for a multi-faceted approach to address the health impacts of climate change in Bangladesh. Consultation with health managers revealed that disease patterns have been changed in most climate zones; however, health system response is inefficient due to insufficient budget, skilled human resources and inappropriate supply, and inadequacy of functional readiness in remote settings. Findings revealed that communities are vulnerable due to frequent climate events, changing patterns of diseases, water and agriculture conditions, and insufficient health system response. By focusing on infrastructure, capacity building, climate literacy, and collaboration, Bangladesh can better prepare for and mitigate the adverse effects of climate change on health and well-being.

**Conclusion:** In conclusion, this study emphasizes the need for a climate-resilient health system in Bangladesh by addressing infrastructure, workforce, and management gaps to protect vulnerable communities and improve health resilience in line with the National Adaptation Plan (2023-2050).

**Keywords:** Health System Resilience, Climate Change, Health Hazards

## **The pattern of illness among the flood survivors in a remotest place of Bangladesh : An experience from a health camp. (4#232)**

*Dr. Sabrina Monsur*

Intern Doctor, Dhaka Medical College Hospital, Bangladesh  
sabinamonsurdmc32@gmail.com

### **Introduction**

Floods are a reasonably common natural hazard globally due to climate change. Bangladesh, being a river country, is not exempt from it. Bangladesh experienced terrible floods in many years including 1988 that left many people dead or sick.

Recently, Bangladesh was hit by an unexpected flood. Feni, Comilla, Noakhali and many other areas were flooded.

**Objective :** The condition of the diseases must be considered when providing relief. The purpose of this review was to identify the health problems that surfaced following the flood.

**Methods :** An epidemiological study was conducted in Loribug of Rajapur union of Burichong upazila, the remotest part of Comilla in Bangladesh India Border. Information was collected from a medical camp, interviewing the patients.

**Result :** Total 100 data was collected. The majority of them are female (46%) and children (32%). Male population was 22%. Itching accompanied by skin lesions was the most typical manifestation (41%). Coughing and allergies associated with Respiratory illness (40%) were the second most prevalent. Due to the drug's unavailability, some patients were presented with problems from complications of non-communicable diseases DM and HTN (5%). Contrary to expectations, diarrhoea and other watery illnesses were less frequent, only 5%.

Once more, because they were born in a rural place, several of the women had not gotten care for a long time. They arrived with typical illnesses unrelated to the disaster, such as low back pain or arthritis (18%), UTI 4%.

**Discussion :** The skin lesion was brought on by prolonged contact with contaminated water. fever, allergies, and other contagious illnesses brought on by the close quarters in the shelter. And the less frequent watery illness due to the accessibility of deep well water.

**Conclusion :** This study emphasizes how critical it is to analyze illness patterns in order to respond quickly and potentially stop outbreaks.

## **Knowledge regarding management of domestic accident among mothers (3#35)**

*Sumaiya akter Tisha<sup>1</sup>, Md. Sazzad Hossain<sup>2</sup>, Nisat Tasnim<sup>3</sup>, Mst. Nilufar Yesmen<sup>4</sup>, Rita Rani Paul<sup>4</sup>*

<sup>1</sup> Student, TMSS Nursing College, Bogura

<sup>2</sup> Lecturer, TMSS Nursing College, Bogura

<sup>3</sup> Lecturer, TMSS Nursing College, Bogura

<sup>4,5</sup> Asst. Professor, TMSS Nursing College, Bogura

**Presenter:** Sumaiya Akter Tisha; Email: tisha8451akter@gmail.com

### **Abstract**

**Background:** Domestic incidents are especially prevalent among women, particularly mothers, who manage most household tasks and caregiving duties. The home, often perceived as a safe environment, can harbor numerous hazards that elevate the risk of injury (Smith & Johnson, 2020).

**Objective:** To assess the knowledge regarding management of domestic accidents among mothers.

**Methods:** A cross-sectional descriptive study was conducted between July and December 2023. Fifty mothers were selected by purposive sampling to participate in the study. Data collection was facilitated through a structured questionnaire developed by the researcher based on comprehensive literature reviews, focusing on various aspects of knowledge regarding management of domestic accidents.

**Results:** The study included 50 respondents, with a nearly equal distribution between the age groups 31-40 years and over 50 years. Most participants had secondary education and were homemakers, with 1-2 children. The overall knowledge score averaged 16.42, while the management score was 14.62. These results indicate that most mothers possess a moderate level of knowledge regarding management of domestic accidents.

**Conclusion:** Addressing domestic accidents necessitates a multifaceted approach, including increased awareness, effective management strategies, and supporting research and policy development. Focusing on prevention and education can significantly reduce the incidence of domestic accidents, ultimately enhancing safety and well-being in the home environment.

**Keywords:** Knowledge, Domestic accidents, Management, Mothers.

## **What is Influencing Antibiotic Usage among University Students? An Explanatory Qualitative Inquiry of University Students in Urban Bangladesh (1#1)**

*Sudipta Das Gupta<sup>1</sup>, Raisa Mehzabeen<sup>2</sup>, Jarin Tasnim Raza<sup>2</sup>, Md. Saffat Hossain<sup>3</sup>, Ishrat Jahan Bushra<sup>2</sup>, Lamia Hasan<sup>2</sup>, Jannatul Ferdous Rayta<sup>2</sup>, Mst. Sabrina Afroz<sup>2</sup>*

<sup>1</sup>South Asian Network for Research and Innovation; <sup>2</sup>Government College of Applied Human Science; <sup>3</sup>Government Shahid Suhrawardy College

### **Abstract**

**Background:** Antibiotic resistance has emerged as a significant global health concern. Lack of understanding about antibiotics contributes to their indiscriminate use and subsequent antibiotic resistance. The purpose of this study was to explore the factors that influence the practices of antibiotic usage among university students.

**Design and Method:** An explanatory qualitative inquiry was implemented through 22 in-depth interviews and three focus group discussions (FGDs) with university students from three public universities in Dhaka city, and in total, 22 students from different faculties of different study years for IDI and 6 to 8 students per FGD, recruited utilizing convenience sampling. All interviews were digitally recorded, transcribed verbatim, and subsequently analyzed through thematic analysis. The study aligned to qualitative research standards as outlined by the COREQ guidelines.

**Results:** The study identified three key themes regarding antibiotic usage among university students: antibiotic medication practices, reasons for self-medication, access to antibiotics without a prescription, and gaps in students' knowledge regarding antibiotic resistance. Notably, over half of the participants lacked awareness about self-medication with antibiotics. A significant number admitted to self-medicating, often purchasing antibiotics without prescriptions due to convenience and cost concerns. Students enrolled in health science programs exhibited better knowledge and more responsible antibiotic usage practices compared to their peers from non-health-related backgrounds. Participants emphasized that socio-economic factors, including limited access to healthcare information and educational resources, significantly influenced their beliefs and practices related to self-medication.

**Conclusion:** This study revealed the imperative demand for educational programs targeting university students to fill in the lack of antibiotic knowledge and include responsible use of antibiotics. Addressing these issues within academia, policy, and implementation levels was essential to fighting antibiotic misuse and the spread of resistance in Bangladesh.

**Keywords:** Antibiotic Usage; Antibiotic Resistance; Self-medication, University Students; Qualitative

## **Pattern of Conjunctivitis and Its Associated Factors Among The Patients Reporting In a Specialized Hospital In Dhaka (2)**

*Amatun Nur<sup>1</sup>*

State University of Bangladesh

**Presenter:** Dr. Amatun Nur Email: ushanoor1234@gmail.com;

**Background:** Acute conjunctivitis is a prevalent global issue, particularly in tropical regions like Bangladesh, due to environmental factors. Despite its high occurrence, especially viral conjunctivitis, there is a lack of recent studies addressing the patterns and contributing factors of this condition in Dhaka, creating a critical need for research into its epidemiology and prevention strategies.

**Objective:** The study aims to identify clinical features, environmental and allergic factors, eye hygiene practices, and sociodemographic characteristics associated with conjunctivitis among patients in a specialized hospital in Dhaka.

**Methods:** The study was a six-month cross-sectional study conducted in a specialized eye hospital in Dhaka, focusing on patients diagnosed with conjunctivitis and prescribed medications, 122 patients (male and female) were selected. The study used purposive sampling to select conjunctivitis patients from a specialized hospital in Dhaka, with data collected via a semi-structured questionnaire and a checklist, managed and analyzed using SPSS with descriptive statistics and Chi-square tests to explore associations.

**Results:** The total 122 study participants were male (55.7%), female (44.3%) married (68.68%), and Muslim (93.4%). Among them, the most prevalent eye diseases are bacterial conjunctivitis (48.4%), viral conjunctivitis (28.7%), and allergic conjunctivitis (23.0%). Most of them (70.5%) reported within the second to seventh day with symptoms (73.0% redness, pain 53.3%, discharge 35.2%). Conjunctivitis was found to be positively associated with the level of education, allergic and environmental factors, and poor hygiene practices (62.9% generally touched their eyes whenever there was discomfort in their eyes, and 49.1% cleaned their eyes with dirty tissue/towel). [95% CI]

**Conclusions:** In conclusion, this study highlights how environmental factors and hygiene practices significantly impact the spread of conjunctivitis. Raising public awareness and conducting further research are essential steps toward reducing its transmission and improving eye health.

**Keywords:** Conjunctivitis, Eye hygiene, Environmental factors, Allergic factors

## **Knowledge and Practice on Zoonotic Disease among Physicians During COVID-19 (8#86)**

Author's Name: *Shajeda Azizi, Md. Sajidul Huq, Khairul Islam*

Institution Name: Deep Eye Care Foundation, Darshona, Rangpur<sup>1</sup>

**Presenter Details:** Dr. Shajeda Azizi Email: sajeda.decf@gmail.com

**Background and Objective:** Zoonotic disease spreads naturally between animals and humans and poses global health threats. This study examined physicians' knowledge and practices regarding zoonotic disease during the COVID-19 period.

**Methods:** This descriptive cross-sectional study assessed physicians' knowledge and practices concerning zoonotic diseases in tertiary medical college hospitals in northern Bangladesh, with a particular focus on Bird flu and Anthrax. The study was conducted from January to December 2020. A total of 211 physicians, including both registered and intern doctors in allied health professions, were selected using a convenient sampling method. After obtaining ethical approval, and informed written consent, participants were interviewed face-to-face using a pre-tested semi structured questionnaire. During the interviews, respondents were asked about the routes of transmission and preventive measures to evaluate their knowledge and other relevant practices related to zoonotic disease prevention.

**Result:** Two-thirds of the study participants knew that bird flu could spread through the air, and around 68% perceived that anthrax could be transmitted by consuming raw or undercooked meat from infected animal reservoirs. Regarding preventive measures, over three-quarters of respondents cited hand hygiene for bird flu and avoiding raw or undercooked meat for anthrax prevention. Approximately 85% of physicians consistently referred patients to nearby infectious disease hospitals, while 46.4% reported wearing N-95 masks occasionally. Notably, about 41% stated they never wore an N-95 mask as a preventive measure against zoonotic disease during the study period. Significant associations were found between age and referral practices, as well as between education level and hand hygiene ( $p < 0.05$ ).

**Conclusion:** These findings highlight the importance of sharing knowledge on zoonoses and fostering collaboration to identify and control zoonotic diseases that pose public health risks in the country.

**Keywords:** Knowledge, Practice, Zoonotic Disease, Health care providers

## **A Study on Knowledge Regarding Dengue Fever among Urban Mothers at Bogura District (5#34)**

*Jesmin Khatun<sup>1</sup> and Mst. Amena Khatun<sup>2</sup> and Mst. Nilufar Yesmen<sup>3</sup> and Rita Rani Paul<sup>4</sup>*

1. B. Sc in Nursing (Basic), TMSS Nursing College, Bogura (Student)
2. Nursing Instructor, TMSS Nursing College, Bogura
3. Asst. Professor, TMSS Nursing College, Bogura
4. Asst. Professor, TMSS Nursing College, Bogura

**Presenter:** Mst. Amena Khatun; amenarumpa254@gmail.com

**Background:** Dengue fever is a leading mosquito-borne disease, resulting in significant epidemics in tropical and sub-tropical regions. It poses a serious public health challenge, impacting both health and socio-economic stability. Despite ongoing efforts, an effective drug or vaccine for dengue remains elusive (World Health Organization, 2010). This study aims to assess the knowledge of dengue fever among urban mothers

**Objective:** To evaluate the knowledge regarding dengue fever among urban mothers regarding its transmission, symptoms, and prevention.

**Methodology:** A cross-sectional descriptive study was conducted from July to December 2023 in Bogura District, targeting urban mothers. Fifty mothers were purposively selected for the study. Data were collected using a structured questionnaire designed by the researcher based on comprehensive literature reviews.

**Results:** The study involved 50 respondents, with a balanced age distribution between 21-30 years and 31-40 years. Most respondents were married, had secondary education, and identified as homemakers, with 1-2 children. The overall knowledge score averaged 27.96, indicating that mothers have a moderate level of understanding regarding dengue fever.

**Conclusion:** The findings reveal that while urban mothers possess a general awareness of dengue fever, significant gaps exist in their understanding of its transmission, symptoms, and preventive measures. Addressing these gaps through targeted education and awareness campaigns is essential for enhancing knowledge and improving public health outcomes related to dengue fever.

**Keywords:** Dengue Fever, Urban Mothers, Knowledge, Public Health

## **Immunosuppressant-induced Strongyloides Stercoralis Infection (in a COVID-19 patient) in Bangladesh (11#244)**

**Authors Name:** Robin Sharma<sup>1</sup>, Muna Islam<sup>1</sup>, Kamrul Alam<sup>1</sup>, Sudipta Das<sup>1,2</sup>, Rabiul Islam<sup>1</sup>, Aniruddha Ghose<sup>1</sup>  
<sup>1</sup>Chattogram Medical College Hospital, <sup>2</sup>Bangabandhu Sheikh Mujib Medical University (BSMMU)

**Presenter:** Dr. Robin Sharma

**Objective:** This case study aimed to describe a case of Strongyloides hyperinfection syndrome following immunosuppression due to COVID-19 pneumonia and its management through immunosuppressive agents like corticosteroids and Baricitinib in Bangladesh.

**Methods:** This case report presents the clinical case of a 78-year-old patient from Cox's Bazar who was admitted to a private clinic in Chattogram three times from April to June 2021.

**Case presentation:** This patient, with co-morbidities like hypertension, ischemic heart disease, and benign enlargement of the prostate, presented with fever and anorexia and was diagnosed as a case of RT-PCR-positive COVID-19 pneumonia with around 10 L/min oxygen requirement at the initial visit. After being treated with injectable Dexamethasone, Remdesivir, and oral Baricitinib, his condition gradually improved, and he was discharged with oral medications. After several days, he visited the same hospital with symptoms the same as previous, with oxygen requirement and a repeat RT-PCR-positive test result. Considering this as a case of COVID-19 reinfection, the patient received treatment with oral corticosteroids, which improved his condition.

The patient was admitted for the third time with complaints of loose stool, itching over the whole body, and a low-grade fever for several days. A complete blood count revealed a total white blood cell count of  $26.5 \times 10^9/L$  with a differential eosinophil count of 49%. A stool sample was sent for microscopic examination, and Rhabditiform larvae of Strongyloides stercoralis were found. Oral Ivermectin and Albendazole were prescribed, and the patient became asymptomatic with no larvae in repeat stool samples after 14 days.

**Conclusion:** Immunosuppression through any means can lead to Strongyloides stercoralis infection in Bangladeshi populations, especially in Bangladesh, where it is endemic. Proper screening, early diagnosis, and management can prevent and mitigate Strongyloides-related complications and mortality, especially among older adults.

**Keywords:** Strongyloides hyperinfection syndrome; COVID-19; Corticosteroids; Baricitinib; Immunosuppression

## **Effect of ABCC4 gene polymorphism on drug induced Allergic Reactions & Diarrhea of Antiretroviral Therapy (ART) in Bangladeshi HIV patients (22#160)**

*Md. Siddiquil Islam<sup>1\*</sup>, Ferdin Ehsan<sup>1</sup>, Zannatul Tunjum Islam<sup>1</sup>, Umme Rokaya Keya<sup>1</sup>, Krishno Dutta<sup>1</sup>, Sumaiya Akter<sup>1</sup>, Md UdoyAman Fahim<sup>1</sup>, Sajid Ahmed Rifat<sup>1</sup>, Kazi Asharaful Islam<sup>2</sup>, Abu Syed Md. Mosaddek<sup>3</sup>.*

Southeast University<sup>1</sup>, BSMMU<sup>2</sup>, Quest Bangladesh Biomedical Research Center<sup>3</sup>

**Presenter:** Dr. Md.Siddiquil Islam; Email: chairpharmacy@seu.edu.bd

### **Abstract**

**Background:** Single nucleotide polymorphisms (SNPs) in ABCC4 gene show the response and toxicity to different ART in different populations with HIV, also such research has been done on Bangladeshi HIV infected patients.

**Objective:** To evaluate the effect of ABCC4 gene polymorphism on drug induced allergic reactions & diarrhea of antiretroviral therapy (ART) in Bangladeshi HIV infected patients.

**Methods:** A total 414 HIV infected patients were recruited from Infectious Diseases Hospital (IDH:208) & (BSMMU: 206) of Bangladesh receiving ART. ART induced toxicities were examined with Common Terminology Criteria for Adverse Events (CTCAE) version 5. DNA was isolated from collected venous blood and PCR was done for specific DNA sequence amplification. Appropriate restriction enzyme was used to perform PCR-RFLP, that had been conducted to determine ABCC4 (rs9561778) polymorphic variants. The association was assessed by calculating odds ratios (ORs) along with their corresponding 95% confidence intervals (95% CIs).

**Results:** ABCC4 (rs9561778) gene polymorphism was associated with ART induced toxicities including allergic reactions & diarrhea. Patients carrying any variant GT and GT+TT of ABCC4(rs9561778) (OR = 1.43, 95% CI = 0.74 to 2.75, p = 0.275 and OR = 1.51, 95% CI = 0.82 to 2.79, p=0.182 respectively) for allergic reactions and were also associated with diarrhea (OR=1.49, 95% CI = 0.70 to 3.1591, p = 0.290 & OR = 1.71, 95% CI = 0.85 to 3.42, p = 0.127) with the comparison of GG genotype.

**Conclusion:** So, patients having T allele were more likely to have unique risk factors in compared to wild type variants. Therefore, alternative therapy may be suggested for getting less toxicities and less hypersensitiveness for these groups of patients. Further validation is required with larger populations to confirm these associations.

**Key words:** HIV, Polymorphism, antiretroviral therapy, PCR-RFLP, CTCAE.

## **Evaluation of Laboratory Parameters as Predictors of Severe Dengue in Hospitalized Patients (3)**

*Dr Sabrina Alam<sup>1</sup>, Dr Tahmidul Islam<sup>2</sup>, Dr Mamun Ur Rashid<sup>3</sup>, Dr Nur A Farhana Islam<sup>4</sup>*

TMSS Medical College, Bogura  
Bangabandhu Sheikh Mujib Medical University  
Shaheed Ziaur Rahman Medical College, Bogura  
TMSS Medical College, Bogura

**Presenter:** Dr. Sabrina Alam

**Background:** Dengue fever is a significant public health concern in tropical regions, including Bangladesh. Prompt identification of severe cases is crucial for effective management and minimizing morbidity and mortality.

**Objective:** This study aimed to evaluate the predictive value of specific laboratory parameters for severe dengue in hospitalized patients.

**Method:** A cross-sectional study was conducted at the Department of Biochemistry in accordance with the Virology department, Bangabandhu Sheikh Mujib Medical University (BSMMU), from May 2021 to December 2022, involving 86 patients with confirmed dengue. Patients exhibiting symptoms such as high fever, severe headache, retro-orbital pain, myalgia, and rash underwent diagnostic testing using dengue NS1 antigen and IgM antibody tests. Blood samples were collected within 24 hours of admission to assess platelet count, hematocrit levels, liver enzymes (AST, ALT), leukocyte count, and coagulation markers. Clinical outcomes were monitored, and patients were categorized into non-severe and severe dengue groups according to World Health Organization criteria.

**Result:** Analysis revealed significant differences in laboratory parameters between severe and non-severe dengue patients. The severe dengue group exhibited a mean platelet count of  $45 \times 10^9/L$ , markedly lower than the non-severe group's mean count of  $155 \times 10^9/L$  ( $p < 0.001$ ). Hematocrit levels were significantly higher in severe cases, with a mean of 47% compared to 40% in non-severe cases ( $p < 0.001$ ). Elevated AST and ALT levels were also significantly associated with severe disease, showing means of 120 U/L and 95 U/L, respectively, versus 45 U/L and 35 U/L in non-severe cases ( $p < 0.001$ ). Logistic regression identified low platelet count, high hematocrit, and elevated AST as independent predictors of severe dengue, achieving an area under the curve (AUC) of 0.87 in ROC analysis.

**Conclusions:** The findings suggest that platelet count, hematocrit, and liver enzyme levels are valuable predictors of severe dengue, enhancing early identification and timely interventions for high-risk patients.

**Keywords:** Dengue, Severe Dengue, Predictive Parameters, Platelet Count, Hematocrit

## **Diabetic foot ulcer among Diabetes Mellitus patients at a tertiary level hospital in Bangladesh: An experience of 172 cases (3#19)**

*Mita Rani Biswas<sup>1</sup>, Mohammad Nurul Anowar<sup>2</sup>*

<sup>1</sup>Faculty of Nursing, Bangabandhu Sheikh Mujib Medical University

<sup>2</sup>National Institute of Advanced Nursing Education & Research, (NIANER), Dhaka

Corresponding author: Dr. Mohammad Nurul Anowar, RN, Ph. D, NIANER

**Presenter:** Mita Rani Biswas, Email: mn.anowar@yahoo.com

### **Abstract**

**Background:** Diabetic Foot Ulcer (DFU) is a major and long standing complication of diabetes mellitus (DM). It is one of the most common causes leading to deformities and disabilities such as limb amputation among DM patients.

**Objective:** The main objective was to assess the diabetic foot ulcer cases among DM patients in a selected tertiary care hospital.

**Methods:** A descriptive study design was conducted with 172 conveniently selected DM patients attending in the outpatient department of Bangladesh Institute of Research and Rehabilitation for Diabetes, Endocrine and Metabolic Disorders (BIRDEM) Hospital Dhaka. Data were collected by face to face interview using questionnaire including socio-demographic characteristics, diseases related characteristics and frequency of DFU among DM patients. Data were analyzed by using descriptive statistics and chi-square test ( $\chi^2$ ).

**Results:** The mean age of the patient was 49.99( $\pm$ 12.26) years. Majority of them were male (51.3%). The study found that the rate of DFU among DM patients was 26.7%. The DFU was significantly associated with lower level of education ( $p=.001$ ), level of last HbA1c ( $p=.024$ ), type of treatment received with insulin & oral tablets ( $p=.008$ ), and patients with no family history of DM ( $p=.031$ ).

**Conclusion:** Rate of DFU was found higher among DM patients. Appropriate preventive measures are to be addressed both for the patients and health care authorities considering the identified factors related to DFU.

**Keywords:** Diabetes, Diabetic Foot Ulcer, Disability, Bangladesh

## **Efficacy of Russian Stimulation in the case of Transverse Myelitis (5#69)**

*Moriomun Nessa Ilma<sup>1</sup>, Md. Asif Arsalan<sup>2</sup> Md. Abu Obaida Maruf<sup>1</sup>, Zakia Khanam<sup>1</sup>, Farhana Tasnim<sup>1</sup>*

<sup>1</sup>Physiotherapist, TMSS Medical College & Rafatullah Comunity Hospital

<sup>2</sup>Senior Physiotherapist, TMSS Medical College & Rafatullah Community Hospital

**Presenter:** Moriomun Nessa Ilma; Email: ilmuni195@gmail.com

### **Abstract**

**Introduction:** Transverse Myelitis(TM) is a rare inflammatory condition affecting the spinal cord, leading to motor, sensory and autonomic dysfunction. While pharmacological interventions are common, electrical stimulation therapies like Russian Stimulation are emerging as promising adjuncts in managing TM symptoms. This case study examines the effectiveness of Russian Stimulation in rehabilitating a 13-year-old boy diagnosed with TM.

**Objective:** This case study aimed to evaluate the efficacy of Russian Stimulation in improving motor function and muscle strength, particularly in the lower limbs, where the patient exhibited severe weakness.

**Methods:** This is a case study approach. The patient underwent 90 sessions of Russian Stimulation over 6 months, receiving 3 to 4 sessions per week. The treatment focused on inducing strong contractions in key muscle groups using a frequency of 50 Hz and a pulse duration of 50 milliseconds. Alongside Russian Stimulation, the patient participated in conventional physical therapy. Efficacy was assessed by reducing spasticity, facilitating muscle relaxation, and enhancing gait recovery to enable independent walking. Functional improvements were measured using the Functional Independence Measure(FIM) and the Pediatric Quality of Life Inventory (PedsQL).

**Results:** After 90 sessions, patient showed significant improvement, with muscle strength increasing from 1/5 to 4/5 and spasticity reducing from Grade 3 to Grade 1 on the Modified Ashworth Scale. Functional outcomes included the ability to walk independently, a 10-Meter Walk Test time improvement to 12 seconds, and FIM scores rising from 70 to 105. The PedsQL score increased from 55% to 85%, indicating enhanced overall quality of life.

**Conclusion:** Integrating Russian Stimulation into rehabilitation significantly improved motor function, reduced spasticity, and enhanced the quality of life for this pediatric TM patient. These findings highlight its potential as a valuable non-invasive therapeutic option for neuromuscular recovery in TM.

**Keywords:** Russian stimulation, transverse myelitis, muscle strength, quality of life.

## Revitalizing Skin: The efficacy of ultrasound therapy in treating (6#71) Hypopigmentation

*Moriomun Nessa Ilma, Md. Abu Obaida Maruf, Md. Asif Arsalan, Zakia Khanam, Farhana Tasnim*

Physiotherapist, TMSS Medical College & Rafatullah Community Hospital

Senior Physiotherapist, TMSS Medical College & Rafatullah Community Hospital

**Presenter:** Moriomun Nessa Ilma; Email: [ilmunilma195@gmail.com](mailto:ilmunilma195@gmail.com)

### Abstract

**Introduction:** Depigmentation can result from various conditions, including vitiligo and post inflammatory hypopigmentation. This case study explores the efficacy of ultrasound therapy in promoting repigmentation in a 25-year-old female patient with localized depigmentation following eczema.

**Objective:** This case aims to evaluate the effectiveness of ultrasound therapy in treating depigmentation. It also investigates the tolerability of ultrasound therapy, noting any adverse effects.

**Methods:** This is a case study approach. The patient underwent 14 sessions of ultrasound therapy over two weeks. Using a 1 MHz frequency in continuous mode for thermal effects, each session lasted about 10 minutes with a coupling gel. Daily application of a topical moisturizing agent was recommended to maintain skin hydration. Efficacy was assessed by repigmentation in affected areas, changes in skin texture, and patient satisfaction.

**Results:** A 25-year-old female presented with localized depigmentation on her left forearm and hand following eczema. The skin appeared lighter without active inflammation or infection. Concerned about her cosmetic appearance, the patient sought treatment. Post-treatment, the patient exhibited significant improvement, with repigmentation observed in approximately 60% of the affected area. Skin texture became smoother, and patient satisfaction increased. No adverse effects were reported, indicating good tolerability.

**Conclusion:** This case highlights the potential of ultrasound therapy in promoting healing and repigmentation in patients with depigmentation. The positive outcomes warrant further studies with larger samples to validate findings and refine treatment protocols.

**Keywords:** Ultrasound therapy, hypopigmentation, ROM, muscle strength

## **Navigating Erb's Palsy: A Case Study on the Efficacy of Faradic and Russian Stimulation (9#99)**

*Zakia Khanam<sup>1</sup>, Md. Asif Arsalan<sup>2</sup>, Md. Abu Obaida Maruf<sup>1</sup>, Moriomun Nessa Ilma<sup>1</sup>, Farhana Tasnim<sup>1</sup>*

1. Physiotherapist, TMSS Medical College & Rafatullah Community Hospital
2. Senior Physiotherapist, TMSS Medical College & Rafatullah Community Hospital

**Presenter:** Farhana Tasnim; Email: [supti023@gmail.com](mailto:supti023@gmail.com)

### **Abstract**

**Background:** Erb's Palsy, or Brachial Plexus Birth Palsy, results from injury to the upper brachial plexus nerves (C5-C6), often due to trauma during birth. This condition leads to muscle weakness, loss of sensation, and limited movement in the affected arm. This case study focuses on the application of Faradic Stimulation Therapy and Russian Stimulation Therapy in a child with Erb's Palsy.

**Objective:** The objective is to evaluate the effectiveness of the electrotherapy modalities in improving muscle function and enhancing recovery in a patient with Erb's Palsy.

**Methods:** The treatment plan comprised 30 sessions of Faradic and Russian stimulation over 8 weeks, administered three times weekly. Faradic stimulation targeted the deltoid, biceps, and brachialis muscles for 10 minutes at 50 Hz, while Russian stimulation was applied for 15 minutes to enhance circulation and reduce muscle spasms. A complementary physiotherapy regimen included passive range-of-motion exercises and functional training. Effective management was assessed by restoring functional movement and strength through physiotherapy and electrotherapy.

**Results:** A 5-year-old child with significant left upper limb weakness presented with limited shoulder abduction and elbow flexion, characterized by the "waiter's tip" posture, following a birth-related brachial plexus injury. Previous conservative physiotherapy had provided limited improvement, leading to the incorporation of electrotherapy. Post-treatment, muscle strength improved significantly, with scores rising from 2/5 to 4/5. The child regained the ability to perform overhead reaching and grasp objects. The characteristic internal rotation posture diminished, and overall confidence in using the affected arm improved.

**Conclusion:** This case underscores the potential of Faradic and Russian Stimulation Therapy in Erb's Palsy rehabilitation, suggesting marked improvements in motor function and recovery. Further research is needed to validate these findings and refine treatment protocols.

**Keywords:** Faradic and Russian Stimulation, Brachial plexus injury, Muscle strength.

## **Innovative Approaches to Wound Healing: A Case Study on Ultrasound Therapy and High-Voltage Pulsed Current (10#100)**

*Md. Asif Arsalan<sup>1</sup>, Moriomun Nessa Ilma<sup>2</sup>, Md. Abu Obaida Maruf<sup>2</sup>, Zakia Khanam<sup>2</sup>, Farhana Tasnim<sup>2</sup>.*

1. Senior Physiotherapist, TMSS Medical College & Rafatullah Comunity Hospital
2. Physiotherapist, TMSS Medical College & Rafatullah Comunity Hospital

**Presenter:** Md. Asif Arsalan; Email : md.asifarsalan@gmail.com

### **Abstract**

**Background:** Wound healing is a multifaceted biological process influenced by various factors, including wound type, severity, and treatment modalities. This case study examines the combined effects of ultrasound therapy and High-Voltage Pulsed Current (HVPC) on wound healing in a 30-year-old male patient with a chronic wound.

**Objective:** The primary objective was to evaluate the effectiveness of ultrasound therapy and HVPC in promoting healing in a chronic non-healing wound on the patient's right ankle.

**Methods:** The treatment plan included 17 sessions of combined ultrasound therapy and HVPC over six weeks, administered three times per week. Ultrasound therapy utilized a frequency of 1 MHz in pulsed mode for 5-10 minutes, while HVPC was applied at 100 Hz for 30 minutes. Regular wound assessments and dressing changes ensured optimal healing conditions. Specifically, the efficacy was assessed on wound size, tissue quality, and patient comfort following 21 treatment sessions.

**Results:** The patient presented with a chronic non-healing wound on his right ankle, measuring approximately 5 cm x 4 cm, resulting from a sports injury six months prior. The wound exhibited minimal drainage and inflammation, with the patient reporting significant pain and difficulty ambulating. Previous treatments had yielded minimal improvement. After treatment, the wound size reduced to approximately 2 cm x 1 cm, with improved granulation tissue and no signs of infection. The patient reported reduced pain and increased comfort, achieving high satisfaction with the treatment.

**Conclusion:** In conclusion, the combined use of ultrasound therapy and HVPC effectively promoted wound healing in this patient, demonstrating significant improvements in wound size and patient outcomes, warranting further exploration in clinical practice.

**Keywords:** Ultrasound Therapy, wound healing, reduced pain

## **Enhancing Bone Healing: A Case Study on Low-Intensity Pulsed Ultrasound Therapy (11#101)**

*Md. Asif Arsalan<sup>1</sup>, Md. Abu Obaida Maruf<sup>2</sup>, Moriomun Nessa Ilma<sup>2</sup> Zakia Khanam<sup>2</sup>, Farhana Tasnim<sup>2</sup>*

1. Senior Physiotherapist, TMSS Medical College & Rafatullah Community Hospital
2. Physiotherapist, TMSS Medical College & Rafatullah Community Hospital

**Presenter:** Md. Asif Arsalan, Email : md.asifarsalan@gmail.com

### **Abstract**

**Background:** This case study investigates the effectiveness of low-intensity pulsed ultrasound (LIPUS) therapy in accelerating bone healing, particularly for delayed and non-union fractures. While existing research supports ultrasound therapy for fracture healing in elderly patients, this study represents the first application of LIPUS for pediatric patients in Bangladesh, aiming to explore its potential as a supplementary treatment.

**Objective:** To evaluate LIPUS therapy's effectiveness in a patient with a mid-shaft tibial fracture. Specifically, the study aims to assess the impact of LIPUS on the rate of fracture healing, callus formation quality, and overall recovery timeline compared to standard treatment protocols.

**Methods:** LIPUS therapy was introduced as adjunct treatment for both patients. They received ultrasound therapy sessions at an intensity of 0.8 MHz for six minutes daily over seven days. Healing progress was monitored through regular radiographic imaging and clinical evaluations.

**Results:** Two cases of non-union fractures were presented: a 2-year-old girl with a humeral shaft fracture and a 7-year-old boy with a lower-end humerus fracture. Initial management involved closed reduction and immobilization for four weeks. However, healing progressed slower than expected. Both patients demonstrated significant improvement in bone healing, characterized by accelerated callus formation and earlier bridging at the fracture site, alongside notable pain reduction. Radiographic evaluations indicated clear evidence of advanced bone healing by the fifth week.

**Conclusion:** This case study supports the effectiveness of ultrasound therapy in enhancing bone regeneration and accelerating fracture healing. The promising outcomes suggest that LIPUS could be a valuable addition to fracture management protocols, warranting further research to confirm its clinical benefits.

**Keyword:** Bone Healing, Ultrasound Therapy, callus formation

## **A Case Study on Frequency Specific Microcurrent Therapy to Enhancing Recovery in Post-Surgical Contractures (12#102)**

*Md. Abu Obaida Maruf<sup>1</sup>, Md. Asif Arsalan<sup>2</sup>, Zakia Khanam<sup>1</sup>, Moriomun Nessa Ilma<sup>1</sup>, Farhana Tasnim<sup>1</sup>.*

1. Physiotherapist, TMSS Medical College & Rafatullah Comunity Hospital
2. Senior Physiotherapist, TMSS Medical College & Rafatullah Comunity Hospital

**Presenter:** Md. Abu Obaida Maruf; Email: [abuobaida.bpt.nitor@gmail.com](mailto:abuobaida.bpt.nitor@gmail.com)

### **Abstract**

**Background:** Post-surgical contractures can severely impair mobility and quality of life. Conventional rehabilitation methods, such as physical therapy and manual stretching, often require extensive time to yield substantial results. This case study explores the efficacy of Frequency Specific Microcurrent (FSM) therapy as a novel approach to accelerate healing and improve function in a patient with a post-surgical contracture.

**Objective:** The objective is to evaluate FSM therapy's effectiveness in promoting healing and enhancing functional outcomes in a patient with a post-surgical contracture.

**Methods:** This is a Case study approach. Here FSM therapy involved applying specific microcurrent frequencies to promote muscle relaxation, facilitate tissue repair, and reduce inflammation. Over four weeks, the patient received 15 minutes of treatment daily—five minutes at frequencies of 58, 1, and 2  $\mu$  A—followed by 10 minutes of stretching exercises. Assessments were conducted at baseline, two weeks, and four weeks, evaluating ROM, pain via the Visual Analog Scale, and functional capacity. Specifically, the study aims to assess FSM's impact on range of motion (ROM), pain reduction, and overall functional ability when used alongside standard rehabilitation methods.

**Results:** The patient is an 8-year-old boy who developed a severe wrist contracture after surgical fixation for a distal radius-ulna fracture. Following four weeks of standard rehabilitation, minimal progress was observed, prompting the introduction of FSM therapy as an adjunct treatment. After four weeks of FSM therapy, the patient exhibited a 65% improvement in ROM, a 70% reduction in pain, and a 50% enhancement in functional ability—results significantly better than those observed during standard rehabilitation alone.

**Conclusion:** FSM therapy may serve as a valuable adjunct in treating post-surgical contractures, offering promising results that warrant further investigation through randomized controlled trials.

**Keywords:** Frequency Specific Microcurrent, Post-Surgical Contractures, Functional ability

## **Integrative and traditional Unani medicine in Lung Cancer and immune support: A review study (17#151)**

*Md. Shahjalal Chowdhury<sup>1</sup>, Dr. Bilkis Afrose Shorna<sup>2</sup>*

1. Ex Lecturer, Hakim Said Eastern Medical College Dhaka
2. Medical Officer, Markajul Hospital, Dhaka

**Presenter:** Dr. Bilkis Afrose Shorna, Email: afroreshorna021@gmail.com

### **Abstract**

**Background:** Lung cancer is a common fatal disease worldwide. We have tried to review the causative factors, clinical features and complementary and alternative medicine in lung cancer.

**Objective:** This review study aimed to explore the common integrative and traditional Unani preventive supplements for cancer and its way to reverse the side effects of treatment. So, through this article we try to identify effective natural and traditional aids in lung cancer.

**Methods:** We searched the Unani Pharmacopoeia and National Unani Formulary, ND Health Facts, ND Assist Blog, Bristol Health-Library and PubMed, Text Book of Natural Medicine Chapter 50, internet data from inception to 16 October 20124, related observational data on traditional medicine Aand cancer.

**Results:** Evidence and various publications consistently suggest that various complementary interventions are effective and beneficial in preventing lung cancer and in relieving its side effects after modern treatment.

**Conclusions:** In light of the results of the present review study, it can be concluded that these data will help enrich our knowledge or remind us how and which natural supplement and nutritional methods are used to prevent, control and alleviate the side effects of modern treatment for lung cancer, however, should be tested with RCTs for some traditional interventional approaches for more validity.

**Keywords:** Lung Cancer, Preventive and Complementary, Integrative and Traditional Unani Medicine, Immune support.

## **Diagnostic and Electrophysiological Features of Hirayama Disease in a Young Adult Male: A Case Report (18#153)**

*Md. Jubayer Hossain<sup>1</sup>, Manisha Das<sup>1,2</sup>*

<sup>1</sup>Center for Health Innovation, Research, Action, and Learning – Bangladesh (CHIRAL Bangladesh), Dhaka, Bangladesh

<sup>2</sup>Dhaka Medical College and Hospital, Dhaka, Bangladesh

Email: contact.jubayerhossain@gmail.com

### **Abstract**

**Background:** Hirayama disease (HD), a rare neurological disorder, typically affects young males and is characterized by asymmetric muscle weakness and atrophy of the upper extremities. This case report presents the clinical features, diagnosis, and radio imaging findings of a 20-year-old male patient diagnosed with Hirayama disease.

**Objective:** To reveal the sequential steps of diagnosis and to be aware regarding early detection of Hirayama disease.

**Methods:** Relevant history, examination and investigation for diagnosis and management of the Hirayama disease was evaluated.

**Case Presentation:** A 20-year-old male, presented with progressive muscle weakness in the upper extremities. His medical history was unremarkable, and initial blood tests, including a complete blood count and metabolic panel, were within normal ranges. Screening for blood-borne viruses and autoimmune markers yielded negative results. MRI of the cervical spine revealed asymmetric flattening of the cervical cord at the C5-6 level with anterior displacement of the posterior dura on flexion of the neck. The vertebrae and intervertebral discs showed normal signal intensities and morphologies. These findings are consistent with those of Hirayama's disease. Motor nerve conduction studies indicated reduced compound muscle action potentials (CMAP) in the left ulnar and radial nerves. Sensory nerve conduction studies were normal. Needle EMG demonstrated active denervation in the flexor carpi ulnaris (FCU) and first dorsal interosseous (FDI) muscles, with giant motor unit potentials (MUPs) noted in the triceps and FDI muscles. These results confirm chronic and active denervation in the lower cervical myotomes leading to muscular atrophy.

**Conclusion:** This case highlights the importance of MRI and EMG in the diagnosis of Hirayama disease, a condition that may present with subtle and progressive neurological deficits. Early recognition and diagnosis are crucial for managing symptoms and preventing further disease progression. Further studies are necessary to explore the therapeutic options and long-term outcomes of patients with Hirayama disease.

**Keywords:** Hirayama disease, cervical spine MRI, electromyography, motor nerve conduction, chronic denervation, neurological disorder

**Study on Knowledge and Practice regarding Type 2 Diabetes Mellitus among the Patient attending Bogura Diabetic & Swasthoseba Hospital, Bangladesh (20#158)**

*MST Mohasina Akter<sup>1</sup>, Hafiza Arzuman<sup>1</sup> Department of Public Health*

Pundra University of Science & Technology, Bogura, Bangladesh

**Presenter:** MST Mohasina Akter; Email: mohasinamunna3584@gmail.com

**Abstract**

**Background:** The chronic metabolic disorder type-2 diabetes mellitus is a fast-growing global problem with huge social, health, and economic consequences.

**Objectives:** To explore the level of knowledge and practice about Type-2 Diabetes Mellitus among the patients attending Bogura Diabetic & Swasthoseba Hospital, Bogura, Bangladesh.

**Methods** A descriptive type of cross-sectional study was carried out during Oct-Dec 2023 to assess the knowledge and practice about Type-2 Diabetes Mellitus among the patients attending Bogura Diabetic & Swasthoseba Hospital, Bogura, Bangladesh. A total of 218 patients were purposively selected for the study. A pretested structured questionnaire was used for collection of data.

**Results:** Respondents in the study were 218. The study showed that the majority (31%) of the patients were aged 60 years and above, 40% were male and 60% were female. Regarding the educational qualification, 34% had education up to class V, 26.6% had SSC, 15.1% had HSC level of education. As per our total scoring scheme the respondent's overall knowledge level was average (62/108, (mean 2.29 and SD 0.801). About Type-2 Diabetes Mellitus regarding practice the respondent's practice habit of Type-2 DM was average (15/24, mean 2.49 and SD .166).

As per our scoring scheme, the respondent's knowledge level in different areas of type-2 Diabetes Mellitus was average general knowledge level was (7/12, SD 1.02), signs and symptoms was (15/24, SD 0.97), complications were 11/24, SD 0.82.

**Conclusion:** The small scale hospital based study revealed the knowledge and practice status in different facets of Type-2 Diabetes Mellitus among adult patients were average to good in different areas of Type-2 DM. The concerned authority should play major role in increasing the awareness regarding Diabetes mellitus among the patients

**Keywords:** Type-2 Diabetes Mellitus, Knowledge, Practice, Adult patient,

## **Effect of vitamin D receptor Gene polymorphism in Autism Spectrum Disorder in Bangladeshi Children (21#159)**

*Md. Siddiquil Islam<sup>1\*</sup>, Ferdin Ehsan<sup>1</sup>, Zannatul Tunjum Islam<sup>1</sup>, Umme Rokaya Keya<sup>1</sup>, Krishno Dutta<sup>1</sup>, Md Udoy Aman Fahim<sup>1</sup>, Sajid Ahmed Rifat<sup>1</sup>, Kazi Asharaful Islam<sup>2</sup>, Abu Syed Md. Mosaddek<sup>3</sup>.*

Southeast University<sup>1</sup>, Institute of Paediatric Neurodisorder and Autism(BSMMU)<sup>2</sup>, Quest Bangladesh Biomedical Research Center<sup>3</sup>

**Presenter:** Dr.Md.Siddiquil Islam; Email: chairpharmacy@seu.edu.bd

### **Abstract**

**Background:**At present, no common biological markers have been identified among individuals with autism spectrum disorder (ASD), which encompasses a range of behaviorally defined conditions. The development of ASD may be influenced by single nucleotide polymorphisms (SNPs) in various genes.

**Objective:**The main objective of is study is to evaluate the influence of VDR gene polymorphism in Childhood Autism spectrum disorders

**Methods:** The research involved 100 children with ASD, recruited from the Institute for Paediatric Neurodisorder & Autism at BSMMU, and a control group of 100 healthy individuals. Genomic DNA was extracted from blood samples and amplified through PCR using primers specific to a targeted region. After PCR, appropriate enzymes were employed to perform Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) for genotype determination. Odds ratios (ORs) and 95% confidence intervals (95% CIs) were calculated to assess the association.

**Results:**We found a correlation between an increased risk of ASD and the presence of the T allele at the Fok-I (rs2228570) site of the VDR gene (OR=1.56, 95% CI=1.0281 to 2.3536, P=0.036) when compared to the C allele. Patients carrying at least one T allele (CT+TT) had a 1.86 times greater likelihood of developing ASD than those with the CC genotype (OR=1.8571, 95% CI=1.0525 to 3.27710, P=0.033).

**Conclusion:**This gene is linked to an increased risk of childhood ASD and could be a promising target for diagnosing the disorder. However, these findings need further confirmation through larger studies that encompass diverse ethnic groups and geographical areas.

**Keywords:** ASD, Polymorphism, VDR, PCR-RFLP, SNPs.

## Effects of ABCB1 gene polymorphism on toxicity of Taxane-based Chemotherapy in Bangladeshi Triple Negative Breast Cancer patients (25#176)

*Md. Siddiquil Islam\*, Umme Rokaya Keya, Mehedi Hasan Al Amin, Habiba Khanom Lubna, Ferdin Ehsan, Zannatul Tanjum Islam, Krisno Dutta, Tamanna Islam, Abu Syed Md. Mosaddek, Kazi Asharaful Islam, Md Udoy Ahmed Fahim.*

Southeast University

**Presenter:** Dr. Md.Siddiquil Islam; Email: chairpharmacy@seu.edu.bd

### Abstract

**Background:** Triple-negative breast cancer (TNBC) poses a significant therapeutic challenge due to its aggressive nature and limited treatment options. Taxane-based drug response and toxicity may be influenced by variations of ABCB1 gene.

**Objectives:** The objective of this study is to assess the impact of ABCB1 (rs1045642) polymorphisms on the toxicity of taxane-based chemotherapy in Bangladeshi triple-negative breast cancer patients.

**Methods:** One hundred female patients with operable breast cancer who had received docetaxel or paclitaxel containing neoadjuvant chemotherapy were included in this study. The Taxane-induced toxicity during the treatment was evaluated according to the Common Terminology Criteria for Adverse Events (CTCAE) version 4. DNA was isolated from patients' blood and amplified by PCR. Genetic polymorphisms were detected with the PCR-RFLP technique.

**Results:** We found that patients with the "TT" genotype of the ABCB1 (rs1045642) gene had a significantly higher risk of developing Anemia (OR = 4.40, 95% CI = 1.06 to 18.09, p = 0.0400) compared to those with the 'CC' genotype. Additionally, patients with the 'TT' and 'CT plus TT' genotypes of the ABCB1 (rs1045642) gene had a significantly higher risk of developing Neutropenia and Gastrointestinal Toxicity compared to those with the 'CC' genotype (OR = 4.38, 95% CI = 0.99 to 19.35, p = 0.0511 and OR = 3.76, 95% CI = 0.95 to 14.87, p = 0.0581 and OR = 4.33, 95% CI = 1.02 to 18.25, p = 0.0457; OR = 3.63, 95% CI = 1.05 to 12.55, p = 0.0416). However, our study did not find any significant relationship between leukopenia and the ABCB1 (rs1045642) gene variant.

**Conclusion:** Genetic variations in ABCB1 (rs1045642) may influence the toxicity of Taxane-based chemotherapy in Bangladeshi TNBC patients. This study sheds light on pharmacogenomic markers for personalized Triple-negative breast cancer treatment, optimizing efficacy and minimizing adverse effects.

**Key Words:** ABCB1, polymorphism, chemotherapy, taxane, triple negative breast cancer.

## **Lifestyles and the status of blood pressure among hypertensive attending in hypertension and research center, Rangpur (26#177)**

*Md Jahangir Kabir, Nurun Nahar, Md Mahfuzer Rahman, Md Zakir Hossain, Munira Begum*

Rangpur Medical College, Armed Forced Medical College, TMSS Medical College

**Presenter:** Dr. Md.Jahangir Kabir; Email: drjahangirkabirk5@gmail.com

### **Abstract**

**Background:** The World Health Organization (WHO) duly recognized hypertension as a global and public health crisis in 2013. An elevated blood pressure poses a risk to one's well-being and health. Lifestyle changes have been connected to the prevalence of hypertension in developing countries. Blood pressure control has been linked to several factors. As the risk factors are multifactorial, preventing hypertension will require efforts on the parts of patients, doctors, and the healthcare system.

**Methods:** The study was designed as a cross-sectional descriptive study. Respondents number were 316 in number as per selection criteria. Frequency table and percentage were used for result analysis.

**Results:** Out of 316 respondents, male was 182(57.6%) and female was 134 (42.4%). Among them 36.1% of patients had an age group 41-50 years and 28.5% had an age group 51-60 years. Majority of respondents 86.7% said they did not smoke. Among the respondents 72.5% did not exercise and 27.5% did exercise. Among all, 49.4% respondents slept  $\geq 7$  hours and 50.6% respondents slept  $< 7$  hours. Only a few respondents, 0.3% admitted consuming alcohol. Among the 316 participants, 60.8% of patients stated that they used extra salt in their food. 48.1% of patients had controlled blood pressure and 51.9% of patients had uncontrolled blood pressure.

**Conclusion:** This study has shown that female, young and middle-aged people are affected by hypertension equally as male, elderly people. Control of blood pressure affected by age, sex, smoking status, extra salt intake and sleeping pattern.

**Keywords:** lifestyles, blood pressure control, hypertension

## **The Role of Breast Cancer Awareness and Screening Programs: A Review of Bangladesh Perspective (31#202)**

*Dr. Ropak Chandra Roy<sup>1</sup> Sujan Mahamud<sup>2</sup>, Md. Mahbubur Rahman<sup>3</sup>, Dr. Banossree Saha<sup>4</sup>, Prof. Dr. Md. Nurul Islam<sup>5</sup>, Prof. Dr. Bijon kumar sil<sup>6</sup>, Star Xu<sup>7</sup>, Dr. Md Kamrul Hasan<sup>8</sup>*

Présenter :

**Background:** Breast cancer is a major public health concern in Bangladesh, characterized by increasing incidence rates and low awareness among women. Early detection through screening is vital for improving outcomes.

**Method:** This paper utilizes a health communication framework to assess the effectiveness of awareness and screening programs. It emphasizes the importance of culturally tailored messages and community engagement in overcoming barriers to awareness.

**Results:** Findings indicate that despite the existence of screening programs, participation is hindered by socio-cultural factors, misinformation, and limited access to healthcare facilities. Awareness campaigns have shown promise in educating women about risk factors and self examination techniques but require further enhancement for broader impact.

**Conclusion:** Breast cancer awareness and screening programs are essential for early detection and treatment in Bangladesh. Collaborative efforts among government and NGOs have initiated positive changes, yet significant gaps remain.

**Future Directions:** Future initiatives should focus on integrating technology, such as mobile health apps, to facilitate easier access to information and screening. Additionally, expanding training for healthcare professionals and community health workers is crucial for improving outreach and reducing the stigma associated with breast cancer.

**Keywords:** Breast cancer, awareness, screening programs, Bangladesh, public health.

## Health Related Condition of Thyroid Cancer Patients (35#224)

*Mir Ishtiaque Ahmed<sup>1</sup>*

### ABSTRACT

**Background:** Having the longevity of thyroid cancer patients, any impairment in health condition during the follow-up period is of great importance.

**Objective:** The study was conducted to determine the health condition of thyroid cancer patients.

**Methods:** This cross sectional study was conducted among 126 thyroid cancer patients. Data were collected by face-to-face interview and reviewing medical records with a semi-structured questionnaire and checklist with validated scale. The subjects were purposively selected following specific selection criteria and maintaining ethical issues. Place and period of study: The study was conducted during the period from June,2022 to August,2023 at Institute of Nuclear Medicine and Allied Sciences (INMAS), Chattogram.

**Results:** This study revealed that majority (71.2%) of respondents was female, married (70%), housewife (60.2%), rural respondent (41.1%) and had primary education (69%). Mean ( $\pm$  SD) age of the respondent was 37.85( $\pm$ 12.20) years (range 14-70 years) and mean ( $\pm$  SD) monthly family income was Tk.20581( $\pm$ 12600). Out of 126 cases, 102 (81.0%) was papillary and 24 (19.0%) was follicular carcinoma. Main presenting features were neck swelling (91.5%), swollen lymph node (41.9%), dysphonia (57.3%) and dysphagia (35.4%). Mean ( $\pm$  SD) of total health related condition score was 73.7  $\pm$  8.39. Health condition score of students and higher educated patients were better among the respective groups ( $p < .001$ ). The study showed the association of clinical condition of thyroid cancer patients ( $R^2 = .025$ ). health related condition revealed the strong prediction with education ( $\beta = -0.888$ ,  $p < .05$ ), family income ( $\beta = 0.05$ ,  $p < .05$ ), marital status ( $\beta = -0.1384$ ,  $p < .05$ ), clinical condition ( $\beta = -0.522$ ,  $p < .05$ ) and perceived stress ( $\beta = -0.632$ ,  $p < .001$ ).

**Conclusion:** The overall health related condition score was considerably good in this study. Timely detection, regular motivation and attending clinical condition may significantly improve the health related condition of thyroid cancer patients

**Key words:** Health related condition, Thyroid Cancer Patient, Clinical Attributes.

## **Title: Does Law Dictate What is Ethically Right or Wrong in Health Science?**

*Manha Tasnim suha, Mst. Nilufar Yesmen*

**Presenter:** Manha Tasnim Suha

### **ABSTRACT**

**Background:** Law and ethics, in the context of health science, might often agree on certain subjects or provide different viewpoints on some aspects. Laws are generally regarded as primary frameworks for acceptable conduct, whereas ethics demand a higher standard for moral behavior.

**Objective:** To find out the intricacies between law and ethics and the areas where they converge in the field of health science.

**Design and Method:** A qualitative review of literature was conducted to examine the relationship between legal and ethical considerations in healthcare.

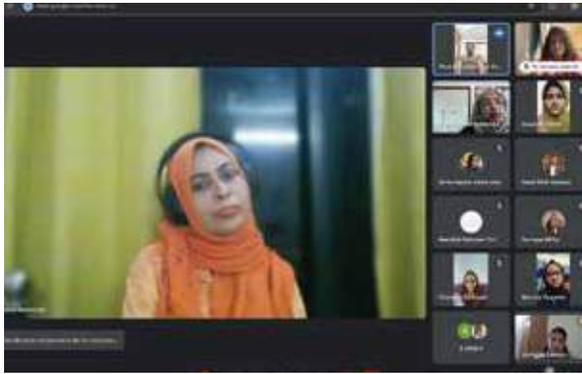
**Results:** The research finds that while laws establish minimum standards for healthcare practices, ethical principles encompass areas extending beyond legal requirements. The adequacy of current legislation may be questioned by ethical issues, particularly in rapidly evolving sectors like biotechnology and genetic engineering. Moreover, political, economic, and social factors can drastically change the way we make and enforce laws. This can lead to potential discrepancies between laws and ethical standards.

**Conclusion:** While a complete equilibrium between law and ethics may be unrealistic, we can always strive to create a more harmonious relationship between these two different concepts. By doing so, we can ensure the well-being of patients and society as a whole.

**Keywords:** law, ethics, health science, bioethics, legal ethics, healthcare ethics

# Photo Gallery of Public Health Foundation Bangladesh & TMSS Medical College





# TMSS Medical College



# TMSS Medical College & Rafatullah Community Hospital







# Public Health Foundation Bangladesh



Jointly Organized by

Public Health Foundation, Bangladesh  
[www.publichealthfoundation.org.bd](http://www.publichealthfoundation.org.bd)

&

TMSS Medical College, Bogura, Bangladesh  
[www.tmssmedicalcollege.com](http://www.tmssmedicalcollege.com)

