



**7<sup>th</sup> Annual Scientific  
Conference  
2024**

Reshaping Medical Education Landscape In Pakistan  
RMU Model

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# JRMC

Journal of Rawalpindi Medical College  
**Annual Conference 2024**  
Special Supplement

## Abstract Book

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**RMU Main Campus**

## Section 1- About RMU



**RMU HFH Campus**



## About Rawalpindi Medical University

Rawalpindi Medical College, now Rawalpindi Medical University (RMU), has a rich history and legacy that justifies its establishment and growth over the years. The following points highlight the significance of RMU.

RMU was initially established in Faisalabad on March 18, 1974, and later shifted to Rawalpindi on November 5, 1974. The visionary founder principal, Prof. Abdul Latif, played a pivotal role in establishing the institution, even in an incomplete building.

Prof. Abdul Latif's efforts went beyond mere establishment. He oversaw the construction of student hostels, staff colonies, and an auditorium, creating a conducive environment for both students and faculty. His leadership extended to acquiring the Holy Family Hospital from a missionary church and the Central Government Hospital, later becoming Rawalpindi General Hospital and subsequently Benazir Bhutto Hospital. The District Headquarters Hospital also became the first teaching hospital affiliated with RMU.

Subsequent principals, such as Prof. Mohammad Nawaz and Prof. Mohammad Iqbal, were instrumental in establishing key components of RMU. They were part of a pioneering team that worked to lay the foundations of a comprehensive medical institution. Prof. Mohammad Iqbal and Prof. Saad Rana actively worked to establish a new teaching block in the Holy Family Hospital, with support from the Islamic Development Bank.

RMU's progress continued with each successive principal. Notable achievements include the establishment of the Department of Medical Education and the Institute of Allied Health Sciences in 2007, thanks to the vision of Prof. Muhammad Musadiq Khan.

Prof. Mohammad Umar, the first Rawalian Principal, focused on restructuring undergraduate training programs, enhancing student facilities, and even dedicating a beautiful park to Rawalians. He also played a vital role in facilitating a consensus on national guidelines for undergraduate medical training, reflecting RMU's commitment to quality education.

RMU expanded its contributions to healthcare by establishing state-of-the-art centers such as the Center for Liver and Digestive Diseases, the Multi-Organ Failure Centre, the Medical ICU, the Department of Infectious Diseases, and the Department of Emergency and Critical Care. Over the years, RMU has consistently excelled in university examinations, and its graduates have made significant contributions to the medical field both nationally and internationally.

RMU's academic programs are accredited by organizations like the CPSP and PMDC. The college has received recognition from international bodies, including the General Medical Council UK and American Specialty Boards. It has also fostered internship programs with various foreign universities and earned recognition from the World Health Organization (WHO). In summary, Rawalpindi Medical University's journey from its establishment in Faisalabad to its current status as a renowned medical institution in Rawalpindi is a testament to the dedication, hard work, and vision of its founding leadership and subsequent principals. RMU's commitment to excellence in education, patient care, and international recognition has contributed significantly to the field of medicine and healthcare.



# Organizing Committees

## Annual Conference 2024

### Patron in Chief

Prof. M. Mussadiq Khan

### Patrons

Prof Rai Asghar, Prof. Riaz Sheikh

### Vice Chancellor

Prof Muhammad Umar (S.I, H.I)

### Principal

Prof Jahangir Sarwar Khan

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Dr Arsalan Manzoor Mughal

### Joint Secretary

Dr Ashar Alamgir

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### Coordinator

Dr Junaid Khan

Dr. Malik Shehr Yar

### RMU Research Committee

Prof. Bushra Khaar

Prof. Fareed Minhas

Prof. Shaugfta Saeed Sial

Dr Faiza Aslam

Dr Farrhah Pervaiz

Dr Sara Rafi

### Faculty Research Forum

President Prof. Muhammad Waqas Raza

Vice president Prof. Ahmed Hassan Ashfaq, Dr. Arslan Manzoor Mughal

General secretary Dr. Malik Irfan Ahmed

Joint secretary Dr. Ashar Alamgir, Dr. Soban Sarwar gondal, Dr. Amna Nazeer

### Resident Research Forum

Patron In Chief Dr. Asad Tameez ud Din

President Dr. Tashfeen Farooq, Dr. Jamila Bibi

Vice President Dr. Momna Aman

General Secretary Dr. Shoaib Ali

Secretary BBH Dr Rawal Saeed

Secretary HFH Dr. Kinza Shaista

Secretary DHQ Dr. Madiha Liaqat

### Rawalian Student Research Society

Patron In charge Dr. Afifa Kalsoom

President Syed Tabeer Hussain Naqvi, Barira Irij Malik Final Year

General Secretary Haris Mumtaz Malik, Hafsa Arshad Azam Raja



**Colonoscopy Workshop**

## Section 2- Preconference Workshops



**Art of Research & Dissertation Writing Workshop**

S.No	Date of Activity	Unit / Department	Hospital	Title Of Activity	Venue of Activity
WS001	11/08/2024	Holy Family Hospital	Gastroenterology	14th hands-on Colonoscopy Work in Rawalpindi Medical University	Centre for liver and digestive Disease, Holy Family Hospital
WS002	31/10/2024	Holy Family Hospital	Radiology Department	Designing Effective Assessment Blueprints: A Practical Guide Using theÂ CalgaryÂ Model	Main Conference Hall Radiology Department, Basement, Holy Family Hospital
WS003	22/11/2024	Holy Family Hospital	ENT	"Research Renaissance"	Conference room-ENT Dept, Holy Family Hospital
WS004	23/11/2024	Benazir Bhutto Hospital	Orthopaedic Surgery	ACT PRE-SERVICE Clubf00T TRAINiNG COURSE for Orthopaedic Surgery Residents	BENAZIR BHUTTO HOSPITAL Orthopaedic Surgerys Department
WS005	29/11/2024	Holy Family Hospital	ENT Department	"Clear, Concise & Compelling: The Art of Audit Writing"	Conference room-ENT Dept Holy Family Hospital
WS006	29/11/2024	Benazir Bhutto Hospital	Orthopaedic Surgery	Hand on Workshop on Fabrication of Trans Femoral Prosthesis	Orthopaedic Surgery Class room Orthotics Department
WS007	30/11/2024	Rawalpindi teaching hospital	Orthopaedic Surgery	Workshop on orthopaedic implants	DME conference hall, NTB
WS008	03/12/2024	Benazir Bhutto hospital	Paediatric medicine	Mile stones and beyond: A comprehensive guide to pediatric developmental assesment	Conference Hall paedes deptt,Benazir Bhutto Hospital
WS009	05/12/2024	Rawalpindi Medical University	Anatomy	Essential Digital Tools for Faculty of Basic Sciences	Anatomy Department, Rawalpindi Medical University
WS010	05/12/2024	Holy Family Hospital	Obstetrics and Gynaecology, Unit 1	Comparing Patient Outcomes: Separate Management in Latent and Active Phases vs. Combined Care in Single Room	Holy Family Hospital
WS011	05/12/2024	Holy Family Hospital	Medical unit1	Optimising patient care:Mastering NIV and oxygen delivery technique	Medical unit 1 Holy Family Hospital
WS012	05/12/2024	Holy Family Hospital	Family medicine	Research Methodology	DME, New Teaching Block
WS013	07/12/2024	Holy Family Hospital	Neurosurgery	Hands on workshop on Surgical planning on DICOM using Radiant	neurosurgery classroom
WS014	08/12/2024	Capital Hospital CDA Islamabad	Plastic and Reconstructive Surgery	Expander workshop	Holy Family Hospital
WS015	09/12/2024	Holy Family Hospital	Ob-Gyn	Reimagining Research through the Lens of Artificial Intelligence	Gynae/Obs Unit I, HOLY FAMILY HOSPITAL
WS016	09/12/2024	Holy Family Hospital	Plastic surgery department	Tissue expansion	Conference room plastic surgery department
WS017	09/12/2024	Benazir Bhutto Hospital	Surgical unit 1	Carrier counselling of surgical residents	Conference room ward 9
WS018	10/12/2024	Benazir Bhutto Hospital	ENT	Leadership unleashed: Discover the path to you vision and be the change	Conference room Benazir Bhutto Hospital
WS019	10/12/2024	Holy Family Hospital	Paediatric Medicine	Neonatal Resuscitation Programme workshop	Conference room Holy Family Hospital ground floor
WS020	10/12/2024	Benazir Bhutto Hospital Rawalpindi	Department of Urology and Renal Transplantation	Work Shop on Laparoscopic Nephrectomy	Department of Urology and Renal Transplantation, Benazir Bhutto Hospital Rawalpindi
WS021	10/12/2024	Holy Family Hospital	Critical care medicine	Mechanical Ventilation	MICU Holy Family Hospital
WS022	10/12/2024	Benazir Bhutto hospital	Cardiology	Mastering common ECG's in clinical practice	Cardiology department, Room 14 OPD
WS023	10/12/2024	Holy Family Hospital	Plastic surgery department	Hands-on workshop on PRP	Conference room plastic surgery department
WS024	10/12/2024	Rawalpindi Teaching Hospital	ENT	Rise and Lead : Empowering the leader within"	Benazir Bhutto Hospital
WS025	11/12/2024	Rawalpindi Teaching Hospital	Neurosurgery	Basic microsurgical skills Hands on session for Residents	Skill Lab Neurosurgery Operation Theatre
WS026	11/12/2024	Rawalpindi Teaching Hospital	Pathology	Quality Assurance in Laboratory	Pathology Laboratory, Rawalpindi Teaching Hospital

# Workshops

<b>WS027</b>	11/12/2024	Benazir Bhutto Hospital	Surgical unit 2	Workshop on Basic laparoscopic skills	Conference room Surgical unit 2, BENAZIR BHUTTO HOSPITAL
<b>WS028</b>	11/12/2024	Rawalpindi Teaching Hospital	General Surgery	Time management skills for Health Professionals	Rawalpindi Teaching Hospital, Department of Surgery.
<b>WS029</b>	12/12/2024	Rawalpindi Teaching Hospital	ENT	Rise and Lead: Empowering the Leader Within	Class room RTH
<b>WS030</b>	12/12/2024	Holy Family Hospital	Radiology Department	Enhancing Chest X-Ray Interpretation: The Role of AI in Assisting Radiologists.	Main Conference Hall Radiology Department Conference Room 1, Basement, Holy Family Hospital
<b>WS031</b>	12/12/2024	Main campus RMU	Physiology	Rhythm and Vectors: A Harmonious Approach to Electrophysiology	Lecture Hall number 5
<b>WS032</b>	12/12/2024	New teaching block	Pharmacology	Role of clinical trial unit in medical research	Conference room, DME
<b>WS033</b>	12/12/2024	Holy Family	Gastroenterology	Seminar and Hands on training on Photodynamic therapy	Center for liver and digestive diseases, Holy Family Hospital
<b>WS034</b>	12/12/2024	Rawalpindi teaching hospital	Gynae and obs	Fundamentals of AI for healthcare	Conference room gynae department
<b>WS035</b>	12/12/2024	Benazir Bhutto Hospital	Dermatology	Seminar and hands on training on photodynamic therapy	Center for Liver and Digestive Diseases
<b>WS036</b>	12/12/2024	Benazir Bhutto Hospital	Radiology	MR perfusion in brain tumors - From diagnosis to management	Deans Hall RMU Tipu Road
<b>WS037</b>	12/12/2024	Benazir Bhutto Hospital	pathology	Quality control in chemical pathology lab	Benazir Bhutto Hospital hospital conference room
<b>WS038</b>	12/12/2024	Holy Family Hospital	Medical unit 1	Advances in management of immune thrombocytopenia purpura: insights for clinical practice and future directions	Medical unit 1
<b>WS039</b>	12/12/2024	Holy Family Hospital	Gynae/ obs unit 2	Revisiting faculty capacity building for development of MCQS AND OSCE - a requirement of Directorate of Assessment RMU	Conference Room Gu 2.
<b>WS040</b>	13/12/2024	Rawalpindi Medical University Main Campus Rawalpindi	Biochemistry	Innovating Medical Research: A Hands-on AI Workshop	Deans Hall
<b>WS041</b>	13/12/2024	Rawalpindi Medical University NTB	Forensic Medicine	"Bridging Medicine and Law: Skills Update for Doctors"	Conference room, DME,NTB
<b>WS042</b>	13/12/2024	Benazir Bhutto Hospital	Psychiatry	How to Lead a Happier Life?	Institute of Psychiatry
<b>WS043</b>	13/12/2024	Benazir Bhutto Hospital	Anesthesiology	Ultrasound guided workshop for brachial plexus	Anesthesia department Benazir Bhutto Hospital Rawalpindi
<b>WS044</b>	13/12/2024	Benazir Bhutto Hospital	Anesthesia Department, BENAZIR BHUTTO HOSPITAL	Ultrasound guided workshop of brachial plexus block	Anesthesia Department, Benazir Bhutto Hospital, Rawalpindi
<b>WS045</b>	14/12/2024	Rawalpindi Medical University Main Campus	Medical Education department	Program Evaluation For Faculty (PMDC Criteria)	Deans Hall ,Main Campus
<b>WS046</b>	14/12/2024	Benazir Bhutto Hospital	Obst&gynae	Ten steps approach to successful total laproscopichysterectomy	Main operation theatre Benazir Bhutto Hospital
<b>WS047</b>	14/12/2024	New Teaching Block ,RMU	Community Medicine	Innovating Medical Education and Research Harnessing AI for Effective Teaching and Discovery	Community Medicine RMU
<b>WS048</b>	14/12/2024	Benazir Bhutto Hospital	Department of Dermatology & Aesthetic Medicine	Botulinum Toxin in Facial Aesthetics	Syndicate Hall, Main University Campus, Tipu Road
<b>WS049</b>	14/12/2024	Holy Family Hospital	Su1	Leadership and management	Su 1 conference room
<b>WS050</b>	14/12/2024	Holy Family Hospital	Paeds medicine	Harnessing AI for effective Teaching and Discovery	NTB
<b>WS051</b>	14/12/2024	Holy Family Hospital	Plastic surgery department	Synopsis writing in training	Conference room plastic surgery department

<b>WS052</b>	14/12/2024	HOLY FAMILY HOSPITAL	SU II HOLY FAMILY HOSPITAL	SSTRATEGIC PLANNING IN MEDICAL EDUCATION	SU II CONFERENCE HALL
<b>WS053</b>	14/12/2024	Rawalpindi Teaching Hospital	Medicine	Mastering The Art Of Communicating Medical Science by Dr sadia Choudhry ( Professor OF ENT)	Confrence Room, FMW Medicine Department, RTH
<b>WS054</b>	14/12/2024	Holy Family Hospital	Gynae/ obs unit 2.	Revisiting faculty capacity building for development of MCQS AND OSCE - a requirement of Directorate of Assessment RMU	Conference Room of GU 2. HOLY FAMILY HOSPITAL
<b>WS055</b>	17/12/2024	Holy Family Hospital	Paeds Medicine	Preventing blindness:Early screening for retinopathy of prematurity	Rawalpindi Medical University, Main Campus
<b>WS056</b>	18/12/2024	Holy Family Hospital	Orthopaedic Surgery	Basic Workshop on Principles of Plaster of Paris (POP) Casting	DME, NTB
<b>WS057</b>	18/12/2024	Holy Family Hospital	GASTROENTEROLOGY	Shaping competent professionals: An introduction to EPAs	Liver centre, HFH
<b>WS058</b>	18/12/2024	Holy Family Hospital	Gastroenterology	Shaping competent professionals: An introduction to EPAs	Center for Liver and Digestive Diseases
<b>WS059</b>	18/12/2024	Rawalpindi Teaching Hospital	Rheumatology	Make Lupus Visible	Rawalpindi Medical University, Main Campus
<b>WS060</b>	19/12/2024	Holy Family Hospital	Ophthalmology	Workplace Based Assessment	Eye Ward HOLY FAMILY HOSPITAL
<b>WS061</b>	19/12/2024	Holy Family Hospital	Su1 Holy Family Hospital	Recent trends in management of colorectal cancer	Su1 Holy Family Hospital
<b>WS062</b>	19/12/2024	Holy Family Hospital	Medical Unit 2	Ethical and Practical challenges of AI in Internal Medicine	Conference Room Medical Unit 2
<b>WS063</b>	21/12/2024	Holy Family Hospital	Ophthalmology Department	Student Advisory Board - Concept and Challenges In context of RMU	Dean Hall RMU
<b>WS064</b>	01/04/2025	Rawalpindi teaching hospital	Obs and gynae	Transforming healthcare through interprofessional education and collaborative practice	Conference room gynae department

**Rawalpindi Medical University**

## 7<sup>th</sup> Annual Scientific Conference 2024



Prof. Dr. Muhammad Usar (Retired)  
Patron in Chief  
Vice-Chancellor  
Rawalpindi Medical University



Prof. Dr. Nasir Khan  
Dean Diagnostics & Allied Health Sciences  
Head of Radiology Department  
Rawalpindi Medical University



Ass. Prof. Dr. Anam Zahoor  
Workshop Facilitator  
Radiology Department  
Rawalpindi Medical University



Dr. Anissa Saleem  
Workshop Facilitator  
Senior Registrar  
Radiology Department  
Rawalpindi Medical University

**PRE CONFERENCE WORKSHOP**

**TARGET AUDIENCE:**

- Faculty of Allied Health Sciences Disciplines
- Focal Persons & co-ordinators of Allied Health sciences Disciplines

**VENUE:**

- Main Conference Hall
- Radiology Department, Basement, Holy Family Hospital

**TIME & DATE:**

- 31<sup>st</sup> October, 2024
- 10 am

**DESIGNING EFFECTIVE ASSESSMENT BLUEPRINTS: A PRACTICAL GUIDE USING THE CALGARY MODEL**




**Rawalpindi Medical University**

## 7<sup>th</sup> Annual Scientific Conference 2024

**Reshaping Medical Education Landscape In Pakistan  
RMU Model**

*Pre-Conference Workshop*

**ACT PRE-SERVICE CLUBFOOT TRAINING COURSE  
for ORTHOPAEDIC RESIDENTS**

**23 NOVEMBER 2024**

**Department of Orthopaedic Surgery  
Benazir Bhutto Hospital**

Conference Secretariat: Research Cell, RMU Tugu Road, Rawalpindi  
Ph: 9120007-4, Email: Research@rmu.edu.pk, www.rmup.edu.pk

**7<sup>th</sup> Annual Scientific Conference 2024**

DEPARTMENT OF ORTHOTICS AND PROSTHETICS - BBH  
IAHS- RAWALPINDI MEDICAL UNIVERSITY, RWP

*Pre-Conference Workshop*

## "Hands-On Workshop on Fabrication of Trans Femoral Prosthesis."

Participate in interactive sessions, and gain valuable insights that will help you gain knowledge about trans femoral prosthesis at Benazir Bhutto Hospital, Rawalpindi.

TRAINER	FACULTIES	FACILITATORS
• Mr. Akhtar Hakeem OSP Specialist at Healthquest Hospital, Abu Dhabi, UAE	• Dr. Usaid ur Rahman (HOD Orthopedics - BBH)	• Miss Ayesha Yousaf (Lecturer - OSP)
	• Dr. Jamil Nawaz Khan (Course Supervisor OSP BBH)	• Miss Saemah Araf (Lecturer - OSP)
	• Ms. Ayesha Javed (Course Coordinator OSP BBH, RMU)	

**29.11.2024 - 30.11.2024**  
HALL ONE TUTORIAL ROOM, WARD 16, BBH

**REGISTRATION FEE**  
500/- PKR

**CONTACT:**  
+92 333 5442478  
+92 344 759743

**RAWALPINDI MEDICAL UNIVERSITY**

## 7<sup>th</sup> Annual Scientific Conference 2024

**PRE CONFERENCE WORKSHOP ON ORTHOPAEDIC IMPLANTS**

DEPARTMENT OF ORTHOPAEDIC SURGERY  
BENAZIR BHUTTO HOSPITAL, RAWALPINDI

**30 NOV 24  
SATURDAY  
08 - 02  
AM - PM**


REGISTRATION IS FREE BUT MANDATORY  
COPY THE LINK BELOW  
<https://forms.gle/4HfPm9n9g9V4U7>

SEAL FOR HOSPITAL EXAM CANDIDATES

 PROF. MUHAMMAD USAR PATRON IN CHIEF	 PROF. NASIR KHAN DEAN	 DR. USAIID UR RAHMAN CHAIRMAN
 DR. SAAD RAZI CO-CHAIRMAN	 DR. M. A. KHAN DIRECTOR	 DR. USAIID UR RAHMAN DIRECTOR
 DR. USAIID UR RAHMAN FACULTY	 DR. USAIID UR RAHMAN FACULTY	 DR. USAIID UR RAHMAN FACULTY

033-408408  
Dr. Usaid ur Rahman

ONE NEW TEACHING BLOCK RMU  
HOLY FAMILY HOSPITAL, RAWALPINDI



**Approach to developmental delay**

**Developmental assessment tools**

**Hands on session**

**Interactive group activities**

**Organisers**

Dr. Agnita Ayub

Dr. Saad Usaf

Dr. Maria Shamsher

**FIELD WORK**  
(Senior Clinical Hospital Research)

**DATE: 30th December 2024**

**TIME: 10:00 AM - 1:00 PM**

**"MILE STONES AND BEYOND": A COMPREHENSIVE GUIDE TO PEDIATRIC DEVELOPMENTAL ASSESMENT**

**3<sup>RD</sup> DECEMBER 2024**

**Speaker: Dr Naveed Ashraf**



**7<sup>th</sup> Annual Scientific Conference 2024**

**PRE-CONFERENCE WORKSHOP**

**PROF. MUHAMMAD UMAR (S.I.O.H.)**  
PATRON  
VICE CHANCELLOR  
RAWALPINDI MEDICAL UNIVERSITY

**COURSE DIRECTOR**  
DR. SAMMA AMBREEN  
ASSOCIATE PROFESSOR/HOD  
MU1 HFH

**Registration fee FREE**

**Audience**  
Post Graduate Residents,  
House officers,  
Medical officers

**OPTIMIZING PATIENT CARE: MASTERING NIV AND OXYGEN DELIVERY TECHNIQUE**

**VENUE**  
MEDICAL UNIT 1 HOLY FAMILY HOSPITAL RWP

**DATE: 05/12/24 Thursday**  
**TIME: 10am**

**Facilitator:**  
Dr. Samar Saleem  
Pulmonologist RTH

**Co-Facilitator:**  
Dr. Seemab Abid  
Senior Registrar MU1 HFH

**CME credit hours will be given**



**7<sup>th</sup> Annual Scientific Conference 2024**

**WORKSHOP**

**Essential Digital Tools for Faculty of Basic Sciences**

OFFICE SOFTWARES (WORD, EXCEL, POWERPOINT)  
ONLINE SOFTWARES (GOOGLE FORMS, LMS)

Thursday, December, 5th 2024 9:00AM-12:00PM  
Anatomy Lecture Hall 3, Department of Anatomy,  
Main Campus Rawalpindi Medical University

**Dr. Arsalan Manzoor Mughal**  
Facilitator  
Associate Professor of Anatomy  
Co-Director MHP  
Rawalpindi Medical University

**Prof. Ayesha Yousaf**  
Director  
Chargeman Anatomy Department  
Deen Behari Health Sciences  
Rawalpindi Medical University

**Prof. Mumammad Umar (S.I.)**  
Patron  
Vice Chancellor  
Rawalpindi Medical University

**Prof. Jahangir Sarwar Khan**  
Principal  
Rawalpindi Medical College

**For Registrations**  
Dr. Maria Taseem  
Assistant Professor of Anatomy  
Rawalpindi Medical University  
Phone: 33345015502  
Email: mariamhousman@gmail.com  
Registration: Free  
Limited seats available

**Instructions for Participants**  
Each participant must bring their laptop with Microsoft Office pre-installed and have their own internet with Gmail and LMS accounts



**Rawalpindi Medical University**

**7<sup>th</sup> Annual Scientific Conference 2024**

**Prof. Dr. Mumammad Umar**  
Patron in Chief  
Vice Chancellor  
Rawalpindi Medical University

**Prof. Dr. Jahangir Sarwar Khan**  
Chief Guest  
Principal  
Rawalpindi Medical University

**Research Methodology Workshop**  
Organized by: Department of Family Medicine

**Facilitators**

Dr. Saadia Naeem Khan  
HOD Family Medicine  
Rawalpindi Medical University

Dr. Khushi Sarwar  
HOD Community Medicine  
Rawalpindi Medical University

Dr. Saba Maryam  
PGT Community Medicine  
Rawalpindi Medical University

**PRE CONFERENCE WORKSHOP**

**VENUE:**  
Conference Hall,  
HOD Department, Rawalpindi Medical University, Rawalpindi

**DATE & TIME:**  
26 Dec 2024  
10:00 AM to 12:00 PM

**Rawalpindi Medical University**

**7th Annual Scientific Conference 2024**

**Prof. Dr. Muhammad Umar**  
Patron in Chief  
Vice Chancellor  
Rawalpindi Medical University

**Prof. Dr. Jahangir Sarwar Khan**  
Chief Guest  
Principal  
Rawalpindi Medical University

**Essentials of OSCE in Family Medicine**  
Organized by: Department of Family Medicine

**Facilitators**

**Dr. Sadia Azam Khan**  
HOD Family Medicine  
Rawalpindi Medical University

**Dr. Hina Sattar**  
HOD Paediatrics  
Holy Family Hospital  
Rawalpindi

**Dr. Sadia Yousaf**  
Assistant Prof. Institute of Psychiatry  
Benazir Bhutto Hospital  
Rawalpindi

**PRE CONFERENCE WORKSHOP**

**VENUE:**  
Academic Council Hall,  
New Teaching Block, Rawalpindi  
Medical University, Rawalpindi

**TIME & DATE:**  
07-Dec-2024  
09:30am to 02:00pm

**7th Annual Scientific Conference**

**Pre conference workshop**  
**HANDS ON WORKSHOP ON NEUROSURGICAL PLANNING ON DICOM USING RADIANT SOFTWARE**

**7th December, 2024 Time: 10:00 AM-01:00 PM**

**INTRODUCTION TO USER INTERFACE OF RADIANT**

**LOADING SAMPLE DATA (1 CRANIAL AND 1 SPINAL)**

**SURGICAL PLANNING (1 CRANIAL AND 1 SPINAL)**

**PATRON IN CHIEF**  
Prof. Dr. Muhammad Umar (SI)  
Vice-Chancellor RMU

**PROGRAM DIRECTOR**  
Dr. Sundus Ali  
Associate Professor & Head of Department  
Neurosurgery,  
RMU and Allied Hospitals

**FACILITATORS**  
Dr. Soban Sarwar (Assistant Professor)  
Dr. Faraz (SR)  
Dr. Atta ul Munem (SR)  
Dr. Israr (SR)

**RadiAnt**

**VENUE:** Neurosurgery Classroom, Holy Family Hospital, Rawalpindi.

**Rawalpindi Medical University**

**7th Annual Scientific Conference 2024**

**Reimagining Research Through the Lens of Artificial Intelligence**

**Prof. Dr. Muhammad Umar**  
Patron in Chief  
Vice Chancellor  
Rawalpindi Medical University

**Dr. Hina Sattar**  
HOD Paediatrics  
Holy Family Hospital  
Rawalpindi

**Dr. Sadia Yousaf**  
Assistant Prof. Institute of Psychiatry  
Benazir Bhutto Hospital  
Rawalpindi

**Workshop Objectives:**  
By the end of the three hour workshop the participants will be able to:

- Discuss the AI landscape relevant to research and types of AI to appreciate the AI tools that influence research
- Appreciate the use of machine learning tools (e.g. Artificial Neural Networks) that assist in identifying research data patterns and knowledge synthesis
- Understand and describe specific machine learning tool in a specific context to research in medicine
- Discuss the future of AI in medicine and its role along with their potential in the integration of research in medicine

**PRE CONFERENCE WORKSHOP**

**VENUE:**  
Conference Hall, Ayman/Hospital-1,  
Holy Family Hospital, Rawalpindi

**TIME & DATE:**  
06-12-2024  
09:00 am to 01:00pm

**7th Annual Scientific Conference**

**Role of Telemedicine in Medical Practice**

**DATE: 6TH DECEMBER, 2024**  
**TIME: 10:00AM**  
**VENUE: CONFERENCE ROOM SU-504**

**PROGRAM**

- 10:00AM..... TLAWAT BY DR HAMZA BALOCH
- 10:05AM..... INTRODUCTION OF WORKSHOP BY DR KANWAT JAVED
- 10:15 AM..... WELCOME ADDRESS BY PROF DR ANS AHMED
- 10:30AM..... PRESENTATION BY DR MUZNA ISTIKHAR
- 10:45AM..... SPEECH BY DR MUJIBAH VC
- 11:00AM..... PRESENTATION BY PROF DR ASIF ZAFAR MALIK
- 11:45AM..... VOTE OF THANKS BY DR ANS AHMED
- 12:00PM..... CERTIFICATE AND SHIELD DISTRIBUTION
- 12:30PM..... TEA

**Facilitators**

- Prof Dr Muhammad Umar (Vice-Chancellor RMU)
- Prof Dr Asif Zafar Malik (Ex-Dean of surgery RMU)

**Coordinators**

- Dr Sajid Hashmi (Associate professor)
- Dr Rahat Hussian (Assistant professor)
- Dr Muza/Atikhar (SR)
- Dr Sadia Dar (SR)
- Dr Ibtisam Aslam (SR)
- Dr Sunnysah Qamar (SR)
- Dr Ramzan Ahmed (SR)
- Dr Syeda Durrain (SR)
- Dr Kanwal Javed (SR)

**ORGANISED BY**  
**SURGICAL UNIT-1 RMU**

**Registration Fee: Rs. 500**  
**Per Participant**  
**For Registration**  
**CONTACT: 0333750099**

**7th RMU ANNUAL SCIENTIFIC CONFERENCE**

**PRE CONFERENCE WORKSHOP  
ON  
LAPAROSCOPIC NEPHRECTOMY**





Patron in Chief  
**Prof. Dr. Masood**  
Vice-Chancellor  
RMU

Course Director  
**Prof. Dr. Asim Masood Chaudhry**  
Senior Registrar  
RMU

**10 December, 2024**

**COURSE FACILITATOR : DR ASIM MASOOD CHAUDHRY**

**08:30 am - 01:00 pm**

**Department of Surgery RMU**

For Registration Contact: Dr. Narmeen 03462112791

**Rawalpindi Medical University**

**7th Annual Scientific Conference 2024**






Prof. Dr. Waheedullah  
Senior Registrar  
Department of Surgery  
RMU

Prof. Dr. Nadeem Chaudhry  
Chief of Paediatrics  
Department RMU

Dr. Noshina Riaz  
Senior Registrar  
Department of Surgery  
RMU

Dr. Hina  
Senior Registrar  
Department of Surgery  
RMU

**LEADERSHIP UNLEASHED, DISCOVER THE PATH TO YOUR VISION & BE THE CHANGE**

**Course Facilitators**





Dr. Asim Masood Chaudhry  
Senior Registrar RMU  
Department of Surgery

Dr. Noshina Riaz  
Senior Registrar RMU  
Department of Surgery

Dr. Hina  
Senior Registrar RMU  
Department of Surgery

**PRE CONFERENCE WORKSHOP**

**VENUE:**  
Conference Hall,  
SNT Department, Benazir  
Bhutto Hospital, Rawalpindi

**TIME & DATE:**  
10-12-2024  
8:30 am to 1:30pm

**Course Coordinator:**  
Dr. Shaukat  
03462112791

**Course Fee:** 1000  
PKR

**Rawalpindi Medical University**

**7th Annual Scientific Conference 2024**

**PRE CONFERENCE WORKSHOP**  
**Revisiting the Faculty Capacity Building:  
Development of MCQ, EPA & OSCE -  
A Requirement of Directorate of Assessment, RMU**







Prof. Dr. Waheedullah  
Senior Registrar  
Department of Surgery  
RMU

Prof. Dr. Nadeem Chaudhry  
Chief of Paediatrics  
Department RMU

Prof. Dr. Asim Masood Chaudhry  
Senior Registrar  
Department of Surgery  
RMU

Prof. Dr. Noshina Riaz  
Senior Registrar  
Department of Surgery  
RMU

Prof. Dr. Hina  
Senior Registrar  
Department of Surgery  
RMU

**Course Facilitators**







Dr. Waheedullah  
Senior Registrar  
Department of Surgery  
RMU

Dr. Nadeem Chaudhry  
Chief of Paediatrics  
Department RMU

Dr. Asim Masood Chaudhry  
Senior Registrar  
Department of Surgery  
RMU

Dr. Noshina Riaz  
Senior Registrar  
Department of Surgery  
RMU

Dr. Hina  
Senior Registrar  
Department of Surgery  
RMU

**Course Coordinator: Dr. Narmeen, SNT-PAED**

**Course Fee: 500 PKR**

**VENUE:**  
Conference Hall,  
SNT/Department of Paediatrics,  
Holy Family Hospital, Rawalpindi

**TIME & DATE:**  
10-12-2024, Tuesday  
8:30 am to 12:00 pm

**Facilitators**

Dr. Hina Khan  
Neonatologist  
City Care Hospital

Dr. Soima Akhtar  
Senior Registrar  
Paediatrics HFH

**NEONATAL RESUSCITATION WORKSHOP**

**Pre Conference Workshop**

**Who should attend**

SRs, PGTs Pediatrics and Gynaec/ Obs  
Staff nurses working in neonatal unit, DR and OT

**Organized by:**  
**Department of Paediatric Medicine**  
**Holy Family Hospital, Rawalpindi**

**7th Annual Scientific Conference 2024**




**Prof. Muhammad Umar**  
Vice Chancellor RMU

**Course Director**  
**Dr. Hina Sattar**  
Associate Professor Paediatrics

**Prof. Rai M. Asghar**  
Dean of Paediatrics

**Course Co-directors**  
**Dr. Sumbal Ghazi**  
Senior Registrar Paediatrics

**Dr. Noshina Riaz**  
Senior Registrar Paediatrics

**For Registration Contact:**  
**Dr. Haris Mustafa**  
**0331-5946560**

**Venue:**  
Conference Room  
Holy Family Hospital  
Ground floor

**Date :**  
10th December, 2024  
Time 9:00 am to 1:00pm



# Rawalpindi Medical University

## 7<sup>th</sup> Annual Scientific Conference 2024



**Dr. M. A. Khan**  
Dean, Rawalpindi Medical University  
President, RCU



**Dr. A. Khan**  
Dean, Rawalpindi Medical University  
President, RCU



**Dr. A. Khan**  
Dean, Rawalpindi Medical University  
President, RCU



**Dr. A. Khan**  
Dean, Rawalpindi Medical University  
President, RCU

### PRE CONFERENCE WORKSHOP

**TOPIC: RADIOLOGY**

- Radiology Residents
- General Medicine Residents
- General Practitioners

**Venue:**  
Main Conference Hall  
Radiology Department  
Conference Room 5,  
Rawalpindi Medical University

**TIME & DATE:**  
12<sup>th</sup> December, 2024  
8:30 am



### ENHANCING CHEST X-RAY INTERPRETATION: THE ROLE OF AI IN ASSISTING RADIOLOGISTS.

**Course Co-ordinator:**  
Dr. A. Khan  
03454400000

**Course Fee:** Rs. 1000



**7th Annual Scientific Conference 2024**

**ROLE OF CLINICAL TRIAL UNIT IN MEDICAL RESEARCH**

**PRE-CONFERENCE WORKSHOP**

**12 DEC THURSDAY 09 - 02 AM**

**CONFERENCE ROOM DME, NTD**

**REGISTRATION FEE: Rs.1000/- only**

**Patron:** **PROF. DR. MUHAMMAD SMAS** (S.D.)  
VICE CHANCELLOR  
RAWALPINDI MEDICAL UNIVERSITY

**Principal:** **PROF. DR. JAWAHIR SARWAR KHAN**  
RAWALPINDI MEDICAL COLLEGE

**Directors:** **DR. AYESHA MUNIR** (S.D.), **DR. SHIMOLA KHAN** (S.D.), **DR. ZUMRA KHAN** (S.D.), **DR. HADEEBA TALAT** (S.D.)

**FOR REGISTRATION: DR. HADEEBA TALAT +92 331 4453825**

**Rawalpindi Medical University**

**7th Annual Scientific Conference 2024**

**PRE-CONFERENCE WORKSHOP**

**SEMINAR & HANDS ON TRAINING ON PHOTODYNAMIC THERAPY**

**NRPU-14617**

**12 DECEMBER THURSDAY 09 - 02 AM**

**Photodynamic Therapy (PDT)** is a treatment that involves light-sensitive medicine and an appropriate light source to destroy abnormal cells.

**Target areas: Dermatology, Gastroenterology, Oncology**

**Course Directors:** Prof. Muhammad Umar, Prof. Kamana Tul Butera

**National Directors:** Dr. Asif Ullah Khan, Dr. Muhammad Saleem, Dr. Iftikhar Ahmed, Dr. Gulshan Shadan

**Course Co-Directors:** Dr. Tanzeem Hussain, Dr. Nabeeha Shahzad, Dr. Shaukha Sharif, Dr. Tayyab Saad Akhtar

**Course Coordinator:** Dr. Sirajul Haq, Ms. Sana Imtiaz

**Objectives:**

- Understanding the Science Behind Photodynamic Therapy
- Prospects of PDT in Modern Medicine
- Hands-On Training on PDT treatment

**Training Agenda:**

- Dispensing a Photosensitizer cream on wounds
- Procedure of Photodynamic Therapy treatment
- Determination of light dose

**Venue:** Centre for Liver and Digestive Diseases (CLDD), Holy Family Hospital, Rawalpindi Medical University

**Dr. Sana Imtiaz 0331-4453825**  
[Sana.Imtiaz@rmpu.edu.pk](mailto:Sana.Imtiaz@rmpu.edu.pk)

**7th Annual Scientific Conference 2024**

**PRE-CONFERENCE WORKSHOP**

**13 DEC FRIDAY 09 - 12 AM**

**CONFERENCE ROOM DME, NTD**

**REGISTRATION FEE: Rs.1000/- only**

**Patron:** **PROF. DR. MUHAMMAD SMAS** (S.D.)  
VICE CHANCELLOR  
RAWALPINDI MEDICAL UNIVERSITY

**Principal:** **PROF. DR. JAWAHIR SARWAR KHAN**  
RAWALPINDI MEDICAL COLLEGE

**Course Director:** Dr. Gulshan Shadan, Associate Prof (HOD) MJL NTD

**Facilitator:** **DR. SHAHEED NAQVI**  
CLINICAL HEMATOLOGIST AND BONE MARROW TRANSPLANT PHYSICIAN  
QUAD E AZAM HOSPITAL AND INSTITUTE OF REGENERATIVE MEDICINE

**Course Coordinator:** **DR. SEEMAB ASIQ**  
SENIOR REGISTRAR  
MJL NTD

**"Advances in the management of Immune Thrombocytopenia Purpura :Insights for Clinical Practice and future directions "**

**"VENUE"** Medical Unit I Holy Family Hospital RWP

**On 12th Dec, 2024 11 am**

**"AUDIENCE"** Post Graduates, House Officers

**FOR REGISTRATION: CONTACT 0339843888**

**7th Annual Scientific Conference 2024**

**BRIDGING MEDICINE AND LAW: SKILLS UPDATE FOR DOCTORS**

**PRE-CONFERENCE WORKSHOP**

**13 DEC FRIDAY 09 - 12 AM**

**CONFERENCE ROOM DME, NTD**

**REGISTRATION FEE: Rs.1000/- only**

**Patron:** **PROF. DR. MUHAMMAD SMAS** (S.D.)  
VICE CHANCELLOR  
RAWALPINDI MEDICAL UNIVERSITY

**Principal:** **PROF. DR. JAWAHIR SARWAR KHAN**  
RAWALPINDI MEDICAL COLLEGE

**Program Director:** **DR. ROMANA MALIK**  
ASSOCIATE PROFESSOR & HOD FORENSIC MEDICINE

**Facilitator:** **DR. SUNDAS AMREEN**  
PROF & HOD FORENSIC MEDICINE

**Co-Director:** **DR. FIJZA ALI**  
ASSISTANT PROFESSOR FORENSIC MEDICINE

**Coordinator:** **DR. UROOJ SHAH**  
COORDINATOR DEMONSTRATOR FORENSIC MEDICINE

**FOR REGISTRATION: Dr. Urooj Shah 0332 5654120**

**7<sup>th</sup> Annual Scientific Conference**

**13th December, 2024**  
Time: 9:00-12:00, Venue: Deans Hall

**Innovating Medical Research  
A Hands-On AI Workshop**

**Prof. Jahangir Swarwar**  
Principal

**Prof. Muhammad Umar**  
Vice Chancellor

**Dr. Asma Umer Khayam**  
PhD, CEO of AUK  
Facilitator

**Dr. Anila Jamil**  
Director Workshop

**Dr. Kashif Raza**  
Co-Director Workshop

Focal Person for Registrations  
Cell: 0333-8361984

Instruction for Participants:  
Each Participant must bring  
fully charged laptop.

Arranged by: Biochemistry Department RMU.

**7<sup>th</sup> Annual Scientific Conference 2024**

**A HANDS ON WORKSHOP ON  
BOTULINUM TOXIN IN  
FACIAL AESTHETICS**

By Department of Dermatology & Aesthetics, Rawalpindi Medical University

Dated: 14th December, Saturday, 2024  
Timing: 10am to 1.00pm  
Venue: Syndicate Hall, Main University Campus, Tipu Road

**Patron in Chief**  
Prof. Muhammad Umar  
Vice Chancellor, Rawalpindi Medical University

**Guest of Honor**  
Maj. Gen. (Retd) Erfa Iqbal Sheikh, MCW  
Professor of Dermatology

**Facilitator**  
Dr. Sherwan Chaudhry  
Assistant Professor of Dermatology  
Rawalpindi Medical University

**Chief Organizer**  
Dr. Fatima Shahzadi  
Associate Professor & Head of Dermatology  
Deptt, Rawalpindi Medical University

**Facilitator**  
Dr. Saba Raza Chaudhry  
Dermatologist and Aesthetic Physician  
Aesthetics Institute of Pakistan, Islamabad

**Director Workshop**  
Dr. Waqar Ullah Khan  
Consultant Dermatologist  
Rawalpindi Medical University

Registration is Free but Mandatory Limited seats  
Last date for Registration: 10th December, 2024

Only for Dermatology & Plastic Surgery Residents & Consultants

**For Registration**  **+92 335 4233001**

Dr. Zainab Tariq  
Senior Registrar, Deptt of Dermatology, RMU

**7<sup>th</sup> International Scientific Conference**

**HOW TO LEAD A HAPPIER LIFE  
LET'S LEARN THE ART AND CRAFT OF SKILLS**  
Pre Conference Workshop

**PROF. DR. MUHAMMAD UMAR**  
VICE CHANCELLOR, PMU AND ALLIED HOSPITALS

**PROF. DR. ADAR SHARAD KUMAR**  
CHAIRMAN AND HEAD OF DEPARTMENT  
INSTITUTE OF PSYCHIATRY, BHI

**DR. MUHAMMAD ATEEN RAO**  
ASSOCIATE PROFESSOR  
INSTITUTE OF PSYCHIATRY, BHI  
FACILITATOR

**DR. RYANA I. HAIR**  
CO-FACILITATOR

**Who should Attend?**

- Medical Students
- Residents
- Consultants

**14 DECEMBER 2024**

**09:00 AM 12:00 PM**  
Institute of Psychiatry  
Benazir Bhutto Hospital

**03315606777**  **Dr. Saba Chaudhry**

**Rawalpindi Medical University**

**7<sup>th</sup> Annual Scientific Conference 2024**

**Pre-Conference Workshop**  
Basic Workshop on  
Principles of Plaster of Paris (POP) Casting  
18 December- 2024 (Wednesday)  
Target Audience: House Officers/Residents

**Prof. Dr. Muhammad Umar**  
Patron

**Prof. Dr. Sherwan Chaudhry**  
Chairman

**Dr. Saba Raza Chaudhry**  
Co-Chairman

**Dr. Saba Raza Chaudhry**  
Co-Chairman

**Dr. Saba Raza Chaudhry**  
Co-Chairman



**Faculty**

- Dr. M. Usman
- Dr. Saba Raza
- Dr. M. Usman
- Dr. Saba Raza
- Dr. M. Usman
- Dr. Saba Raza

**Co-Delegates**

- Dr. Saba Raza
- Dr. M. Usman
- Dr. Saba Raza
- Dr. M. Usman

Conference Secretaries: Research Cell, RMU Tipu Road, Rawalpindi  
Ph: 03330014, mrcconference2024@gmail.com www.rmu.edu.pk

**Department of Paediatric Medicine  
Holy Family Hospital, Rawalpindi**

## RETINOPATHY OF PREMATURETY- CURRENT EPIDEMIC OF CHILDHOOD BLINDNESS IN PAKISTAN

**DR. YASSER MASOOD**  
CONSULTANT NEONATOLOGIST  
IMHS INTERNATIONAL HOSPITAL

**DR. SIDRA JABEEN**  
ASSOCIATE PROFESSOR  
PEDIATRIC OPHTHALMOLOGIST  
HOLY FAMILY HOSPITAL

**PROF. MUHAMMAD UMAR**  
VICE CHANCELLOR RMU

**PROF. HAI MUHAMMAD ASGHAR**  
DEAN OF PAEDIATRICS

**PROF. FORD AHMED NIAZI**  
HEAD OF OPHTHALMOLOGY  
HOLY FAMILY HOSPITAL

**DR. NINA SATTAR**  
ASSOCIATE PROFESSOR  
HOD PAEDS HFH

**VENUE**  
CONFERENCE ROOM  
GROUND FLOOR  
HOLY FAMILY HOSPITAL

**DATE & TIME**  
THURSDAY 17TH DECEMBER 2024  
8:30AM TO 11:30AM

**ORGANIZERS**


**DR. SAJIMA AKHTAR**  
SENIOR REGISTRAR PAEDS HFH

**DR. SHANAZADI SUMOOL GHAZI**  
SENIOR REGISTRAR PAEDS HFH

**DR. NUSKINA NIAZI**  
SENIOR REGISTRAR PAEDS HFH

**DR. AYESHA TARIQ**  
SENIOR REGISTRAR PAEDS HFH

For Registration Dr. Hania Mustafa, 0331 5940560 Registration Fee: Rs. 1000





## Program Evaluation as per PM&DC Criteria

Faculty Session

Friday, November, 15th 2024 9:00AM-12:00PM  
Deans Hall, Main Campus  
Rawalpindi Medical University



**Prof. Mumammad Umar (S.I)**  
Patron  
Vice Chancellor  
Rawalpindi Medical University



**Prof. Jahangir Sarwar Khan**  
Principal  
Rawalpindi Medical College



**Dr. Arsalan Manzoor Mughal**  
Facilitator  
Associate Professor of Anatomy  
Additional Director DME  
Co-Director MHPE  
Rawalpindi Medical University



**Prof. Ifra Saeed**  
Director  
Professor of Anatomy  
Director DME  
Rawalpindi Medical University



**For Registrations**  
Dr Farzana Fatima  
Assistant Professor of Medical  
Education  
Rawalpindi Medical University  
Phone: 03365437752  
Email: drfarzanafatima@gmail.com  
Registration: Free

### Instructions for Participants

Each participant must bring  
their filled departmental  
faculty survey forms



## Section 3- Abstracts





## Faculty Research Forum





## Message from the Vice Chancellor

The realization of the Faculty Research Forum, a longstanding vision of mine, fills me with immense pride and joy. Witnessing my students and juniors strive for excellence, and competing on a global scale, brings great satisfaction as a mentor. At Rawalpindi Medical University, our dedicated commitment is to cultivate our residents to meet the highest international standards, producing top-tier professionals. Recognizing research as a crucial component of a robust healthcare system, we believe it is essential for our country to actively encourage and support this endeavor. The field of medicine and healthcare is rapidly evolving, demanding that today's doctors receive training and education that aligns with these changes. Introducing a new system and fostering a culture of innovative thinking and directives can be challenging in the beginning. However, discovering like-minded individuals who contributed to the inception of the forum has been a source of relief and comfort for me. Together, I believe Rawalpindi Medical University is on the verge of setting a new standard in the current medical landscape. With the guidance of God Almighty and a vision grounded in noble and necessary aspirations, I envision all our faculty members participating in the forum, working collaboratively towards its goals and resolutions.

## Office Bearers



Prof. Muhammad Waqas Raza  
*President FRF*



Prof. Ahmad Hassan  
*Vice President FRF*



Dr. Arsalan Manzoor Mughal  
*Vice President FRF*



Dr Malik Irfan  
*General Secretary FRF*



Dr Ashar Alamgir  
*Joint Secretary FRF*



Dr Soban Sarwar  
*Joint Secretary FRF*



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## **RA-01: Bridging Science and Medicine: Combating Climate-Driven Vector-Borne Diseases through One Health**

**Saira Karimi, Wafa Omer**

Pathology/Research cell, Bahria University health Sciences Campus, BUCM

sairakarimi.buhsci@bahria.edu.pk

Climate change is reshaping ecosystems, altering vector distribution and behavior, and intensifying the global vector-borne disease burden. Rising temperatures and altered precipitation are moving diseases such as malaria, dengue, and Lyme disease into areas where they have never previously been found, putting a significant number of human and animal populations at risk. It requires a One Health approach, recognizing the inextricable interconnection between human, animal, and environmental health.

The aim is to look at the key importance of interdisciplinary collaboration, especially the partnership between basic scientists and clinicians, on issues related to vector-borne diseases such as endemic dengue and climate change. Basic scientists contribute their efforts in predictive modeling toward the anticipation of outbreaks, the advancement of molecular work related to vector biology, and innovative tool development, such as vaccines and genetic methods for the control of vectors. Clinicians provide a much-needed perspective for the manifestation of disease, patient care, and requirements in public health. Together, they inform strategies for effective surveillance, outbreak response, and prevention.

Some examples of successful science-medicine collaborations include the GIS mapping of disease hotspots and the development of novel insecticides. With the speed at which climate change is accelerating the spread of vector-borne diseases, the need for interdisciplinary approaches should be strengthened. The presentation aims to encourage action that demands sustained investment in research, public health education, and policy reform for global health protection.

## **RA-02: Transforming Microbial Diagnostics: The Role of Emerging Molecular Methods**

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The emergence of innovative tools in the field of molecular biology has revolutionized the traditional method of diagnostics. Many advanced methods now engage in using isothermal amplification technologies, CRISPR-CAS based diagnostics and

different miniaturized PCR detection systems. Furthermore, Polymerase chain reaction (PCR), next-generation sequencing (NGS) and metagenomics have played a crucial role in identification and comprehensive profiling of microbial communities. Number of pathogens are unculturable and easily escape the traditional diagnostic methods, but use of machine learning and effective next generation methods offer comprehensive profiling of microbial communities. The era of proteomics and metabolomics further enhances diagnostic accuracy and predictive capabilities. Such advancements improve the quality of detection by providing more rapid, accurate and sensitive tools to detect and characterize the pathogen. Control and management of disease is mostly dependent on the effective diagnostic methods, therefore the spread of disease can be contained by upgrading the traditional lab diagnostics. These innovations address critical challenges in clinical, agricultural, and environmental settings, paving the way for personalized medicine, outbreak control, and sustainable disease management.

## **FRF-01 Comparing Patient Outcomes: Separate Management in Latent and Active Phases vs. Combined Care in Single Room**

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Comparing Patient Outcomes: Separate Management in Latent and Active Phases vs. Combined Care in a Single Room

Introduction: Traditionally, laboring patients, both high-risk and low-risk, were managed in a shared 5-bed room in our unit. However, our institution implemented a change in practice, designating separate rooms for the latent and active phases of labor; and for the high and low risk.

Objective: To evaluate the impact of this change on patient outcomes, staff satisfaction, and overall patient experience.

Methods: A retrospective cohort study was conducted comparing patient outcomes, including unattended deliveries, patient satisfaction, working staff ease and nursing care, between the two care models.

Additionally, staff satisfaction surveys were administered to assess perceived workload, stress levels and overall job satisfaction.

Results: Preliminary findings suggest that the separate room model may lead to improved patient

satisfaction, increased efficiency, reduced perceived stress among staff, better pain management, decrease in unattended deliveries and potentially enhanced patient outcomes.

Conclusion: This study aims to provide evidence-based insights into the optimal care model for laboring patients, balancing the need for individualized care with efficient resource utilization.

Keywords: Active Phase of Labour, Filter Room, Latent Phase, Single Room Care

### **FRF-02 Correlation Of Serological Markers And Thombocytopenia In Dengue Infection- A Cross Sectional Study From 2019 Epidemic In Rawalpindi, Pakistan**

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Introduction: Dengue is an arthropod-borne infection brought about by dengue virus. Annually, it influences up a great many individuals worldwide.

An early and exact conclusion of dengue in the intense period of ailment is significant for distinguishing a scourge and for commencement of Therapy. Detection of the emitted NS1 protein is another methodology that guide in the early finding

Methods: This was a cross-sectional study conducted at Department of Medicine, District Head Quarter Hospital, Rawalpindi, Pakistan from August to November 2019 in which patients who were labelled and managed as dengue fever on the basis of clinical presentation, positive serology and thrombocytopenia. Serum was assessed for NS1 antigen, IgM and IgG utilizing the ELSIA technique. The quantity of platelet was likewise recorded in all samples. Data was analyzed by SPSS v23.0.

Conclusion: We concluded in our studies that thrombocytopenia is a not an indicator of severity of disease neither related to an indicator of complications like DHF; however thrombocytopenia is a marker for progression of disease, our study confirmed NS1 to be highly sensitive from day one for diagnosis of dengue fever; however IgM cannot be an early diagnostic marker for dengue fever.

Keywords: thrombocytopenia, NS1, Dengue, IgM, IgG

### **FRF-03 Impact of Innovative Cases on Residents' Motivation**

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#### **Presentation Summary**

##### **1. Key Reasons for Innovation in Plastic Surgery**

- Improving Patient Care:
- Addressing Unmet Medical Needs:
- Historical and Ongoing Contributions:

##### **2. Areas of Innovation**

- Technological Advancements:
- Minimally Invasive Techniques:
- Disaster-Driven Innovations:

##### **3. Concept of Resident's™ motivation**

The internal and external factors that drive medical trainees to engage, learn, and perform effectively in their clinical training.

##### **4. How innovation increases resident motivation**

- Sparks Curiosity and Arousal
- Fosters a Sense of Accomplishment
- Improves Problem-Solving Skills
- Empowers and Increases Autonomy

##### **5. Examples of innovative management in Plastics**

- VLNT for lymphedema
- Bilateral hand replant
- Labbe procedure for facial nerve palsy
- Genital reconstruction in ambiguous genitalia
- Free ALT flap for open wound
- Free fibula flap for traumatic radial bone injury

### **FRF-04 Validation of the ICO-OCEX Tool for Competency-Based Assessment in Ophthalmology Residency Programs**

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Background: Competence in medical training requires trainees to independently demonstrate practical skills. The ICO-OCEX (International Council of Ophthalmology-Ophthalmic Clinical Evaluation Exercise) tool, an improved version of OCEX (Ophthalmic clinical evaluation exercise), employs behaviorally descriptive milestones based on the Dreyfus model to address inconsistent grading

interpretations and effectively assess ophthalmology residents' competencies through workplace-based assessments.

**Purpose:** To determine the validity and reliability of ICO-OCEX formative assessment tool for ophthalmology postgraduate residents.

**Methods:** A multiphase mixed-method instrument developmental approach was used. Quantitative content validation was conducted using the modified Delphi technique, while cognitive pretesting assessed response process validity. Pilot testing was carried out to evaluate construct validity, as well as reliability and inter-rater reliability.

**Results:** The modified Delphi technique achieved consensus on all 33 items, confirming stability and a scale content validity index of 0.97. Cognitive interviews led to revisions, resulting in a 34-item instrument. Confirmatory factor analysis indicated a good to excellent model fit. Cronbach's alpha was 0.995 and Fleiss Kappa showed moderate to substantial inter-rater reliability.

**Conclusion:** The ICO-OCEX tool with 34 items measuring four constructs on a three-point Dreyfus scale, showed good validity and excellent reliability. This tool can enhance formative assessment and competency development in ophthalmology residency programs, supported by faculty training for consistent application.

**Keywords:** Competence, workplace-based assessment, Dreyfus scale, ICO-OCEX, ophthalmology residency programs

#### **FRF-05 Cognitive Schemes For Clinical Diagnostic Reasoning By Medical Students**

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Cognitive processes that activate clinical reasoning are complicated. These cognitive processes are either analytical (slow) or non-analytical (fast). This research focuses on how thinking cultivates and alters over the course of years spent in medical college and how they are different in high vs borderline medical students.

**Objective:** The study aims to explore the cognitive schemes, build up by medical students with different achievement records for clinical diagnostic reasoning, the pathways followed by them for diagnostic reasoning and to explore neurocognitive factors that influence their clinical

diagnostic reasoning. **Methodology:** The sampling technique was purposively followed by theoretical sampling. The study was conducted from Dec 2016 to May 2017. This was a

qualitative study based on the Grounded theory of Constructivist design. In-depth interviews were audio-recorded, transcribed, and analyzed manually.

**Results:** Using thematic analysis, 8 themes surfaced. Students of high

achievement followed pattern recognition (system 1).

Hypothetical deductive reasoning (system 2) was followed by borderline students. However, most strategies of reasoning were uniformly distributed among high achievers and

borderline students. Sleep deprivation and fatigue were the two most important factors which affected the cognitive schemes of medical students.

**Conclusion:** Clinical reasoning in medical education is of significance in the

development of future doctors. The actual reasoning process includes medical decision-making on one hand and problem-solving on the other hand.

Cognitive schemes of high achiever students are based on pattern recognition and borderline students follow hypothetical deductive reasoning.

**Keywords:** Cognitive schemes, clinical diagnostic reasoning, system 1, system 2, pattern recognition, hypothetico-deductive reasoning.

#### **FRF-06 Technical Nuances of Glossopharyngeal Neuralgia: A rare entity**

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**Background:** Glossopharyngeal neuralgia (GPN), unlike its counterpart, trigeminal neuralgia, is an extremely rare pain syndrome, 100 times less common than trigeminal neuralgia. Multiple surgical options have been reported, like transposition, microvascular decompression (MVD), and/or neurectomy.

**Case History:** A 65-year-old female presented with sharp-shooting brief episodes of left-sided ear and throat pain for one year, which were triggered by coughing, talking, and swallowing and not accompanied by syncopal episodes, transient or persistent bradycardia, asystole, and even seizures. MRI brain with contrast revealed vascular loop at supraolivary fossa. Routine retromastoid craniotomy with an infraorbicular approach was utilized.

Operative findings: posterior inferior cerebellar artery (PICA) origin from vertebral artery (VA) was acute and whole loop was ventral to 9th, 10th complex (a rare variant in 2% cases). The surgical corridor was further compromised by the enlarged asymmetrical jugular tubercle. Neurovascular conflict (NVC) by distal PICA was found at root exit zone (REZ), as seen on MRI at supraolivary fossa. Furthermore, 1 cm away from the root exit zone (REZ) proximal PICA loop was found deforming the 9th/10th complex, causing discoloration of the 10th nerve but not the 9th.

Conclusion: Due to restriction of space by enlarged jugular tubercle, as well as acute angle origin of PICA from VA, MVD of 10th and neurectomy of 9th were felt justified over transposition or MVD alone.

#### **FRF-07 Assessment Of Clinical Spectrum Of Renal Diseases In Children- A Descriptive Study At Benazir Bhutto Hospital Rawalpindi**

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Introduction: Childhood kidney diseases are a frequent presentation. Most of the affected pediatric populations are from under developed and developing countries. Noting the epidemiology of childhood renal diseases is very important as it helps in health planning, allows for adequate resource allocation and enables adequate renal services provision. This study aimed to determine the etiological spectrum of renal disease in pediatric patients.

Methodology: A descriptive study was conducted in Benazir Bhutto Hospital, Rawalpindi over a period of 6 months. Ethical clearance was taken from institutional review board and written informed consent was administered before enrollment of subject per study criteria. Total 100 children of both genders, aged up to 12 years with the diagnosis of any renal disease condition were included in the study. Patients having other comorbidities like chronic liver disease and heart diseases were excluded. The study information was age, sex, detailed history and physical examination and details of laboratory investigations. Statistical analysis was conducted in SPSS version 20.0.

Results: Mean age of patients was 2.1 years. Most patients had fever, edema, burning micturition and high blood pressure. In two third children RFTs were deranged and 19.0% had positive urinary

culture reports. The common kidney diseases were UTI (42.0%), nephrotic syndrome (29.0%), acute kidney injury/ disease (19.0%), and chronic kidney disease (6.0%).

Conclusion: UTIs and nephrotic syndrome along with acute kidney injury were main kidney conditions. Females were more likely to have UTIs whereas nephrotic syndrome was common in male children.

#### **FRF-08 Variations In Length Of Styloid Process In Adult Human Dry Skulls**

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Objective: To establish baseline data regarding average length of styloid process in adult human dry skulls in Asian population in Pakistani region.

Study Design: Comparative cross sectional study.  
Place and Duration of Study: Department of Anatomy King Edward Medical University, University of Lahore, Services

Institute of Medical Sciences, Central Park Medical College, CMH Lahore and Nawaz Sharif Medical College Gujrat, from

May to Jun 2018.

Methodology: A total of 71 adult human dry skulls with intact styloid processes were studied from the Anatomy museums of various public and private sector medical colleges of Punjab. The length of both styloid processes from root to tip was

measured using a measuring scale in centimetres.

Results: The length of styloid process varied from a minimum value of 0.8 cm to a maximum value of 4.3cm. Mean length of right and left styloid processes was found to be  $1.68 \pm .781$ cm and  $1.86 \pm .738$ cm respectively. Out of 14.2% of skulls were found to have styloid process  $>2.5$ cm. Mean length of styloid process of the skulls studied in our setting is  $1.77 \pm 0.76$ cm.

Conclusion: As the styloid process was found to be longer than the normal reported length in 14% of skulls. It might be a reason for symptomatic patients presenting in outpatient ward with throat pain and discomfort which often remains unaddressed and needs consideration.

Keywords: Eagle's syndrome, Stygia, Styloid process

### **FRF-09 Inclusion of Bioethics in Curricula of Rawalpindi Medical University**

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**Background:** The change in trend of medical practices made it important that bioethics should be included in curricula. The paternalistic approach of doctors can be changed via teaching bioethics. Accreditation Council for Graduate Medical Education, ACGME, 2006) all over the world have emphasized the teachings of ethics, professionalism and communication skills at undergraduate level. Keeping in view the global trends adopted by the modern curricula to formally integrate the elements of professionalism and Bioethics, Pakistan Medical & Dental Council has also made it mandatory for all medical schools to incorporate professionalism into their curricula. Keeping in consideration the current trends of curricular reforms globally and nationally, team of dedicated professionals of Rawalpindi Medical University, took an initiative of revamping existing curricula under visionary leadership of worthy Vice Chancellor with aim of spiral integration of bioethics, professionalism, interpersonal and communication skills as longitudinal theme spanning across all five years with constructive alignment of teaching.

#### **Objectives:**

The aim of integration of basic, clinical and humanistic approach is develop the holistic paradigm in which disease process is determined in socio cultural, geographical and contextual perspective. The aim of incorporation of Bioethics as longitudinal theme is to produce competent future physician not just having sound scientific knowledge but also have sensitization to community needs and ability to providing best services to underserved communities in ever changing arena.

#### **Implementation Barriers & Challenges:**

Developing and implementing this strategic change faced several obstacles: an overwhelming MBBS schedule, overburdened faculty, lack of explicit guidelines, insufficient funds, and logistical and infrastructural challenges. Despite these, Rawalpindi Medical University, a public sector institution, led the innovative approach to integrate a Bioethics curriculum at the undergraduate level. The visionary

leadership of the Vice Chancellor inspired faculty to work towards this common goal.

#### **Framework of Bioethics Curricula:**

The foundation of the Bioethics curriculum is medical knowledge and clinical competence. A physician must possess strong medical knowledge and technical skills. Built on this foundation are key attributes of professionalism and ethical practice, which students learn over five years:

Foundation Module (1st Year MBBS): History of bioethics

Basic Ethics Module (2nd Year MBBS): Identifying and dealing with ethical dilemmas

Ethics of Physician-Pharmaceutical Industry (3rd Year MBBS)

Public Health Ethics (4th Year MBBS)

Clinical Ethics (Final Year MBBS)

These components collectively form the Bioethics curriculum at RMU.

#### **Conclusion:**

The teaching of bioethics remains a formidable challenge, necessitating distinctive strategies and tailored methodologies. The main goal remains to make the current curricula an effective tool for shaping medical students and their future practice. It should be kept under consideration that the current curriculum still demands specific modifications. Most of the teachers who took an initiative of revamping existing curricula under visionary leadership of worthy Vice Chancellor expressed a desire to take a topic beyond the prescribed curriculum.

key words: bioethics, curricula, RMU

### **FRF-10 Variation In Anatomical Location Of Trochlear Spine/Fovea In Orbital Cavity In Human Dry Skulls**

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**Introduction:** The cartilaginous pulley of superior oblique muscle is vulnerable during the operations on frontoethmoidal sinus. This pulley passes through an anatomical landmark called as trochlear fovea or spine which in turn is located at the superomedial angle of orbit.

**Methodology:** Four measurements were taken in frontal plane using two perpendicular lines passing through supra orbital notch and frontozygomatic suture while in sagittal plane the distance of fovea/spine was measured from orbital rim anteriorly and optic canal posteriorly.

**Results:** The distance of fovea/spine from the lines along supra orbital notch and frontozygomatic suture

was  $7.22 \pm 0.93\text{mm}$  and  $6.14 \pm 0.83\text{mm}$  respectively. It was  $3.77 \pm 0.73\text{mm}$  behind the rim and  $38.22 \pm 2.98\text{mm}$  in front of optic canal.

Conclusion: To prevent unwanted injury to superior oblique pulley surgeons should know the topographic location and variation of fovea or spine so that the postoperative diplopia could be prevented.

Key words: Trochlear spine, Trochlear fovea, Orbital cavity

#### **FRF-11 Association of Genetic Polymorphism rs 77630697(Gly64Asp) of Multidrug and Toxin Extrusion -1 with glycemic response to metformin in patients with Type 2 Diabetes Mellitus**

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Objective: To determine the relationship between Gly64Asp (rs77630697) polymorphism of multidrug and toxin

extrusion-1 (MATE-1) and therapeutic response of metformin in Type-2 diabetic patients.

Methods: A longitudinal study was conducted at Riphah International Hospital, Islamabad from June 2020 to December 2021. Type-2 diabetic patients (n=200) on metformin monotherapy fulfilling the inclusion criteria were enrolled and followed up till three months. Based on change in HbA1c, they were divided into responders and nonresponders.

DNA was extracted and genotyping was done by TETRA ARMS PCR. Data was entered and association was analyzed by SPSS 22.

Results: Out of 200 participants, 104 were categorized as responders and 96 as non-responders. The genotype and allelic distribution of rs77630697 was significantly different between responders and non-responders. The variant genotype (GG) was most prevalent among the study population and among responders. After follow up of three months, difference in glycemic response was found to be statistically significant ( $p < 0.05$ ) among three genotypes (GG, GA and AA). The decline in HbA1c was highest in GG genotype with almost two-fold reduction in comparison with GA and AA. Carriers of allele A were significantly associated with impaired response to metformin.

Conclusion: The variable therapeutic response to metformin in the responders and non-responders may be contributed to rs77630697 isoform variation of MATE-1.

Keywords: Metformin, Polymorphism, Diabetes Mellitus.

#### **FRF-12 Holistic PCOS Management: The Role of Antioxidant Therapy in Lifestyle Modification**

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Introduction: Polycystic Ovary Syndrome (PCOS) affects 10% of women worldwide, with an elevated prevalence of 52% among Pakistani women. This condition is marked by endocrine dysregulation, menstrual disturbances, infertility, insulin resistance, and metabolic disorders. Standard management includes lifestyle interventions, metformin, and letrozole, while novel therapies like lycopene, with its antioxidant and anti-inflammatory potential, offer emerging promise. The underlying pathophysiology involves hyperandrogenism, impaired steroidogenesis, and oxidative stress. Further studies are essential to elucidate lycopene's histological impact and therapeutic role in PCOS.

Methods: Fifty adult female Sprague Dawley rats were divided into five groups, 10 rats each. Control group A was given standard rat diet. Rats of experimental group B were given 1 mg/kg of letrozole to induce PCO model. Group C was given 1 mg/kg of letrozole + 15mg/kg/day of lycopene. Group D was given 1 mg/kg of letrozole + 500 mg/kg/day metformin. Group E was given 1 mg/kg of letrozole + combination of lycopene and metformin together. Rat body weight and glucose levels were taken on day 1 and end of experiment, blood samples were taken for bio-chemical analysis i.e., serum testosterone, SOD, CAT & MDA before sacrificing the rats. Ovaries were preserved or H&E staining for light microscopy. Statistical analysis was carried out for result interpretations.

Results: The results showed, restoration of rat weight back to normal by use of Lycopene and Metformin when used independently and even better when given in combination. Histological architecture of ovary showed better count of secondary and graafian follicles towards normal values which was quite reduced in PCOS. While raised number of atretic follicles in PCOS was reduced and overall improvement in distorted/ cystic ovaries was noted by treatment therapy. High testosterone and glucose levels were brought near normal values. Elevated Oxidative markers (ROS) were also reduced. Use of lycopene a powerful antioxidant, alone and in combination with metformin more efficiently, reversed the damage in ovarian tissue accessed by bio-chemicals and histological parameters.

Conclusion: Lycopene can ameliorate histological, bio-chemical, and functional damaged in polycystic ovaries by its antioxidant effect. Better useful effects

were observed by its use in combination with metformin.

**Key Words:** Lycopene, Letrozole, Pcos, Oxidative Stress

### **FRF-13 Effects of caffeinated energy drinks on cerebellum of Male albino rats**

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**Introduction:** Energy drinks are widely being used by different age groups especially by teenagers in Pakistan. Higher level of caffeine in energy drinks have harmful effects on histology of brain tissue.

**Methodology:** Red bull in dosage of 3.75 ml/kg body weight was administered by oral gavage daily for 4 weeks to experimental group B followed by normal diet for next 4 weeks. Experimental group C was given 3.75 ml/kg body weight of red bull for consecutive 8 weeks. The cerebellum was excised in each animal and weighed; fixed in formalin, stained with Hematoxylin and Eosin. Sections were observed for histological cytoarchitecture.

**Results:** Results were taken in forms of photomicrographs and analyzed. Observations showed marked detachment of pia mater along with congestion and marked hypertrophy of molecular layer, distortion of purkinje cells and shrinkage of granular layer in experimental group C. Changes were minimal to mild in experimental group B.

**Conclusion:** consumption of caffeinated energy drinks should be restricted to avoid their harmful effects on cerebellum leading to sleep disturbances and motor incoordination.

**Keywords:** Caffeine, Energy drink, Cerebellum

### **FRF-14 Synergistic Effect of Coenzyme Q10 and L-Carnitine on Gliosis and Anhedonia, in a Rat Model of Multiple Sclerosis: An Immunohistochemical Study**

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**Introduction:** Multiple sclerosis (MS) is a chronic neurodegenerative disease, that primarily affects the central nervous system. This study provides histological evidence of the combined effects of L-Carnitine, and Coenzyme Q10 on gliosis and anhedonia in a rat model of multiple sclerosis (MS).

**Methods:** Fifty male Sprague Dawley rats were

randomly divided into 5 groups of 10 rats each.

Group 1 was the control group. The rest of the groups were disease models and were given 0.2% cuprizone w/w to induce MS. After 4 weeks, Group 3 started receiving L-Carnitine, Group 4 was given Coenzyme Q10, and Group 5 received both, while cuprizone poisoning continued. After 12 weeks sucrose preference test and tail suspension test were performed for anhedonia. Rats were euthanized and brains were dissected, and assessed for astrocytes, oligodendrocytes, and microglial count.

**Results:** A significant increase in oligodendrocyte count, while a reduction in astrocyte and microglial count was seen in the synergistic group ( $p < 0.05$ ). Synergism could not be proved in anhedonia.

**Conclusion:** The combination of Coenzyme Q10 and L-Carnitine has a synergistic effect in controlling gliosis in a rat model of MS, but synergism could not be demonstrated on anhedonia.

### **FRF- 15 Reasons For Difficult Topics In Anatomy And Their Solutions As Per Undergraduate Medical Students**

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**Objective:** To identify the topics difficult to understand in learning Anatomy and to investigate the reasons of difficulty and their possible solutions.

**Methods:** This descriptive observational study was conducted at Army Medical College, Rawalpindi, Pakistan from April to November 2019. Open ended and validated questionnaires were filled by 205 undergraduate medical students at the end of their academic year to ensure that complete course of anatomy including gross anatomy, histology and embryology were covered by students. Students were asked to specify the problem area, the subtopics, give the reasons for topics being difficult and mention possible solutions they think will help them in better understanding of these difficult areas. The problems having 5 or less number of responses were not included in the analysis.

**Results:** Embryology, histology & neuroanatomy were perceived as the most difficult areas by 89%, 62% & 61% of students respectively. Constraint of time (41% for gross anatomy & 26% for embryology), high difficulty level (35% for embryology & 29% for gross anatomy) and difficulty in differentiation of slides (34% for histology) were the main reasons for problems in understanding the topics. Use of more 3-D aids (61%) & revision classes along with written tests (39%) were

commonest possible solutions for perceived difficulties by students.

Conclusion: Embryology has been perceived as the most difficult topic of

anatomy by the students of second year MBBS

followed by gross anatomy and

Histology. Time constrain was suggested as main

reason and Use of 3-D aids as

main solution for difficulties.

Key Words: Anatomy; Embryology; Gross Anatomy;

Histology; Medical Students; Neuroanatomy;

Difficult Topics.

### **FRF- 16 Neonatal Complications Of Late Preterm And Early Term Infants: A Comparison Of Two Cohorts In Pakistan And Poland**

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Introduction: Complications of late preterm and early term infants have been studied in high-income countries. However, the scarcity of data from the developing world limits our understanding of these newborns global health impact. This study aimed to compare the neonatal complications of these infants between Pakistan and Poland.

Methodology: A six-month prospective cohort study was conducted at university hospitals in Pakistan (Rawalpindi Medical University) and Poland (Poznan University of Medical Sciences). All late preterm and early term infants delivered during the study timeframe were included (late preterm/early term; Pakistan: 398/721; Poland: 206/878), and their complications were recorded. Descriptive statistics and multivariable logistic regression analyses were employed.

Results: Neonatal mortality was significantly higher for both late preterm (9.8% vs. 1.5%;  $p < 0.001$ ) and early term infants (6.4% vs. 0.5%;  $p < 0.001$ ) in Pakistan compared to Poland. Pakistani newborns had significantly higher rates of respiratory distress syndrome (late preterm: 20.4% vs. 2.4%; early term: 4.2% vs. 0.5%) compared to those in Poland ( $p < 0.001$ ). For both late preterm and early term infants, the frequency of early-onset and late-onset sepsis was significantly higher in Pakistan than in Poland. Late preterm infants in Pakistan were at an increased risk of requiring mechanical ventilation [aOR 5.14 (95% CI 1.92 13.73)] and antibiotic therapy [aOR 2.53 (1.64 3.90)] compared to their Polish counterparts. Whereas early term infants in Pakistan were at a higher risk of developing pneumonia [aOR 3.48 (1.69 7.18)] and more frequently required NICU admission [aOR 2.41 (1.75 3.32)], non-invasive ventilation [aOR 1.56 (1.10 2.22)], mechanical ventilation [aOR

4.68 (2.38â€”9.21)], and antibiotic therapy [aOR 5.15 (3.46â€”7.66)] compared to early term newborns in Poland.

Conclusion: Late preterm and early term infants are at a significantly higher risk of neonatal complications in Pakistan as compared to Poland, highlighting the disparity between high-income and developing nations.

Keywords: Late preterm, early term, neonatal morbidity, neonatal mortality

### **FRF- 17 Compare of Primary Repair and Stoma Formation for Traumatic Gut Injury in terms of Frequency of Wound Infections**

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Objective: To compare primary repair and stoma formation for the patients with traumatic gut injury. Study Design: Quasi-experimental study. Place and Duration: The study conducted at Rawalpindi Medical University (RMU) and Allied Hospitals from June 21, 2021, to December 20, 2021.

Methodology: The study was conducted to compare primary closure and stoma formation for patients with traumatic injuries. The patients were divided in two groups: Group-A (primary closure) and Group-B (stoma formation), and surgical site infection (SSI) was considered as a primary outcome. Results: A total of 60 patients (30 in each group) with mean age in Group-A and Group-B as  $30.7 \pm 15.57$  years and  $35.4 \pm 17.53$ , respectively. On comparison, 9 (30%) and 19 (63.33%) patients suffered from SSI in Group-A and Group-B, respectively ( $p = 0.009$ ).

Conclusion: Primary repair is superior to stoma formation for the patients with traumatic gut injuries. Keywords: Gut Injuries, Intestinal Perforation, Surgical Repair, Stoma Formation, Wound Infection, Postoperative Complications, Primary Suturing

### **FRF- 18 Diagnostic efficacy of SOFA score: An ICU experience from Pakistan**

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Introduction: To determine the cut off value of Sequential Organ Failure Assessment score at the time of admission in Intensive Care Unit to predict mortality and outcome in critically ill patients.

Methods: This cross-sectional, descriptive study was undertaken at Intensive Care Unit of Rawalpindi Teaching Hospital, Rawalpindi, Pakistan between April and August 2023. SOFA score of all critically

ill patients at the time of admission in ICU and their outcome (expired or discharged) was recorded. Receiver Operator Characteristics Curve (ROC) was drawn for SOFA score and mortality. Cut off value for SOFA score was calculated. Outcome of patients above and below the cut off value for SOFA score was studied using Chi-square test.

Conclusion: Mortality was higher in patients who had higher SOFA score at the time of admission in Intensive Care Unit. At admission SOFA scores (7 and >8) are best predictor of outcome in critically ill patients.

Keywords: SOFA SCORE, CRITICALLY ILL PATIENTS, MORTALITY, OUTCOME

### **FRF-19 Gastroenterology Service Facilities at a Secondary-Level Hospital During the Revamping of the Principle Tertiary Care Site (HFH)**

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Introduction: In a historic move for the Punjab Health Department, Holy Family Hospital, a major tertiary care hospital was fully closed for revamping, marking the first such event in the region's healthcare history. During this closure, gastroenterology services were temporarily relocated to Benazir Bhutto hospital, a secondary care hospital. The shift lasted for approximately 10 months. The initial six-month period of this transition saw significant restructuring in the service delivery model. For the first time in the hospital's history, the administration permitted a double shift schedule in the endoscopy suite to accommodate an increased volume of procedures, including both basic and advanced gastrointestinal (GI) and hepatology procedures. However, certain specialized procedures, such as Endoscopic Ultrasound (EUS), were not performed during this period.

Objective: This initiative aimed to ensure continuity and expansion of gastroenterology and hepatology services during the closure of the principle tertiary hospital, including maintaining essential outpatient, inpatient, and endoscopic services.

Methods: During the 10-month revamping period, a comprehensive approach was adopted to deliver uninterrupted GI and hepatology services:

Endoscopic Services: A range of gastrointestinal and hepatology endoscopic procedures were performed, including upper and lower GI endoscopies, and Endoscopic Retrograde Cholangiopancreatography (ERCP), except for EUS.

Expansion of Services: The GI and hepatology services were extended to indoor patients, with the gastroenterology team collaborating with the medical

team on both regular working days and emergency shifts. Outpatient Services: Outpatient services were increased to four days a week, consisting of two in-person and two online consultations, to ensure accessibility for patients from both urban and rural areas.

Results: The revamping phase resulted in a remarkable achievement in service delivery, with a significant volume of procedures and consultations conducted despite the temporary relocation of services: Outdoor Consultations: 6,507 outpatient consultations were successfully managed during the period. Endoscopic Procedures:

o Upper GI Endoscopy: 1,891 procedures were performed. o Lower GI Endoscopy: 303 procedures were carried out. ERCP: A total of 358 procedures were done.

Conclusion: The relocation of gastroenterology and hepatology services during the revamping of the primary tertiary care hospital was successfully managed, demonstrating the ability of a secondary care facility to handle an increased volume of specialized procedures. The implementation of double shifts in the endoscopy suite, expansion of both inpatient and outpatient services, and the collaboration between departments allowed for the uninterrupted provision of essential healthcare services. This experience highlights the capacity for flexibility and innovation in healthcare delivery during times of significant infrastructural changes. The success of this initiative provides valuable insights for future contingency planning in healthcare systems during major hospital refurbishments or closures.

### **FRF- 20 Effectiveness of Faculty Development Workshop on Introduction and Development of Student's Portfolio: A Pilot Project**

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Objective: To evaluate the effectiveness of faculty development workshop on "Introduction & development of student's portfolio" using first two levels of Kirkpatrick (KP) model.

Study Design: A quantitative evaluation study based on evaluation of one day workshop, conducted on 15 November 2019.

Place and Duration of Study: The study was conducted at Islamic International Medical College at Department of Medical Education.

Methods: The study aimed to evaluate the efficacy of faculty development workshop on Kirkpatrick's model of program evaluation. A 4-hours workshop was carried at Islamic International Medical College

on 15 November 2019. Sampling technique was purposive (n=21). The reaction of the study participants about the training experience was evaluated through a feedback evaluation proforma. The assessment of knowledge was done through MCQs and reflective writing skill was assessed through a checklist based upon framework of Gibbs reflective cycle. Both knowledge and skill were assessed before and after the workshop. The content of pre-test and post-test was same.

Results: The knowledge of the participants about portfolio was remarkably increased, from  $3.95 \pm 1.35$  (median=4) in pre-test to  $6.23 \pm 1.17$  (median=6) in post-test. The improvement in reflective writing skill was also significant  $2.14 \pm 0.727$  (median=2) in pre-workshop reflection to  $4.23 \pm 0.70$  (median=4) in post-workshop reflection. The Wilcoxon signed rank test showed a significant increase in both knowledge and skill (p-value <0.000). The reaction of the participants showed high percentages regarding content delivery (95%), learning environment (100%) and increase in knowledge (95%) measured on 5-point Likert scale. Conclusion: Faculty development workshop on student's portfolio was highly valued by faculty members. Most of the participants were convinced and ready to start portfolio for learning and assessment of students in the institution.

Keywords: student's portfolio, faculty development workshop, Kirkpatrick (KP) model

#### **FRF- 21 Differences in reporting of violence and deliberate self harm related injuries to health and police authorities, Rawalpindi, Pakistan**

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#### **Abstract**

Background: The aim of study was to assess differences in reporting of violence and deliberate self harm (DSH) related injuries to police and emergency department (ED) in an urban town of Pakistan.

Methods/principal findings: Study setting was Rawalpindi city of 1.6 million inhabitants. Incidences of violence and DSH related injuries and deaths were estimated from record linkage of police and ED data. These were then compared to reported figures in both datasets. All persons reporting violence and DSH related injury to the police station, the public hospital's ED, or both in Rawalpindi city from July 1,

2007 to June 30, 2008 were included. In Rawalpindi city, 1016 intentional injury victims reported to police whereas 3012 reported to ED. Comparing violence related fatality estimates (N = 56, 95% CI: 46-64), police reported 75.0% and ED reported 42.8% of them. Comparing violence related injury estimates (N = 7990, 95% CI: 7322-8565), police reported 12.1% and ED reported 33.2% of them. Comparing DSH related fatality estimates (N = 17, 95% CI: 4-30), police reported 17.7% and ED reported 47.1% of them. Comparing DSH related injury estimates (N = 809, 95% CI: 101-1516), police reported 0.5% and ED reported 39.9% of them. Conclusion: In Rawalpindi city, police records were more likely to be complete for violence related deaths as compared to injuries due to same mechanism. As compared to ED, police reported DSH related injuries and deaths far less than those due to other types of violence.

#### **FRF- 22 From theory to practice: Students feedback on workshops as a teaching tool in undergraduate medical education**

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Introduction: RMU has implemented a competency-based curriculum for undergraduate MBBS students, focusing on learner-centric education. Clinical workshops play a vital role in this integrated modular teaching aiming to develop and refine the skills necessary for delivering medical care at all levels of the healthcare system. Workshop<sup>TM</sup>s enhance learners' knowledge, skills, and professional competence. we evaluated feedback of students on workshop as teaching tool in undergraduate medical education.

Materials and methods: A study was conducted among final-year MBBS students who completed four weeks rotation in the OBS and GYNAE block between July 2024 and November 2024. The students attended four workshops in each module, led by experienced senior faculty members using interactive methods. Feedback was collected on various aspects of the workshops, including content, organization, time allocation, objectives, and outcomes, as well as the trainers' knowledge and preparedness. Likert scale was used to take feedback from students and data was analysed using SPSS version 28 software. Results: A total of 73 students (23 males and 50 females) attended the four workshops during a one-month rotation. The students expressed overall satisfaction with the workshop. they praised the relevance (93%), objective achievement (80%), and

teachers dedication (80%). Most of the students (78%) agreed that students participation and interaction was encouraged by the teachers. However, 57% felt time allocation was insufficient. Despite this, 77% recommended continuing the workshops as they found them helpful in improving their clinical skills.

**Conclusion:** The overall feedback suggests that these workshops are a valuable addition to the curriculum, enhancing clinical skills and knowledge. The overwhelming majority (77%) of students recommending their continuation is a testament to the workshops' impact. However, improvements can be made by adjusting time allocation and Incorporating facilitator feedback.

**Keywords:** feedback, workshop, undergraduate medical education

### **FRF- 23 Enhancement in patient care with the introduction of subspecialty clinics in gastroenterology outpatient department in rawalpindi medical university**

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**Introduction:** Gastroenterology outpatient departments are overwhelmed with patients who have a variety of different illnesses. Given the limited resources, it is the gastroenterologist's duty to prioritize patients and organize the different clinics to ensure the most efficient way to manage and follow up with patients. We have initially established four subspecialty clinics specifically for patients with inflammatory bowel disease, pancreatic diseases, viral hepatitis and hepatocellular carcinoma in our general gastroenterology outpatient department of Rawalpindi medical university to see if the overall management of patients with gastrointestinal diseases could be improved. Considering the increasing need for specialized clinics, recently hepatocellular carcinoma surveillance and MASH clinics are introduced to overcome the delay in patient management and prevention of serious diseases. A well-developed processing chain of healthcare organizations under the medical management program becomes the foundation of such a comprehensive healthcare system, ensures a high level of efficiency for comprehensive patient management, and further development of preventive medical care.

**Objective:** This study aims to evaluate impart of establishing subspecialty clinics in gastroenterology on improvement in patient care and services.

**Method:** Patient data from the subspecialty clinics

were collected and analyzed for the years 2021 to 2023. Metrics included patient volume, follow-up rates, and waiting times. Patient satisfaction was assessed using the Patient Satisfaction Questionnaire Short Form (PSQ-18), covering dimensions such as access, technical quality, communication, and overall satisfaction. The clinics outcomes were compared to the general Gastroenterology Outpatient Department (OPD) to assess improvements. Qualitative feedback from patients and clinicians regarding personalized management plans and multidisciplinary care was also incorporated.

**Results:** IBD Clinic: Patient volume showed variability this time(36 in 2021, 58 in 2022, and 32 in 2023). Despite the decline in 2023, consistent follow-up care and personalized treatment strategies maintained high satisfaction levels, with PSQ-18 scores averaging 4.5/5.

Hepatitis Clinic: Patient numbers declined (1189 in 2021, 1000 in 2022, and 281 in 2023), partly due to hospital revamping. However, reduced waiting times and improved follow-ups enhanced patient satisfaction, with good satisfaction scores averaging 4.3/5.

Pancreatic Clinic: Established in 2022, it managed 119 patients in its first year and 95 in 2023. Positive outcomes were achieved through focused management plans, regular follow up visits and multidisciplinary input, reflecting PSQ-18 scores of 4.4/5. HCC Clinic: Patient numbers increased from 155 to 157 then to 174 in 2021, 2022 and 2023 respectively. The new HCC Surveillance and MASH Clinics, launched in November 2024, aim to address gaps in early detection and deliver multidisciplinary care, with baseline PSQ-18 scores of 4.6/5 reported. Across all clinics, patients consistently reported higher satisfaction compared to the general OPD due by reduced waiting times, frequent follow-ups as needed and tailored management plans.

**Conclusion:** The establishment of subspecialty outpatient clinics at Holy Family Hospital has significantly enhanced patient care by improving follow-up rates, satisfaction levels and service efficiency. The declining patient volumes in 2023 highlight the need for strategic interventions to sustain these benefits amid ongoing hospital restructuring.

### **FRF- 24 Safety And Feasibility Of Mesenchymal Stem Cell Therapy In Patients With Critical COVID-19 Infection**

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**Objective:** To determine the outcome of Mesenchymal Stem Cell therapy compared to

controls in critically ill COVID-19 patients. Study Design: Quasi-Experimental Study. Place and Duration of Study: Department of Pulmonology, Pakistan Emirates Military Hospital, Rawalpindi Pakistan, from Oct 2020 to Apr 2021. Methods: We selected 104 critically affected COVID-19 cases from the COVID High Dependency Unit and Intensive Care Unit. All patients were in critical condition and were not improving on the set protocols with high oxygen dependency. In the Intervention Group (Group-A, n=52) mesenchymal stem cell transplant Group, procedure was done using an intravenous drip in addition to the standard treatment as per hospital protocol while in the Control Group (Group-B, n=52) standard treatment was given using the hospital protocol. The study outcomes were improvement in High Resolution Computed Tomography score and reduction in Fraction of Inspired oxygen (FiO<sub>2</sub>) dependency up to 28 days post-transfusion or up to discharge. Results: The HRCT severity score (range from 0 to 40) significantly improved in MSCT Group 25.8/40±14.7/40 compared to the controls. Similarly, the FiO<sub>2</sub> improved 0.58±0.30 in the MSCT-Group as compared to the Control-Group. Moreover, MSCT significantly decreased mortality 29(55.7%) vs 47(90.3%) compared to the controls. Conclusion: Mesenchymal stem cell therapy is very effective in decreasing the severity of HRCT score, improving oxygenation index and mortality in critical COVID-19 patients. Keywords: COVID-19, ICU, Mesenchymal Stem Cell Transplantation, Mortality, Severity Score.

#### **FRF- 25 Moyamoya Disease and its Association with Thyroid Disorders; a Pakistani Case Report and a Review of Case Reports**

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Objective: We aimed to report the case of a Pakistani female who presented with MMD and hyperthyroidism, and the worldwide Literature review of the case reports on MMD associated with hyperthyroidism. Methods: The study was carried out using PRISMA's recommendations. An electronic search on PubMed, Cochrane Library, and Google Scholar was carried out. Articles explaining the association between Moyamoya disease and thyroid-related diseases were included. Results: A total of 31 studies were included in the review, with the preponderance of Japanese females. The review has systematically compiled in detail all the aspects of moyamoya

syndrome and thyroid disorders- from detailed histories of the included patients to the treatment interventions used and their outcomes.

Conclusion: The authors are with the suggestion that more cases of MMD and its association with other major factors should be presented in Pakistan as well as in all parts of the world.

Keywords: Moyamoya Disease, Thyroid Disorders, Hyperthyroidism, Gravesâ€™ Disease.

#### **FRF- 26 One-Minute Drills: Teaching Microsurgical Skills With The One-Minute Preceptor Model**

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Background: Microsurgical skills are essential for successful surgical practice, yet traditional surgical training often falls short in providing the necessary hands-on practice and immediate feedback required for skill development. The One-Minute Preceptor (OMP) model, a structured and time-efficient approach to teaching, has shown promise in improving clinical skills in various medical fields. This study aims to evaluate the effectiveness of the OMP model in enhancing microsurgical skills compared to traditional training methods. Methods: In this randomized controlled trial, 20 participants (Group A: control, Group B: experimental) were assessed for their microsurgical skills, specifically in Forcep Handling, Slip Knot, and Palming. Group B received training using the OMP model, where brief, focused teaching sessions were provided, followed by immediate feedback. Group A underwent traditional training methods. Participants' skill performance was measured using a structured scoring system (1-5 scale) for each skill, and total scores were calculated by summing the individual scores. Statistical analysis was performed using independent samples t-tests to compare the performance between groups. The effect size was calculated using Cohen's d. Results: Group B demonstrated significant improvements in all skill areas, including Forcep Handling, Slip Knot, and Palming, with a mean total score of 10.4 compared to Group A's mean total score of 5.8. The independent samples t-test revealed statistically significant differences between the two groups (p < 0.0001 for all skill scores). The calculated effect size (Cohen's d = 5.93) indicated a large and meaningful difference between the groups. These findings suggest that the OMP model

significantly enhanced skill acquisition in microsurgery.

**Conclusion:** The One-Minute Preceptor model is an effective teaching strategy for improving microsurgical skills. This study provides strong evidence that focused, brief teaching sessions with immediate feedback can significantly accelerate the learning process in surgical training, offering a promising approach for integrating skill development into surgical education.

**Keywords:** One-Minute Preceptor, Microsurgery, Surgical Education, Skill Acquisition, Teaching Models, Medical Education, Randomized Controlled Trial, Feedback, Surgical Training, Effect Size

### **FRF- 27 The prevalence of gestational diabetes mellitus among pregnant females attending Antenatal OPD of Benazir Bhutto Hospital**

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**Background:** Gestational diabetes mellitus (GDM) is the intolerance of glucose with first onset during pregnancy. Females with GDM are more likely to have negative obstetric and perinatal consequences. Most women suffer from GDM between 24-28 weeks of pregnancy. The current study aimed to determine the prevalence of GDM and investigated its relationships with risk factors including maternal age, obesity, family history, and parity.

**Methods:** This cross-sectional study comprising 1161 subject was conducted at the outpatient department of Benazir Bhutto Hospital Rawalpindi, between January 2022 to Sep 2024. Females in the age bracket of 17 to 49 years were included in the study. Single-step 75 gm glucose load "International Association of Diabetes in Pregnancy Study Group (IADPSG) criteria were used for screening women with GDM. SPSS 25 was used to analyze data. Binary logistic regression was used to assess the relationship between risk factors and GDM. A p-value of 0.05 was considered significant.

**Results:** The prevalence of Gestational Diabetes Mellitus (GDM) was found to be 13.3% (n=154/1161). Overall 9.8% of women had a family history of diabetes, 7.1% were obese (BMI 27.5kg/m<sup>2</sup>), 33.6 were overweight, 6.7% were 37-49 years old and 23.4% were multiparous. Multivariate regression revealed that women with family history of DM have the highest odds of adjusted odds ratio of (AOR) 5.54 95% C. I. = (3.52-8.71), p= 0.0001. Females 37 years old AOR 3.55 (p = 0.0001 and Obese AOR of 3.47 (p = 0.001) are more likely to develop GDM, compared to women aged between 16-22 year AOD- of 1.97 (p = 0.072), and overweight

women BMI 23.0 kg/m<sup>2</sup> AOR = 1.16, p = 0.461. Multiparous, AOR-1.54 95%CI (0.904-2.64) p= 0.111 showed no significant association with Gestational Diabetes.

**Conclusion:** The increasing prevalence of GDM is strongly associated with risk factors like older maternal age, raised BMI, and family history of Diabetes mellitus

**Keywords:** Gestational diabetes mellitus, parity, Body mass index, maternal Age

### **FRF- 28 The Impact Of Mentorship Programs On Career Satisfaction And Research Productivity In Orthopedic Surgery Residents**

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**Background:**

Mentorship programs are essential for supporting the professional development of Orthopedic surgery residents. However, the impact of these programs on career satisfaction and research productivity is not well understood.

**Objective:** To evaluate the effect of mentorship programs on career satisfaction and research productivity in Orthopedic surgery residents.

**Methods:** A prospective cohort study of 40 Orthopedic surgery residents and residents on rotation in Orthopedic department of RMU & Allied Hospitals (20 with mentorship, 20 without mentorship) participating in a mentorship program. Career satisfaction and research productivity were assessed using surveys and questionnaires at baseline, 6 months, and 12 months.

**Results:** Preliminary results suggest that mentorship programs are associated with increased career satisfaction (p < 0.01) and research productivity (p < 0.05) among Orthopedic surgery residents.

**Conclusion:** This study provides evidence for the importance of mentorship programs in supporting the professional development of Orthopedic surgery residents. The findings have implications for the design and implementation of mentorship programs in Orthopedic surgery residency.

**Keywords:** Mentorship programs, Orthopedic surgery residents, Career satisfaction, Research productivity

### **FRF- 29 Cognitive Disposition To Respond In Postgraduate Trainees Of General Surgery At Rawalpindi Medical University**

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**Background:** Cognitive biases leading to diagnostic errors are associated with adverse outcomes and compromise patient safety and contribute to morbidity and mortality. Exploration and identification of cognitive biases have been a difficult task for the clinicians and medical educators. The literature is deficient in identification of cognitive biases in surgical trainees. The objective of the study was to identify various cognitive biases that may negatively impact clinical reasoning skills and lead to diagnostic errors in trainees of general surgery.

**Methods:** A quantitative study was conducted involving 48 trainees of general surgery to explore the various cognitive biases. The questionnaire was devised and consisted of ten items devised to explore five biases. Descriptive statistical analysis was done on SPSS 20 and the respondents with score >25 were categorized as predisposed to error score of 20-25 were taken as borderline and overall score of <25 was insignificant for presence of cognitive bias.

**Results:** Premature closure was the most frequent cognitive bias found significant in 34 (70 %) of trainees followed by anchoring bias in 14 (58, 3 %) trainees. The relative frequencies of different bias is shown in table 2. Mean score of the questionnaire was 22.7 (range 10 to 38) SD 7.2. Ten out of forty eight (21%) trainees with a mean score of >25 showed a clear inclination toward cognitive errors whereas 11 (22%) with a score in range of 21 to 25 were categorized as having an equivocal tendency towards committing an error, Whereas 27 (56%) with a score of less than 20 were less prone to cognitive errors.

**Conclusion:** The two most common errors seen in the study were anchoring bias and premature closure and both are related to information gathering. A larger study is required to explore the association of cognitive bias with different specialties and experience of clinicians.

**Key words:** Cognitive bias, diagnostic errors, Postgraduate trainees, General surgery Clinical reasoning skills.

### **FRF-30 Levels Of Electronic Health (E-health) Literacy Among Second Year Medical Students From Rawalpindi Medical University**

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**Introduction:** By Definition e-health literacy is the ability to effectively use digital health resources like electronic health records, telemedicine, and mobile health apps. It is increasingly utilized by medical

professionals to improve healthcare delivery and patient outcomes. Assessing e-health literacy among medical students is critical, as it prepares them to effectively use digital resources, guide patients, and manage telehealth services. This study aims to evaluate the e-health literacy of second-year medical students at Rawalpindi Medical University.

**Methods:** A six-month cross-sectional study at Rawalpindi Medical University assessed e-health literacy among second-year medical students using a questionnaire based on the eHealth Literacy Scale (eHEALS). The study involved 188 participants, recruited through non-random convenience sampling, and their responses were analyzed using SPSS 27 to determine their ability to access and effectively utilize online health resources.

**Results:** Of 188 medical students, 99.5% had internet access. Among them, 73.4% had good e-health literacy, 25.5% had average knowledge, and 1.1% had poor knowledge. Notably, 73.8% of students with internet access demonstrated good e-health literacy.

**Conclusion:** Almost all students have internet access, with a vast majority demonstrating good e-health literacy, and effectively utilizing online health information. Both male and female students show similar proficiency in using digital health resources. The findings suggest that while most students are adept at using the internet for health-related decisions, those with average or poor literacy levels might benefit from targeted support to improve their skills.

**Key words:** E-health literacy, Medical students, Digital health resources, Telemedicine, Health informatics

### **FRF- 31 Cultivating Tomorrow's Researchers: A Novel Approach to Undergraduate Research Education at RMU**

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Rawalpindi Medical University's (RMU) Integrated Undergraduate Research Curriculum is a comprehensive program that combines basic sciences and clinical research skills to foster a deep understanding of medical research methodologies. This curriculum emphasizes interdisciplinary integration, interprofessional collaboration, and hands-on research experiences to cultivate a multifaceted approach to scientific inquiry.

**Methods:** A cross-sectional study was conducted to evaluate the effectiveness of the Integrated Undergraduate Research Curriculum.

Results: The curriculum is a longitudinal course that spans five years of the MBBS program, developing competencies in:

1. Communication skills
2. Professionalism
3. Research ethics
4. Leadership
5. Teamwork

Conclusion: The Integrated Undergraduate Research Curriculum at RMU is a structured, well-defined, and well-implemented program that evaluates the curriculum's impact on students' research competence and its alignment with evolving medical research standards. RMU is the only public medical university with a proper research curriculum at the undergraduate level.

Keywords: Communication skills, Professionalism, Research ethics, Leadership, Teamwork

### **FRF-32 Ensuring Excellence in Medical Education: Quality Assurance of the MD Radiology Program at RMU**

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Introduction: The MD Radiology program at Rawalpindi Medical University (RMU) is designed to meet the evolving demands of radiological education and healthcare. To ensure excellence, a comprehensive quality assurance mechanism has been implemented, focusing on four critical components: curriculum, teaching and training, assessment and evaluation, and research.

Methods: The program adopts a structured curriculum aligned with national and international guidelines, emphasizing competency-based learning. Teaching and training involve a mix of didactic lectures, hands-on radiology practice, and interdisciplinary collaboration. Assessment is multifaceted, combining formative and summative evaluations through objective structured clinical examinations (OSCEs), logbook reviews, and performance appraisals. The research component integrates supervised projects to enhance evidence-based practice and analytical skills. Quality assurance is monitored via the CIPP (Context, Input, Process, Product) evaluation model to ensure ongoing improvement.

Results: Preliminary reviews reveal enhanced student engagement and performance, with positive feedback from residents and supervisors. Regular audits highlight improvements in structured learning outcomes, teaching methodologies, and research output. Identified gaps in resource allocation, logbooks and curriculum are being addressed to optimize program delivery.

Conclusion: The MD Radiology program at RMU exemplifies commitment to high standards in medical education. By integrating quality assurance practices across curriculum design, training, assessment, and research, the program aims to produce competent radiologists equipped to address contemporary healthcare challenges. Ongoing monitoring and iterative improvements will sustain this excellence.

### **FRF- 33 Impact of Innovative Cases on Residents' Motivation- Oral Presentation**

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Summary of Oral Presentation

1. Key Reasons for Innovation in Plastic Surgery
  - a. Improving Patient Care:
  - b. Addressing Unmet Medical Needs:
  - c. Historical and Ongoing Contributions:

2. Areas of Innovation
  - a. Technological Advancements:
  - b. Minimally Invasive Techniques:
  - c. Disaster-Driven Innovations:

3. Concept of Resident's motivation

The internal and external factors that drive medical trainees to engage, learn, and perform effectively in their clinical training.

4. How innovation increases resident motivation
  - a. Sparks Curiosity and Arousal
  - b. Fosters a Sense of Accomplishment
  - c. Improves Problem-Solving Skills
  - d. Empowers and Increases Autonomy

5. Examples of innovative management in Plastics
  - a. VLNT for lymphedema
  - b. Bilateral hand replant
  - c. Labbe procedure for facial nerve palsy
  - d. Genital reconstruction in ambiguous genitalia
  - e. Free ALT flap for open wound
  - f. Free fibula flap for traumatic radial bone injury

### **FRF-34 Satisfaction Of Postgraduate Trainees Of Rawalpindi Medical University Of The Mini Clinical Evaluation Exercise As Part Of Their Formative Assessment**

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Introduction-The Mini Clinical Evaluation Exercise (mini-CEX) is a brief direct observational assessment

of trainee-patient interactions, which enables assessment of several clinical domains.

#### Objective

The study aimed to investigate the satisfaction of postgraduate trainees of mini CEX as part of their formative assessment through a set questionnaire based survey.

#### Study Design- Cross sectional

Methods: Our postgraduate trainees participated in the study by filling online Google form. The questionnaire comprised of 20 close ended questions, with a five-point Likert rating- scale ,focused on multiple aspects like mini-CEX understanding, role of facilitators, satisfaction, feedback on satisfaction, professional and clinical skill improvement. The Likert score were analyzed by using SPSS version 21, and expressed as percentage, frequency and means for each question.

RESULTS: A total of 100 trainees participated and completed the questionnaire, 77 female and 23 male. Their mean age ranged between  $29.37 \pm 1.38$ .

Overall satisfaction rate was 3.49 out of 5. Basic understanding of mini-CEX -{question1-4}, mean score was 3.37%, however 11.63% trainees disagreed with the aspects of basic understanding and think their queries were not well addressed and lack of proper methodology. Facilitators role {question 5-8} was satisfactory according to most trainees mean score 3.23, only 11.28% disagreed on teacher's commitment, feedback and support.

Clinical skill development {question 9-13}, mean score was 3.60. Personal and professional development [Question 14-19], mean score was 3.53 most expressed satisfaction regarding mini -CEX as a formative assessment tool and agreed that it enabled them to improve their clinical professional skills and found it as a useful exercise for their examination.

#### Conclusion

1. Although majority of trainees perceive the mini-CEX as an effective tool for clinical teaching, there is a need to clarify the scoring criteria, time distribution of clinical encounters.

2. measures are needed to ensure the quality of clinical encounters, teacher training, and feedback.

Key Words- mini CEX, Formative assessment, Postgraduate trainees.

### **FRF-35 Assessment of Intraprofessional Collaborative Practices Among Postgraduate Trainees in Tertiary Care Hospitals of Rawalpindi Medical University**

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Introduction: Intraprofessional collaboration is vital for high-quality care in tertiary hospitals, especially in managing complex cases. However, evidence to assess such practices remains limited. The assessment of intraprofessional collaborative practice (IPCP) among healthcare postgraduate trainees is crucial for enhancing teamwork and quality care, and impacts patient outcomes, workforce satisfaction, and organizational efficiency.

Objective: To assess the intraprofessional collaborative practices in post-graduate trainees of affiliated hospitals of Rawalpindi Medical University.

Methods: This study uses a validated questionnaire to assess intraprofessional collaboration among healthcare providers in three tertiary care hospitals affiliated with Rawalpindi Medical University. A cross-sectional study was conducted across three tertiary care hospitals, i.e Holy Family Hospital, Benazir Bhutto Hospital, and Rawalpindi Teaching Hospital, Rawalpindi. Post-graduate residents from various departments, were recruited through stratified random sampling. Data were collected using a validated questionnaire designed to measure intraprofessional collaboration. Six themes were utilized for assessment i.e identification of roles and responsibilities for IPCP, communication level of postgraduate residents, team-based care and networking, Values/ Ethics for IPCP, sharing of mutual knowledge and intraprofessional collaborative leadership. Descriptive and inferential statistical analyses were performed to identify collaboration scores, patterns and factors influencing intraprofessional dynamics.

Results: The study analyzed responses from post-graduate residents of different departments. The 29-item IPCP-R has a maximum score of 145, indicating excellent intraprofessional collaborative practices. A score of 29 is the minimum. The overall collaboration score of postgraduate residents of the three hospitals was moderate.

Conclusion: The findings highlight the need for targeted interventions to improve intraprofessional collaboration in tertiary care settings. Addressing identified barriers through training programs, policy reforms, and institutional support can enhance team dynamics and healthcare outcomes. Future studies should explore the longitudinal impacts of such interventions in similar contexts.

Keywords: intraprofessional collaboration, healthcare professionals, tertiary care hospitals, validated questionnaire, Rawalpindi Medical University.

### **FRF- 36 Patient Satisfaction and Feto-Maternal Outcome in Group Antenatal Care (GAC) and Traditional Antenatal Care (TAC): A**

## Comparative Study at Rawalpindi Teaching Hospital

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**Introduction:** Antenatal care (ANC) is crucial for maternal and fetal health, traditionally delivered through individual, doctor-centered visits. Group Antenatal Care (GAC), a model involving group sessions with healthcare providers, has shown potential benefits in improving patient satisfaction and building a sense of community. However, the impact of GAC in Pakistan, particularly in tertiary care hospitals, remains understudied. This study aims to compare patient satisfaction between GAC and Traditional Antenatal Care (TAC) at Rawalpindi Teaching Hospital. The findings will help assess whether GAC can offer a more supportive and satisfactory alternative to TAC in this setting.

**Objective:** To compare maternal and neonatal outcomes and patient satisfaction levels between Group Antenatal Care (GAC) and Traditional Antenatal Care (TAC) to assess the effectiveness of GAC in improving patient satisfaction and outcomes for expectant mothers and their newborns

**Methods:** This study employed a comparative cross-section design involving participants from two antenatal care models: GAC and TAC. subjects in both group were enrolled using the non-probability method. Data on maternal demographics, neonatal outcomes, delivery methods, and patient satisfaction were collected using structured questionnaires and hospital records. All the data were entered and analyzed though Jaffery Amazing Statistical Package (JASP).

**Results:** A total of 74 expectant mothers (37 from each group) were recruited for the study. This study investigates the maternal and neonatal outcomes, C-section delivery rates, and patient satisfaction in Group Antenatal Care (GAC) compared to Traditional Antenatal Care (TAC). GAC participants had significantly higher birth weights ( $p = 0.043$ ) and lower rates of preterm births ( $p < 0.001$ ) than those in TAC, indicating better neonatal outcomes associated with GAC. Additionally, the analysis of C-section deliveries showed that 10.8% of GAC participants underwent C-sections, while TAC participants had a higher rate of 29.7%. Patient satisfaction scores highlighted that GAC participants were generally more satisfied with the care received, particularly regarding the qualifications of doctors and trust in the hospital, whereas TAC participants reported greater satisfaction with hospital cleanliness and prompt attention from staff.

**Conclusion:** GAC offer improved neonatal outcomes including higher birth weights and lower preterm

birth rates and higher patient satisfaction compared to TAC, emphasizing the need for further research on the benefits of group-based antenatal care models.  
**Keywords:** Antenatal Care, Group Antenatal Care, Traditional Antenatal Care, Neonate, Patient Satisfaction

## FRF- 37 Enhancing Contraceptive Uptake in Rawalpindi Teaching Hospital through a Quality Improvement Initiative

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**Introduction:** Pakistan ranks 5th in the world for the most populous countries. Our annual growth rate is 2.4%<sup>1</sup>. Although a substantial amount of the budget is allocated for enhancing the contraceptive prevalence rate to 50% by 2025, however it is still around 30-35%<sup>2</sup>. Most of the efforts directed towards achieving the goal remains unfulfilled. Quality improvement projects at healthcare facilities can tackle the issue at the grassroot level , thereby increasing the contraceptive prevalence rate. However, to achieve it, a root-cause analysis and remedial steps should be planned and implemented to achieve fruitful results

### PLAN

#### Problem Identification

It was observed that the contraceptive prevalence rate in Rawalpindi Teaching Hospital was stagnant at 2-3% in 2023. This was an alarming situation as RTH is a tertiary care hospital and should lead the way towards a CPR of 50 % . The question arose why this situation arose. How to achieve the desired targets, was the challenge .

#### Root-Cause Analysis

**Physical causes-** Non-availability of contraceptive material in adequate amounts from population welfare department of Pakistan.

**Human Causes-** Lack of motivation for healthcare providers as no regular check.

**Organizational Causes-** Lack of standardized policies for provision of contraceptives.

#### Measures

A google form was created to collect the data .

Details regarding the demographic details, method of contraception used, the designation of the person who counselled the patient etc.

#### DO

#### Implementation

1. A teaching and training session was conducted for the senior registrars, post-graduate trainees and house-surgeons of the department.

2. A campaign for patient education and awareness was conducted on monthly basis.

3. Contraceptive proforma was attached with antenatal card.
4. Counselling of antenatal patients in group antenatal classes.
5. Counselling by senior faculty in OPD and Wards.
6. Encourage the presence of husbands at the time of counselling
7. Insertion of Jadelle and PPIUCD in immediate postpartum period.

Data collection

Data was collected on google form.

#### STUDY

Data Analysis: Data was analyzed on SPSS 26, showing a 50% increase in contraceptive uptake compared to the baseline.

#### ACT

Adopt Fully implement the change from this PDSA cycle

Adjustment:

Based on our findings in the study phase, we can further increase the CPR by counselling of husbands by male counselors.

Plan for the next cycle

1. Continue motivational activities for long-term sustainability of the program.
2. Introduce innovative steps e.g WHO, FIGO tools and recommendations to sustain the increase and further enhance the CPR to 80%.
3. To increase awareness of and utilization by OB/GYNs of the latest WHO recommendations for family planning/contraceptive use.

Keywords: contraceptive prevalence rate, quality improvement.

#### **FRF- 38 Utilizing Structured Peer Assisted Learning (PAL) in undergraduate clinical research training: a Quasi-Experimental Study**

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**Introduction:** Peer Assisted Learning (PAL) is defined as learning among the people who are not professional teachers and belong to the same social groupings or it is simply defined as "learning among the peers. Studies have found PAL to be an effective educational method with promising preliminary results when used in the medical education setting but data regarding its feasibility for use in medical education, particularly in the context of use in clinical research training, is limited. This study aims to explore the efficacy of the PAL teaching modality in the field of clinical research

training for medical students by assessing improvement in research knowledge of students being taught via peer assisted learning.

**Objectives:** To assess the effectiveness of a Peer Assisted Learning (PAL) program in providing practical research experience to undergraduate medical students.

**Methods:** A quasi experimental study was conducted from June to November 2023. A 6-month PAL program was introduced at Rawalpindi Medical University, pairing undergraduate mentors, from the MBBS program, with mentees in 21 research groups. The required sample size was 70 cases and 70 controls calculated by WHO sample size calculator. We selected 82 mentees, 82 controls, and 21 mentors. The control group included 82 students currently studying in the MBBS program at RMU, who were part of the PAL program, were selected via simple random sampling using a . random number generator. The control group was matched with the mentee group for gender and year of study. The program focused on research methodologies and observational studies. Research knowledge evaluations (RKE) score and program perceptions were collected from mentees and mentors, with a control group for comparison.

**Results:** Participation in the PAL program led to a significant improvement in mentees' research knowledge, reflected in a mean RKE score increase from 11.00 to 13.04 ( $p < 0.001$ ). The control group's scores remained unchanged. Mann-Whitney U tests confirmed these findings, showing substantial differences in pre-PAL and post-PAL RKE scores for both mentees and the control group ( $p < 0.001$ ). Mentees and mentors provided positive feedback about the program, with 87.8% of mentees agreeing that PAL is effective and 79.3% preferring it over traditional teaching methods.

**Conclusion:** The PAL program effectively enhances the research knowledge of undergraduate medical students, as evidenced by improved RKE scores. Both mentees and mentors expressed positive perceptions of the program. PAL serves as a promising method to prepare medical students for research-oriented clinical careers, fostering a research culture among them.

**Keywords:** Medical Education, Mentoring, Research, Undergraduate.

#### **FRF- 39 Impact of pedagogical framework on laproscopic training in gynae department of tertiary care hospital**

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**Introduction:** The adoption and consistent practice of laparoscopic surgical techniques have significantly transformed the field of surgery, offering benefits such as reduced recovery times, lower complication rates, and improved patient outcomes compared to traditional open methods. However, the successful implementation of laparoscopic surgery often hinges on the availability of skilled personnel, adequate training, and institutional support. In many healthcare settings, especially in resource-constrained environments, the absence of dedicated trainers and structured educational programs can limit the widespread adoption of these techniques.

Incorporating a trained supervisor and structured workshops can have a profound impact on surgical practices, particularly in improving laparoscopic surgery outcomes. The Learn, See, Practice, Prove, Do, Maintain (LSPPDM) pedagogical framework, an evidence-based approach developed through a comprehensive review and synthesis of existing literature, offers a promising solution to address these challenges. This study aimed to evaluate the impact of the LSPPDM framework within the laparoscopic training course for surgical residents at Benazir Bhutto Hospital, focusing on its impact on the rate of laparoscopic surgeries and the overall skill development of trainees.

**Methods:** A retrospective analysis was conducted, comparing the number of laparoscopic surgeries performed over two consecutive years. From May 2022 to April 2023, prior to the interventions, 14 laparoscopic surgeries were performed. From May 2023 to April 2024, following the introduction of a trained supervisor and department-led workshops, this number increased to 32. The workshops included hands-on training and theoretical sessions designed to enhance the surgical team's skills and confidence. The effectiveness of the training was assessed through the improvement in technical skills, confidence levels, and feedback from surgical residents.

**Results:** The number of laparoscopic surgeries increased significantly, from 14 in the first year (2022-2023) to 32 in the subsequent year (2023-2024), marking a 128.6% increase in the number of surgeries performed. Additionally, 90% of the trainees reported an improvement in their technical skills, with 75% feeling more confident in performing laparoscopic procedures independently. The workshops were rated highly by participants, with an average score of 4.5 out of 5 for their impact on learning and skill development.

**Conclusion:** The LSPPDM pedagogical framework proved to be both practical and effective, leading to

significant improvements in the technical and non-technical skills of surgical trainees. The structured approach, including hands-on workshops and supervision, contributed to a notable increase in the number of laparoscopic surgeries performed and enhanced trainees' overall surgical competence, compared to a traditional training program. This study suggests that adopting the LSPPDM framework can be a valuable strategy for improving laparoscopic training, particularly in resource-limited settings. **Keywords:** LSPPDM framework, surgical education, resource-limited settings.

#### **FRF- 40 A Closed loop clinical Audit on implementation of WHO surgical safety checklist in a tertiary care hospital**

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The WHO SSC is a 19-items checklist designed to be used during three critical phases of surgery: prior to anesthesia induction (Sign In), before the skin incision (Time Out), and before the patient leaves the operating room (Sign Out). Its primary goals are to enhance communication among surgical team members, ensure consistent patient care, and foster a safety-oriented culture in surgical environments. Research indicates that surgical procedures can lead to adverse events in up to 40% of cases. The effective implementation of the WHO SSC has been shown to significantly reduce these events. However, adoption and consistent use of the checklist pose challenges, particularly in resource-limited settings. This study seeks to explore these challenges within the OB/GYN context.

**Methods:** A prospective study was conducted, observing 60 surgical procedures in OB/GYN operation theatres for WHO SSC implementation. The study was carried out from September 1, 2024, to November 1, 2024. WHO SSC forms were provided in both emergency and elective operation theatres and. Data was analyzed and interventions were carried out by a series of rigorous meetings and discussions with medical and nursing staff. Results were re-audited after two weeks.

#### **Results**

Out of 60 surgical procedures observed, the initial audit revealed an overall compliance of 65% with the WHO Surgical Safety Checklist. Compliance was highest during the Sign In phase (80%) but lower during the Time Out (60%) and Sign Out (55%) phases, with common omissions including patient identity checks, site marking, and instrument counts. After interventions, including training and staff

discussions, a re-audit showed a significant increase in compliance to 90%. The Sign In phase improved to 95%, Time Out to 85%, and Sign Out to 92%. The most noticeable improvement was in Time Out, where communication and procedure checks were better followed.

#### Conclusion

The implementation of the WHO Surgical Safety Checklist showed significant improvement in surgical safety practices following targeted interventions. Training and regular reinforcement played a crucial role in enhancing compliance, though some lapses, particularly in the Sign Out phase, remained. This study highlights the importance of continuous education and audits to maintain high adherence to safety protocols and reduce the potential for surgical errors.

Keywords: Surgical Safety Checklist, WHO checklist, Surgical compliance, Closed loop audit.

#### **FRF- 41 Quality Care through Clinical Audit: Time to ECG of Patients presenting with Chest Pain in The Emergency Department of A Tertiary Care University Affiliated Teaching Hospital, Pakistan**

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**Introduction:** The audit was undertaken when it came to observation that ECGs were not performed timely in patients with chest pain. The aim was to assess the time taken in performing an ECG and whether it was in line with the guidelines laid out by the European Society of Cardiology Guidelines.

Patients presenting to emergency department with acute chest pain should have an ECG recording within 10 minutes of registration, per the European Society of Cardiology Guidelines (Recommendation Level 1; Evidence Level B)

Patients presenting with chest pain to the ED for the first time were audited. Time was measured from generation of Patient Encounter Slip till performance of ECG by on duty Nurse. Retrospective approach was selected, and all such patient presenting over a 10-day period in July 2021. Patients already admitted in the hospital or patients referred from secondary care hospitals were excluded. Data was obtained from maintained ECG register for female patients, thus the entire study population was female. The data was gathered, and was analyzed using MS Excel and IBM SPSS Statistics v25.0 by Dr Azam. Reaudit was done in following implementation of Departmental Policy.

**Results** Initially a total of 103 patients were audited in July 2021. Post Intervention, 67 patients were included over the duration of time

The mean time to ECG overall was 20mins, and shift wise was 15mins, 27mins and 19mins for morning, evening and night shifts, respectively. Following intervention, the mean time to ECG overall was 19mins, and shift wise was 22mins for the morning shift, 19mins mins for the evening shift, and 13 mins for the night shift. While the time to ECG was reduced by a minute overall, an independent sample T-test revealed the reduction to be non-significant with a negligible effect size

**Conclusions** The data clearly showed that patients did not get an ECG within 10mins of reaching the ED, with there being on average a time delay of double the recommended the time.

#### **FRF- 42 Diploma in obstetrics and gynecology-A way forward to strengthen midlevel specialists.**

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**Introduction:** The Diploma in obstetrics and gynecology is of two years structured training program in OBGYN started in Rawalpindi Medical university in 2022 under the leadership and supervision of Vice Chancellor Prof Muhammad Umar, Prof. Lubna Ejaz Kahloon, Prof. Tallat Farkhanda and Professor Dr.Humera Noreen as program director. Pakistan has high maternal mortality rate 186 per 100,000 live birth. According to millennium development goal 5 it should be reduced to 70 per 100,000 live birth by 2030. Sixty one of Pakistani population is residing in rural area so it is very important to strengthen the health system in the rural areas by providing competent midlevel specialist. Timely access to emergency obstetric care is crucial in preventing mortalities associated with pregnancy and childbirth. The referral of patients from periphery to tertiary levels has been identified as an integral component of the health care delivery system. To help improve standard procedures and reduce delays which affect access to emergency care for this purpose initiative was started by RMU to train doctors so they manage low risk cases independently and timely refer the complicated and high-risk case to tertiary care hospitals.

The aim of two years DGO programme in Obs / Gynae is to train residents to acquire the competency of a mid level specialist in the field of Obs / Gynae and acquire the basic idea of research. The objectives are To enhance Obs / Gynae knowledge, clinical

skills, professional attitude and communication skill towards patients, their families and other healthcare professionals. To enhance sensitivity and responsiveness to community needs and the economics of health care delivery.

To enhance critical thinking, self-learning, and interest in research and development of patient service. To inculcate a commitment to continuous medical education and professional development. To acquire competence in managing acute Obs / Gynae emergencies and identifying Obs / Gynae problems needs referral to tertiary care hospital and other specialty.

Results: The students applied from different regions of Pakistan among them 85% from Punjab, 10% from AJK and 5% from KPK. The 86% of students had done MBBS from private medical colleges and only 14% government medical colleges who joined training.

Impact on process

The DGO programme was started in 2022. In batch 1 thirty students applied for DGO out of which twenty were shortlisted after the interview by the panelists. Nine students continued training and eleven left the program within 1st few months.

Batch 2 enrolled in 2023. Total interviews conducted by panelists were fifty-one of students. Twenty students started the training, out of which six students left the training. Batch 3 started academic journey in 2024. Total thirty-one doctors appeared in the interviews among them twelve were shortlisted and started training and one left.

Impact on outcome opportunity to work in busy public sector hospitals. Provision of broad experience in Obs / Gynae, including its inter-relationship with other disciplines and able to refresh their basic knowledge. Able to develop, negotiate and implement effective management plans and integration of patient care by learning new protocols of OBGYN. Initial evaluation of patient by comprehensive history taking and physical examination, requesting the appropriate investigation and formulating the management plan. Perform competently the basic obstetric and gynecological procedures independently and 1st hand assistance in complicated and critical cases. Their interpersonal and communication skills are polished which enable them to establish and maintain professional relationships with patients, families, and other members of health care teams. They are made to learn commitment to continuous professional developmental, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society. Exposure to research and training in the usage of updated technology required in research.

Future Vision according to SWOT analysis

**Strength** This program provides the platform for the training of the doctors from the distant areas to improve their clinical skills, competency, professionalism, research and ethics. Improve and strengthen the Referral system. There is increase in connectivity and networking. Source of revenue generation for the university. Improve ranking of the university. Recognition in the community.

**Weakness** Insufficient time for comprehensive training in obs/gynae Diploma may not be equally valued in other countries

**Opportunities** Provision of Platform for providing opportunities to doctors who are still at the level of MBBS for polishing and grooming their experience. Exposure to research and tertiary hospital.

**Threats** In view of two major programs FCPS and MS the DGO might be neglected.

Decrease motivation due to unpaid training and logistics issues.

**Conclusion:** The initiative taken by RMU will help peripheral areas by providing competent midlevel specialist

**Keywords:** Diploma Obs gynae.

### **FRF- 43 Innovations in Logbook Appraisal: Integrating Objective Approaches with Shared Supervisor and Committee Roles**

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**Introduction:** Efficient logbook evaluation is critical to ensuring the quality of postgraduate medical training. Traditional appraisal methods often lack standardization and objectivity, leading to variability in assessments and diminished accountability. To address these challenges, we implemented innovative interventions in Rawalpindi medical university; aimed at enhancing logbook evaluation by fostering collaboration among supervisors and a dedicated evaluation committee. This study outlines the design and initial outcomes of these interventions.

**Methods:** A multidisciplinary committee was constituted to oversee logbook evaluations, comprising senior faculty members from various departments. Separate scoring proformas were designed for supervisors and the evaluation committee, emphasizing objective and standardized assessment criteria. Supervisors and postgraduate trainees were sensitized regarding the new approach through meetings and interactive sessions. The first cycle of implementation involved applying the redesigned evaluation process to assess logbooks across multiple units. Data was collected on scoring

trends, compliance, and feedback from supervisors and trainees.

**Results:** The first cycle demonstrated improved consistency in scoring between supervisors and the evaluation committee. Supervisors reported greater clarity in evaluation criteria, while trainees exhibited enhanced understanding of logbook requirements.

**Preliminary analysis** suggests an increase in logbook completion rates and adherence to standards.

**Feedback** highlighted the importance of continued training and iterative refinement of scoring tools to sustain improvements.

**Conclusion:** Integrating objective scoring approaches with shared roles between supervisors and an evaluation committee has shown promise in improving the logbook appraisal process. The first cycle indicates positive trends in standardization and compliance. Future cycles will further explore the long-term impact on training quality and outcomes. This model could serve as a replicable framework for other institutions aiming to enhance postgraduate medical training.

#### **FRF- 44 Setting the Benchmark: Quality Assurance in RMU Diplomas**

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**Introduction:** Quality assurance in postgraduate medical education ensures that training programs meet international standards and produce competent professionals. At Rawalpindi Medical University (RMU), diploma programs, particularly in radiodiagnostics, are pivotal in bridging the gap between foundational medical education and specialized practice. This study highlights the mechanisms and frameworks adopted for quality assurance in RMU diploma programs.

**Methods:** The program is built on a structured curriculum aligned with national and international standards, prioritizing competency-based learning. It utilizes a blend of didactic lectures, hands-on radiology training, and interdisciplinary collaboration for teaching and training. Assessments are multifaceted, including formative and summative approaches such as objective structured clinical examinations (OSCEs), logbook reviews, and performance evaluations. The research component features supervised projects aimed at fostering analytical skills and evidence-based practice. Quality assurance is ensured through the CIPP (Context, Input, Process, Product) evaluation model, supporting ongoing development and improvement.

**Results:** Initial reviews indicate increased student engagement and improved performance,

accompanied by positive feedback from residents and supervisors. Routine audits show progress in structured learning outcomes, teaching methods, and research output. Efforts are underway to address identified gaps in resource allocation, logbooks, and curriculum to further enhance program delivery.

**Conclusion:** The implementation of a robust quality assurance framework has elevated the standard of RMU diploma programs, setting a benchmark for other institutions. Future cycles of evaluation will focus on sustaining improvements and addressing residual gaps to ensure continuous program excellence.

#### **FRF-45 Prevalence and Comparison of Diabetes Mellitus in Males and Females patients Treated in Diabetic Clinic RTH in 2024**

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Diabetes mellitus is a growing health concern worldwide, affecting millions of people. This study aims to compare the prevalence of diabetes mellitus in males and females; there types and age- wise frequency.

**Methods:** A cross-sectional study was conducted among 10,738 individuals (2,237 males and 8,501 females) aged 20-80 years, from Period of 09 months duration from January 2024 to September 2024

.Fasting blood glucose levels with a level  $\geq 126$  mg/dL and random  $>200$  mg/dl measured thrice in individuals confirmed were diagnosed with diabetes mellitus.

**Results:** The overall prevalence of diabetes mellitus was 12.5% (1,342/10,738). The prevalence was (15.2%, 341/2,237) is there in males ,as compared to females (84.8%, 1,001/8,501) ( $p<0.001$ ).

Prevalence of Diabetes Mellitus in Males and Females\* Males: 15.2% (341/2,237)

Females: 84.8% (1,001/8,501)

**Conclusion:** This study highlights the significant burden of diabetes mellitus in both males and females.However; The prevalence was higher in females compared to males, and increased with age in both sexes. These findings emphasize the need for targeted interventions to prevent and manage diabetes mellitus in both males and females.

#### **FRF-46 Bridging the Gap in Documentation Discrepancies: Using Reflective Practice to Improve the Completeness and Accuracy of Clinical Notes in Obstetrics and Gynaecology**

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**Introduction:** Accurate and comprehensive clinical documentation is critical in obstetrics and gynecology, where precise operative notes and correct recording of neonatal information, such as baby gender, are essential for quality care, continuity of care, and medico-legal protection. Discrepancies in documentation can lead to errors in clinical decision-making and compromised patient safety.

**Reflective practice** offers a structured approach to help clinicians identify and rectify such errors.

**Objective:** To bridge the gap in documentation discrepancies, using reflective practice to improve the completeness and accuracy of clinical notes in obstetrics and gynaecology.

**Methodology:** A cross-sectional analytical study was conducted in the Obstetrics and Gynaecology department of Benazir Bhutto hospital, Rawalpindi. A total of 200 clinical case notes, including operative notes and neonatal delivery records, were reviewed before the intervention. Reflection workshops were organized for clinicians, where they assessed their own documentation using a structured checklist focusing on essential components of operative notes (e.g., procedure details, baby gender, surgical findings, complications). After three months of reflective practice, a repeat audit was conducted on 200 additional case notes. Improvements in the rate of discrepancies, including missing operative details and errors in baby gender documentation, were analyzed. Clinicians' self-reported confidence in their documentation accuracy was also assessed through a structured questionnaire.

**Results:** The rate of errors in operative notes decreased from 25% (baseline) to 05% (post-intervention) ( $p < 0.05$ ). Clinicians' self-reported confidence in documentation accuracy increased from an average score of 2.8 to 4.2 on a 5-point Likert scale. These results demonstrate that reflective practice leads to a measurable improvement in documentation quality in obstetrics and gynecology.

**Conclusion:** Reflective practice is a valuable tool for enhancing the quality of clinical documentation in obstetrics and gynecology. The implementation of structured reflection workshops significantly reduced errors in operative notes. This approach promotes accountability, supports medico-legal protection, and enhances overall patient care.

**Keywords:** Reflective practice, 5-point Likert scale, patient safety

**FRF-47 Enhancing Natural Beauty: The Role of Dimpleplasty in Modern Aesthetic Surgery**

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Dimpleplasty, a cosmetic procedure aimed at creating natural-looking dimples on the cheeks or chin, has gained significant popularity in modern aesthetic surgery. This procedure appeals to individuals seeking to enhance their facial appearance by adding subtle, youthful features that convey charm and symmetry. While dimples are often seen as a desirable trait associated with beauty and youth, they are not universally present, prompting many to opt for dimpleplasty as a means of achieving this aesthetic.

The technique involves creating a small, strategically placed depression in the skin of the cheek or chin, which mimics the appearance of a naturally occurring dimple. The procedure can be performed under local anesthesia, making it minimally invasive with relatively quick recovery times. The versatility of dimpleplasty allows it to be tailored to individual facial structures, ensuring that the dimples blend harmoniously with the patient's features.

Dimpleplasty is gaining recognition not only for its aesthetic appeal but also for its psychological impact. Patients often report enhanced self-esteem and confidence after the procedure, as they feel more aligned with their perception of beauty. Furthermore, as a simple and relatively low-risk procedure, dimpleplasty stands out as an accessible option for individuals seeking non-invasive enhancements. This presentation will explore the growing role of dimpleplasty in aesthetic surgery, discussing its technique, benefits, patient satisfaction, and the psychological effects associated with the creation of dimples. Additionally, we will examine the key considerations for selecting candidates, potential complications, and post-procedure care, ensuring that practitioners understand the nuances of this increasingly popular procedure.

In conclusion, dimpleplasty is an effective and sought-after procedure that aligns with the broader trend of natural-looking enhancements in modern cosmetic surgery. Its ability to accentuate facial beauty, while providing minimal recovery time, solidifies its place as a leading option for individuals seeking to enhance their natural appearance.

**FRF-48 Simulation in Plastic surgery training: Evidence-based benefits**

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Simulation in plastic surgery training has been evaluated for its impact on knowledge and skills acquisition, specifically in cleft surgery. A study involving 13 plastic surgery residents compared the effectiveness of a digital simulator to a textbook for unilateral cleft lip repair.

**Introduction:** Simulation is common in surgical training, but its benefits in plastic surgery are unclear.

- This study assesses simulation-based learning for cleft surgery through a randomized trial.

**Methods:** Thirteen residents were randomized to either a digital simulator or a textbook. Evaluated parameters included surgical knowledge, procedural confidence, performance on 3D models, and satisfaction. Data were analyzed statistically.

**Results:** The digital simulation group showed significant improvements in surgical knowledge, procedural confidence, markings performance, and surgical performance compared to the textbook group. Participants rated the digital simulator as more satisfactory.

**Conclusion:** Digital cognitive simulators enhance surgical knowledge, confidence, and performance, proving valuable in plastic surgery training.

#### **FRF-49 Combination of problem - based and team based learning in clinical teaching of plastic and reconstructive surgery**

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Combining Problem-based Learning (PBL) and Team-based Learning (TBL) in clinical teaching of plastic and reconstructive surgery can enhance knowledge acquisition and classroom efficiency, leading to the development of skilled professionals.

**Introduction:** Balancing theoretical knowledge with practical application is challenging in plastic and reconstructive surgery. Combining PBL and TBL can optimize knowledge acquisition and classroom efficiency.

**Methods:** 12 plastic surgery residents were selected and divided into experimental and control groups. The experimental group received combined PBL-TBL teaching, while the control group received traditional teaching.

Teaching effectiveness was evaluated based on student satisfaction and academic performance.

**Results:** Resident satisfaction was higher in the experimental group than in the control group ( $P < 0.05$ ).

Subjective academic performance scores by instructors were higher in the experimental group ( $P < 0.05$ ).

- Satisfaction rates: Control group - 33.3%, Experimental group - 83.3%.

**Conclusion:** The combination of PBL and TBL had a significant positive effect in plastic and reconstructive surgery clinical practice.

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#### **FRF-50 Perception of Online Versus Face-to-Face Learning among Plastic Surgery Residents of Holy Family Hospital Rawalpindi**

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**Introduction:** The COVID-19 pandemic has transformed the field of medical education as the instructional strategies shifted from traditional face-to-face to online platforms. Upon resuming regular routines, the online modality continued to be integrated into the curriculum to a degree, presenting distinct challenges and opportunities for postgraduate trainees. This study aimed to explore the perceptions of plastic surgery residents at Holy Family Hospital regarding the two learning modalities, emphasising the identification of their respective benefits and drawbacks to optimise educational strategies for improved training.

**Methods:** This study used a phenomenological approach to explore the perceptions of plastic surgery residents. A purposive sampling technique was used, as all the present plastic surgery residents who had experienced both modes of learning were included. Data were collected through structured interviews conducted in person. The interviews were audio-recorded and transcribed. Thematic analysis was performed to identify key themes and patterns in the data.

**Results:** Six of the eleven plastic surgery residents were enrolled in MS, while five were in the FCPS program. Their ages ranged from 27 to 34. E-learning was acknowledged for fostering selfdirected learning, facilitating multitasking behaviour, offering convenient access to current medical literature, and conserving time. The primary perceived drawbacks

of E-learning were barriers to learning resulting from internet connectivity and insufficient hands-on experience. Upon comparison, the residents believed that E-learning facilitates self-paced learning and keeps individuals informed about advancements in the field, but face-to-face learning enhances clinical abilities, social competencies, and professionalism. A varied reaction was obtained about incorporating e-learning into the plastic surgery curriculum.

**Conclusion:** The residents believed face-to-face learning is better for developing the skills required to become a competent plastic surgeon.

**Keywords:** Internet usage, Lifelong Learning, Multitasking Behavior, Plastic Surgery, Professionalism.

### **FRF-51 Efficacy of Mini Percutaneous Nephrolithotomy (Mini-PCNL) Over Standard PCNL: A Clinical Audit at Benazir Bhutto Hospital, Rawalpindi, Pakistan.**

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**Introduction:** Percutaneous nephrolithotomy (PCNL) is the gold standard for managing large renal calculi. Mini-PCNL, with a smaller tract size, offers potential advantages such as reduced complications and quicker recovery. This audit evaluates the clinical efficacy and broader impacts of mini-PCNL compared to standard PCNL at Benazir Bhutto Hospital, Rawalpindi, over a 6-month period. **Methods:** A retrospective review of patients undergoing mini-PCNL or standard PCNL between June and November 2024 was conducted. Data on stone clearance rates, operative time, hospital stay, and complications were analyzed. Secondary outcomes included effects on hospital operations, patient turnover, and faculty skill enhancement. Inclusion criteria were renal calculi  $\leq 2$  cm, with exclusion criteria including anatomical abnormalities or concurrent urological surgeries. Statistical analysis was performed using SPSS v28, with significance set at  $p < 0.05$ .

**Results:** A total of 80 patients were analyzed, with 40 in each group.

**Clinical Outcomes:**

**Stone Clearance:** Mini-PCNL achieved 92.5% compared to 87.5% for standard PCNL ( $p = 0.31$ ).

**Operative Time:** Mini-PCNL required  $68 \pm 12$  minutes versus  $83 \pm 15$  minutes ( $p < 0.01$ ).

**Hospital Stay:** Mini-PCNL patients stayed  $1.8 \pm 0.4$

days versus  $2.6 \pm 0.5$  days ( $p < 0.01$ ).

**Complications:** Minor complications occurred in 15% of mini-PCNL cases compared to 27.5% in standard PCNL ( $p = 0.04$ ).

**Impact on Clinical Settings:**

Mini-PCNL facilitated shorter operative times and quicker patient recovery, reducing surgical backlogs. The lower complication rates decreased the burden on postoperative care facilities.

**Hospital Working and Patient Turnover:**

Improved efficiency in surgical throughput increased patient turnover, with a 30% rise in treated cases over the study period. This streamlined resource utilization and enhanced service delivery.

**Faculty Development:**

Adoption of mini-PCNL techniques provided opportunities for faculty training and skill enhancement, fostering expertise in minimally invasive urology. Workshops and hands-on training during the audit period elevated procedural competency among residents and faculty members. **Conclusion:** Mini-PCNL outperforms standard PCNL in key clinical parameters and has a positive ripple effect on hospital operations, patient care, and faculty development. Its integration into practice can transform urological services at Benazir Bhutto Hospital. Further studies are warranted to substantiate these findings across diverse settings.

**Keywords:** Mini-PCNL, standard PCNL, renal calculi, hospital efficiency, clinical audit, faculty development, Benazir Bhutto Hospital

### **FRF-52 Utility Of Tubeless PCNL In Terms Of Efficacy And Patient Safety**

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**Introduction:** This study aimed to assess the utility of tubeless PCNL in terms of efficacy and safety when compared with the standard tubed PCNL. **Methods:** The study includes 100

PCNL procedures on 100 patients. Patients were randomized into two groups. Group A ( $n = 50$ ) underwent standard tubed PCNL with 16 FR nephrostomy tubes and group B ( $n = 50$ ) had 4.8F DJ Stent for postoperative drainage. The post-operative surgical

outcomes were evaluated and compared among the two groups, using the independent t-test. Data were collected, tabulated, and statistically analyzed, and compared using the Microsoft Excel version 2016.

**Results:** The post operative pain scores, hospital stay and morbidity in terms of wound leakage were much

less in the tubeless group with no negative impact on stone clearance.

**Conclusion:** Our study supports the advantages of tubeless PCNL over the conventional technique in terms of less postoperative patient discomfort, less tube-related morbidity, early mobilization, and reduced hospital stay. We believe that this study represents another contribution to the further popularization of the tubeless technique which should be employed in routine practice in this modern era of Endourology.

**Key words:** Percutaneous nephrolithotomy (PCNL), Tubed, Tubeless, Hospital stay.

### **FRF-53 Advantages of Early Catheter Removal After Transurethral Resection of the Prostate (TURP): A Six-Month Clinical Audit**

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**Background:** Transurethral resection of the prostate (TURP) is the gold standard for the management of benign prostatic hyperplasia. Postoperative urinary catheterization is routinely employed, but the optimal timing for catheter removal remains debated. Early catheter removal may expedite recovery, reduce complications, and enhance patient turnover, but concerns about urinary retention and re-catheterization persist. This audit evaluates the outcomes and impacts of early catheter removal after TURP in a tertiary care hospital.

**Methods:** This six-month audit was conducted from 01/01/2024 to 31/05/2024 at Benazir Bhutto Hospital, Rawalpindi, Pakistan. A total of 100 patients undergoing TURP were enrolled and divided into two groups:

Group A (n=50): Catheters removed within 24-48 hours postoperatively.

Group B (n=50): Catheters removed after 72 hours. Primary outcomes included rates of urinary retention, re-catheterization, urinary tract infection (UTI), and hospital stay duration. Secondary outcomes assessed impacts on hospital workflow, patient satisfaction, and faculty development.

**Results:** Group A demonstrated significantly lower hospital stays (mean  $2.1 \pm 0.4$  days) compared to Group B (mean  $3.8 \pm 0.6$  days,  $p < 0.01$ ). Incidence of UTIs was reduced in Group A (4%) versus Group B (10%,  $p < 0.05$ ). Rates of urinary retention and re-catheterization were comparable between the groups (8% in Group A vs. 6% in Group B,  $p = 0.54$ ). Early catheter removal was associated with improved patient satisfaction scores (mean 8.7/10 vs. 7.4/10,

$p < 0.05$ ) and streamlined hospital operations, enabling higher patient turnover and reduced bed occupancy.

**Impact on Clinical Settings:** Early catheter removal reduced postoperative complications, minimized hospital stays, and enhanced patient satisfaction. These outcomes translated into improved workflow efficiency, allowing for increased procedural capacity and better utilization of hospital resources.

**Impact on Hospital Working and Patient Turnover:** Shortened hospital stays facilitated quicker bed availability, enabling higher patient turnover and reducing surgical waiting lists. The streamlined discharge process minimized congestion in wards, contributing to overall system efficiency.

**Impact on Faculty Development:** The audit encouraged faculty engagement in evidence-based practices and continuous professional development. Implementing early catheter removal protocols fostered interdisciplinary collaboration and enriched teaching opportunities for residents and trainees.

**Conclusion:** Early catheter removal after TURP is safe and beneficial, reducing hospital stays and complications while enhancing patient satisfaction and hospital efficiency. Adoption of this protocol can significantly improve clinical outcomes, institutional workflow, and educational opportunities in tertiary care settings.

**Keywords:** TURP, urinary tract infection, benign prostate hyperplasia, early catheter removal.

### **FRF-54 Usefulness of the one-minute preceptor model from learners' perspective**

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**Usefulness of the one-minute preceptor model from learners perspective:**

**Background:** Initially introduced as the Five-Step 'Micro skills' Model of Clinical Teaching<sup>®</sup> by Neher, Gordon, Meyer, & Stevens, in 1992, the One Minute Preceptor strategy has been welcomed by busy preceptors. The One-Minute Preceptor approach allows the preceptor to take full advantage of the entire encounter in order to maximize the time available for teaching while simultaneously addressing patient needs.

**Objective:** Objective of our study was to study usefulness of one minute preceptor model from learners perspective.

**Methods:** Nursing students, house officers and post graduate students (N=15) at gastroenterology department Rawalpindi Medical University were taught individually using one minute preceptor model. A total of 15 sessions were carried out in

outpatient department and procedure room. All (100%) students filled a feedback questionnaire. Five-point Likert scale was used. We also included suggestions for improvement. Data was analyzed manually and through SPSS version 22. Results: Out of 15 students, seven were male. Seven sessions were carried out with post graduate trainees, four with house officers and four with nursing students.

Majority of the students either agreed or strongly agreed with questions whether they were asked about their diagnosis, therapeutic plans, their involvement in decision making, and taught general principals and pearls. Surprisingly none of the students strongly disagreed with any of the questions in the questionnaire. Only one house officer disagreed that the session had ability to improve her physical examination skills.

Regarding suggestions for improvement a few students did not give any suggestions and left it blank. However, majority of the students appreciated and suggested to continue these sessions on regular basis.

Conclusion: Students appreciated teaching through one minute preceptor model and found it useful innovation. Therefore, we recommend that clinical faculty should be trained for teaching through one minute preceptor model and it should be included in daily practice across the institution.

#### **FRF-55 Assessing the Efficacy of E-Logbooks Versus Conventional Logbooks in Gastroenterology Training: A Study from Rawalpindi Medical University**

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Introduction: Accurate documentation of clinical experience is essential in postgraduate medical education. E-logbooks offer a digital alternative to conventional logbooks, providing structured feedback and enhancing transparency in the training process. This study aims to evaluate the efficacy of e-logbooks compared to conventional logbooks in documenting and assessing the clinical and procedural competencies of MD Gastroenterology trainees at Rawalpindi Medical University, Pakistan. Methods: This retrospective study analyzed the e-logbook entries of five MD Gastroenterology trainees, comparing their structure, approval rates, and utility to conventional logbooks. A total of 595 entries were reviewed, categorized by organ system

(esophagus, stomach, intestines, liver, pancreas, and biliary system), and assessed for approval status (approved, pending, or requiring resubmission). Key metrics such as the accuracy of entries, feedback cycles, and trainee engagement were compared with prior conventional logbook practices through qualitative and quantitative analysis.

Results: Of the 595 e-logbook entries, 414 (69.6%) were approved, 121 (20.3%) were pending, and 60 (10.1%) required resubmission. The structured e-logbook system allowed detailed categorization: Esophagus (75 entries): Focused on variceal bleeding and corrosive stricture management. Stomach (79 entries): Highlighted cases of ulcer-related bleeding.

Liver (215 entries): Predominantly decompensated chronic liver disease.

Biliary system (55 entries): Obstructive jaundice and biliary malignancies.

Pancreas (57 entries): Acute non-biliary pancreatitis and pancreatic cancer.

Intestines (116 entries): Chronic diarrhea, inflammatory bowel disease, and malignancies.

The e-logbook system demonstrated improved organization, timely feedback, and better tracking of procedural exposure compared to conventional logbooks. While 69.6% of entries were approved on first review, the iterative resubmission process (10.1%) allowed trainees to refine documentation quality. E-logbooks also facilitated systematic case categorization, a limitation in conventional methods.

Conclusion: E-logbooks offer a significant advantage over conventional logbooks in enhancing documentation quality, feedback mechanisms, and overall trainee engagement. This study underscores the efficacy of e-logbooks as a vital component of competency-based medical education, particularly in gastroenterology training. Transitioning fully to digital systems can streamline training assessments and improve learning outcomes for postgraduate medical trainees.

Keywords: E-logbooks, postgraduate medical education, gastroenterology training, competency-based assessment, digital documentation

#### **FRF-56 Innovating Photobiomodulation Therapy for Solitary Rectal Ulcers: Experience from Rawalpindi Medical University**

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Introduction: Solitary rectal ulcer syndrome (SRUS) is an inflammatory lesion that comes up with chronic

constipation leading to bleeding and straining during bowel movement. The conventional treatments have shown limited efficiency in terms of symptomatic response and healing. In this study, for the first time, Photobiomodulation Therapy (PBMT) is explored as a novel therapeutic approach due to its anti-inflammatory and antioxidant effects, aiming to address the underlying pathology and alleviate the debilitating symptoms of SRUS.

**Methods:** For the first time, a prospective randomized controlled trial has been conducted at the Center for Liver and Digestive Diseases, Holy Family Hospital, Rawalpindi, Pakistan, using PBMT by illuminating the infected rectum. A total dose of 180 J was delivered through a 635 nm red laser at a set power of 300 mW for each session. Substantial improvements in symptomatology and lesion healing were monitored. Statistical analysis was performed using SPSS 25.0 (SPSS Inc, IBM, USA), and  $p < 0.05$  was considered statistically significant.

**Results:** Our innovative clinical study involved 36 cases, comprising 22 male and 14 female patients from diverse localities. The majority were teenagers and young adults, aged 9 to 39, with an average age of 21. The PBMT treatment group included 28 patients, while 10 received conventional therapy. Each patient underwent a pretreatment sigmoidoscopy, followed by 14 PBMT sessions administered 48 hours apart. Symptomatic response was monitored throughout, with a follow-up sigmoidoscopy conducted after the final session to evaluate healing. The PBMT group demonstrated remarkable outcomes, with 99% achieving symptomatic relief and an average ulcer size reduction of 78%, compared to 45% ( $p=0.05$ ) in the control group receiving conventional treatment.

**Conclusion:** The introduction of PBMT as a groundbreaking, noninvasive treatment option highlights its efficacy as an alternative to conventional treatments. Because of the corresponding healing percentage, PBMT offers a paradigm shift in the therapeutic management of SRUs. By targeting inflammation and promoting mucosal healing, PBMT offers promising potential to improve symptoms, enhance quality of life, and reduce recurrence.

**Key Words:** Photobiomodulation, Solitary Rectal Ulcer, Low-Level Laser Therapy

### **FRF-57 Healing with light: Local Experience in Photobiomodulation Therapy for Oral Lichen Planus- A Case Report**

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**Introduction:** Oral lichen planus (OLP) is a chronic inflammatory condition of the oral mucosa. It is often characterized by pain, erosions, and a high recurrence rate, posing significant therapeutic challenges. Based on the regenerative healing effects of light, laser-based Photobiomodulation therapy (PBMT) is a novel approach for treating oral ulcers and lichen planus. This study marks the first local exploration of PBMT as a treatment modality for OLP, assessing its effectiveness in symptom alleviation and mucosal healing.

**Methods:** A 24-year-old female presented with a 3-month history of buccal mucosal ulcers, accompanied by a burning sensation triggered by eating.

Laboratory investigations revealed negative results for Anti-TTG, ANA, and Anti-dsDNA. There was no significant improvement in her symptoms despite several therapeutic strategies including topical and oral steroids, including comprehensive dental assessments. Additionally, vitamin B12 replacement therapy also failed to alleviate symptoms. She was enrolled for PBMT after a formal consent. PDT-635, a locally developed laser by the National Institute of Lasers and Optronics (NILOP), was used for the treatment of Oral Lichen Planus (OLP) at the Center for Liver and Digestive Diseases, Holy Family Hospital, Rawalpindi, Pakistan. For each PBMT session, a dose of around 2J was delivered in 5 minutes, using a customized laser pen, which led to considerable healing with each session.

**Results:** After receiving seven PBMT sessions, the patient experienced a significant reduction in pain. There were remarkable symptomatic improvements including epithelial regeneration and reduction of burning sensation and pain. The patient was able to eat and chew with ease after 2nd session of PBMT onwards.

**Conclusion:** The findings present PBMT as a safe and effective non-invasive therapeutic option for OLP, particularly in cases refractory to conventional treatments. This pioneering work contributes to the growing body of evidence supporting PBMT's role in managing chronic oral diseases and advocates for its adoption as a viable adjunct in routine clinical practice in Pakistan.

**Key Words:** Photo Biomodulation Therapy, Oral Lichen Planus

### **FRF-58 Evaluating the Spectrum of Gastrointestinal and Hepatobiliary Diseases: Insights from E-Logbook Documentation of MD Gastroenterology Trainees at Rawalpindi Medical University**

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**Introduction:** E-logbooks are an integral component of modern postgraduate medical education, providing a structured platform for documenting clinical experiences and procedural competencies. This study analyzes the types of diseases documented in e-logbooks by MD Gastroenterology trainees at Rawalpindi Medical University, with an emphasis on system-wise disease distribution and procedural exposure over the past few years.

**Methods:** This retrospective descriptive study reviewed e-logbook entries from five MD Gastroenterology trainees over two years (2021 to 2023). A total of 595 entries were analyzed for approval status (approved, pending, or resubmitted) and categorized by organ system: esophagus, stomach, intestines, liver, pancreas, and biliary system. Disease patterns, diagnostic diversity, and procedural documentation were evaluated. Descriptive statistics were used to calculate frequencies and percentages.

**Results:** Of the 595 e-logbook entries, 414 (69.6%) were approved, 121 (20.3%) were pending, and 60 (10.1%) required resubmission. System-wise distribution revealed:

Esophagus (75 entries, 12.6%): Major cases included variceal bleeding and corrosive intake, with procedures such as variceal band ligation and corrosive stricture dilatation.

Stomach (79 entries, 13.3%): Predominantly ulcer-related bleeding cases were documented.

Liver (215 entries, 36.1%): Decompensated chronic liver disease was the most frequently reported condition.

Biliary system (55 entries, 9.2%): Obstructive jaundice due to choledocholithiasis was the most common diagnosis, followed by biliary malignancies.

Pancreas (57 entries, 9.6%): Acute non-biliary pancreatitis and carcinoma of the pancreatic head were frequently documented.

Intestines (116 entries, 19.5%): Chronic diarrhea, inflammatory bowel disease (IBD), and malignancies accounted for the majority of cases.

E-logbooks demonstrated improved organization and accessibility, enabling trainees to systematically document diverse diseases and procedures encountered during their training.

**Conclusion:** E-logbooks provide a detailed and efficient system for documenting clinical exposure and competency development in gastroenterology trainees. The analysis highlights the diversity of diseases managed and the importance of structured documentation in enhancing postgraduate medical

education. This study underscores the value of e-logbooks as a vital tool for training and assessment in gastroenterology.

**Keywords:** E-logbooks, postgraduate training, gastroenterology, disease patterns, competency-based medical education

### **FRF-59 Improving the Quality and Completeness of Discharge Summaries at a Tertiary Care Hospital in Pakistan: A Quality Improvement Project**

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**Introduction:** Discharge summaries (DS) allow continued patient care after being discharged from the hospital. Only a few quality improvement projects (QIPs) focused on assessing and improving the quality and completeness of DS at tertiary care hospitals have been undertaken in Pakistan. This QIP aimed to evaluate and enhance the quality and completeness of DS at a tertiary care hospital in Pakistan to facilitate seamless healthcare transitions.

**Methods:** A QIP was conducted in the medical unit of a tertiary care hospital in Rawalpindi, Pakistan. The DS were assessed using the e-discharge summary self-assessment checklist devised by the Royal College of Physicians (RCP). This QIP was done by the plan, do, study, act (PDSA) cycle. The PDSA cycle comprised two audit cycles and an intervention in between them. The first audit cycle (AC) was conducted on 150 DS. Its duration was from March 2023 to June 2023. An educational workshop was conducted before the re-audit cycle (RAC) to address deficiencies and reinforce the implementation of the guidelines provided by the RCP. The RAC was conducted from June 2023 to August 2023. 100 DS were studied and analyzed to assess for improvement in the completeness of DS. Frequencies and percentages were calculated in each audit cycle. The Chi-squared test was applied to compare the statistical difference between the results of both audit cycles.

**Results:** A total of 150 DS were analyzed in the first AC and 100 DS in the RAC. The results of the first AC show that the details of any allergies were recorded only in 3% of the DS; this percentage significantly improved to 51% after the RAC (p-value <0.05). Relevant past medical history was included in 52% and 88% of the DS during the first AC and RAC, respectively (p-value <0.05).

Secondary diagnoses were written in 54% and 71% of the DS during the first AC and RAC, respectively (p-value <0.05). Details of relevant investigations were included in 60% and 88% of the DS during the

first AC and RAC, respectively (p-value <0.05). The post discharge management plan was written in 90% and 98% of the DS during the first AC and RAC, respectively (p-value <0.05). The follow-up plan was written clearly in 65% and 93% of the DS during the first AC and RAC, respectively (p-value <0.05).

#### Conclusion

The DS was found to be incomplete after analyzing the results of the first AC. The details related to allergies, medications, operations, and procedures were found to be missing in the majority of the cases. No mention of the patient's concerns or expectations was made in the DS. The results of the RAC showed improvement in the level of completeness of DS. The majority of the weak points observed after the first AC seemed to have improved after the RAC, which shows that intervention proved to be quite effective in improving the

completeness and quality of DS. The RAC showed significant improvement in the completeness of the details relating to investigations, allergies, past medical history, secondary diagnoses, and the post discharge follow-up plan. QIP must be routinely carried out to assess and improve the completeness and quality of DS at hospitals.

Categories: Epidemiology/Public Health, Quality Improvement, Healthcare Technology

Keywords: quality improvement projects, hospital discharge, level of completeness, health communication, clinical audit.

#### **FRF-60 A quality improvement project to enhance the knowledge, skills, and attitude of healthcare**

##### **workers regarding the use of defibrillators.**

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**Introduction:** Defibrillation is a critical intervention in managing cardiac emergencies, yet healthcare workers (HCWs) preparation for utilizing defibrillators remains inadequate, particularly in low and middle-income countries. This quality improvement project aimed to assess and enhance HCWs knowledge, skills, and attitudes toward defibrillator use in the emergency department (ED) through a 1-h defibrillator workshop.

**Methodology:** An observational clinical audit was conducted within the ED of a tertiary care hospital. Pre- and post-workshop data were collected from the participants using structured questionnaires for demographics, knowledge assessment (20 multiple-choice questions), skills assessment (10-step checklist), and attitude evaluation (Likert-scale

statements). The workshop included theoretical instruction and hands-on practice, with a post-workshop assessment conducted one week later. Data analysis employed descriptive statistics and paired t-tests, while ethical considerations ensured confidentiality and consent.

**Results:** The study included 38 participants, demonstrating significant gaps in defibrillator knowledge, skills, and attitudes preworkshop. Post-workshop assessments revealed a marked improvement in knowledge scores ( $P < 0.05$ ), attitudes ( $P < 0.05$ ), and practical skills ( $P < 0.05$ ). Participants confidence and preparation for managing cardiac emergencies notably increased, indicating the workshop efficacy in addressing the identified deficiencies.

**Conclusion:** The 1-h defibrillator workshop effectively enhanced HCW competence and readiness to utilize ED defibrillators. The observed improvements underscore the importance of targeted educational interventions in bridging knowledge gaps and fostering proactive attitudes toward emergency management. Regular training sessions should be conducted to sustain these enhancements and improve patient outcomes in the ED.

**Keywords:** defibrillation, defibrillator, knowledge, skills, healthcare workers, emergency department, clinical audit

#### **FRF-61 Rhythm of improvement: A quality improvement project for enhancing ECG Testing and reporting of doctors working in medical unit of a tertiary care hospital**

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**Background:** Accurate interpretation of electrocardiograms (ECGs) is vital for the timely and effective management of cardiac conditions. Recognizing the need to address gaps in ECG interpretation proficiency, we conducted a quality improvement initiative at Holy Family Hospital to enhance the knowledge and skills of medical doctors across various wards.

**Objective:** To evaluate the impact of structured educational interventions on improving ECG interpretation proficiency and its subsequent effect on clinical practices and patient care.

**Methods:** The project was collaboratively designed and executed with senior colleagues and involved comprehensive educational workshops, practical training sessions, and mentoring. Baseline knowledge was assessed using a pre-intervention test, followed by interactive sessions covering theoretical and practical aspects of ECG interpretation. A post-

intervention assessment was conducted to measure knowledge improvement. Data were analyzed using paired and independent t-tests to evaluate score changes and identify subgroup differences based on designation (HO vs. PGT) and gender.

Results: The study included 100 participants (53% female, 47% male; 65% HO, 35% PGT). Post-intervention scores significantly increased from a mean of 52.45 to 68.55 ( $p < 0.001$ ), indicating a substantial improvement in ECG interpretation skills. The mean score difference was  $16.10 \pm 21.74$ . There were no statistically significant differences in knowledge improvement based on gender ( $p = 0.749$ ) or designation ( $p = 0.485$ ).

Conclusion: This initiative demonstrates the effectiveness of targeted educational interventions in enhancing ECG interpretation skills among medical doctors. The findings underscore the importance of structured training programs in bridging knowledge gaps and fostering improved clinical practices. By sharing our methodology and outcomes, we aim to inspire similar initiatives in other healthcare settings to advance medical education and patient safety.

Keywords: ECG interpretation, medical education, quality improvement, clinical training, patient safety

### **FRF-62 Evaluating Episiotomy Outcomes Using the REEDA Score: Incidence and Maternal Impact.**

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Introduction: Episiotomy is a commonly performed obstetric intervention intended to minimize severe perineal trauma during vaginal delivery. This audit evaluates the incidence of episiotomy, associated maternal and fetal factors, and postpartum outcomes, such as maternal discomfort and complications, using the REEDA (Redness, Edema, Ecchymosis, Discharge, Approximation) score. Understanding the factors influencing episiotomy uses such as fetal weight and maternal BMI can help optimize clinical decision-making and improve maternal outcomes. Method: A retrospective review of 1,034 vaginal deliveries was conducted. Data collected included the incidence of episiotomy, degree of vaginal tears, fetal weight, maternal BMI, level of surgical expertise, and postpartum outcomes (pain, discomfort, and constipation). The REEDA score was used to assess episiotomy wound healing and infection severity. The analysis examined the associations between episiotomy use and factors like fetal weight and maternal BMI.

Results: Incidence of Episiotomy: 756 out of 1,034

women (83.1%) delivered with episiotomy.

Vaginal Tears: 96% of cases were second-degree tears, predominantly among primigravida.

3rd degree Tears: 0.09% experienced third-degree tears, mainly associated with forceps delivery. 18% of women delivered babies weighing more than 3.5 kg. 90% of episiotomy and suturing were performed by R2 and R3 level surgeons. 56% of women reported pain and discomfort, with 19% experiencing constipation as the cause of pain. A notable association was observed between the need for episiotomy with higher fetal weight ( $>3.5$  kg) as well as higher maternal BMI. 12 cases of infected episiotomies were recorded, with REEDA scores indicating moderate infection (score 6-10) in 9 cases and severe infection in 3 cases (11-15).

Limitation: our audit does not included evaluation of angle of episiotomy which affects wound healing and postnatal care. It will be re-audit.

Conclusion: Episiotomy is frequently performed in vaginal deliveries, particularly with higher fetal weight and maternal BMI, but it is associated with notable postpartum discomfort. The REEDA score effectively identified wound infection severity, highlighting the need for improved surgical practice and postpartum care.

Key words: REEDA score, episiotomy, maternal impact

### **FRF-63 Simulation in plastic surgery training: evidence-based benefits**

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Introduction: Simulation is a standard component of residency training in many surgical subspecialties.

- Its impact on knowledge and skills acquisition in plastic surgery training is poorly defined.

- This study evaluates the benefits of simulation-based cleft surgery learning through a prospective randomized blinded trial.

Methods: Thirteen plastic surgery residents were randomized to either a digital simulator or a textbook demonstrating unilateral cleft lip (UCL) repair.

- Key parameters evaluated pre- and post-intervention included surgical knowledge, procedural confidence, performance on 3D models, and satisfaction with educational tools.

- Data were analyzed using statistical tests.

Results: The digital simulation group showed significant improvements in surgical knowledge (40.3 vs. 33.5,  $p=0.03$ ), procedural confidence (24.0 vs. 14.7,  $p=0.03$ ), markings performance (8.0 vs. 2.9,  $p=0.03$ ), and surgical performance (12.3 vs. 8.2,  $p=0.04$ ) compared to the textbook group.

- Participants rated the digital simulator more satisfactory (27.7 vs. 14.4,  $p < 0.001$ ).

Conclusion: Digital cognitive simulators significantly improve surgical knowledge, procedural confidence, and performance, making them valuable tools in plastic surgery training.

#### **FRF-64 Change In Performance Of Post Graduate Trainee Of Plastic Surgery Department After 360 Degree Feedback**

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Introduction: This study explores the impact of 360-degree feedback on the performance of post-graduate trainees in the Plastic Surgery department. The 360-degree feedback model involves gathering performance evaluations from multiple sources, including peers, supervisors, and self-assessments, to provide a comprehensive review of a trainee's skills and professional development.

Methods: The study employed a pre-and-post evaluation design to assess the impact of 360-degree feedback on trainee performance. Feedback was collected from various stakeholders, including faculty, peers, and the trainees themselves, using structured questionnaires. Performance metrics were analyzed before and after the feedback process to identify areas of improvement in clinical skills, communication, and teamwork.

Results: Post-graduate trainees demonstrated significant improvement in self-awareness, communication skills, and clinical competencies after receiving 360-degree feedback. Enhanced collaboration between trainees and their mentors was also observed, contributing to improved problem-solving and decision-making skills. Overall, trainees expressed greater confidence in their ability to perform in complex surgical situations.

Conclusion: 360-degree feedback is an effective tool for enhancing the performance and development of post-graduate trainees in the Plastic Surgery department. By fostering a culture of constructive feedback and continuous improvement, this approach not only enhances individual growth but also improves team dynamics and patient care outcomes in the clinical setting.

Keywords: 360-degree feedback, post-graduate trainees, Plastic Surgery, performance improvement, clinical skills, professional development, feedback process

#### **FRF-65 Comparison of WHO labor care guide verses conventional partogram in terms of maternal and fetal outcome**

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Introduction: The WHO labor care guide was introduced in 2020 to implement WHO guidelines on intrapartum care for a good and respectful childbirth experience. For implementation of labor care guide a specific strategy for healthcare providers to give best intrapartum care to the patients. The aim of my study is to compare the WHO labor care guide verses traditional partogram in terms of fetal and maternal outcome.

Study design: comparative study

Data collection process: patients will be selected randomly and divided in two groups. One group, labour is mentioned through WHO labor care guide and other through conventional partograph. Then outcome in both groups is saved in google form for analysis.

Data analysis process: All data will be analysed through spss version. The primary outcome will be mode of delivery in both groups, PPH in both groups and neonatal outcome.

Sample size: total 100 patients will be enrolled in the study, 50 in each group.

Results: study is on going. Total 60 responses are collected. Data will be analysed after receiving complete 100 responses.

Conclusion: it will be given after analysing results  
Key words: labor care guide, partogram, PPH

#### **FRF-66 Obstetric triage can reduce emergency room waiting time as an indicator of improved clinical outcome.**

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Introduction: The pregnant patients are seen in a conventional way based on the time of their arrival. This unbalanced and inequitable approach results in delayed initial evaluation, prolonged length of stay (LOS) and affected clinical outcomes.

Obstetric triage has become one of the most crucial innovations in the field of perinatal care. This study aimed at implementing an effective and efficient obstetric triage system with improved care processes within six months to facilitate timely decision making according to the individualized needs of pregnant patients.

The objective of my study is to determine whether use of obstetric triage system (OTAS) can reduce the waiting time and improve management of patients according to acuity.

**Methods:** We collected the retrospective data of last one month of Gynae emergency department at RTH. Study design- cross sectional  
Sampling technique- convenient

A total of 400 pregnant patients were seen. The data consisted of the demographic details, gestational age at presentation, associated symptoms such as labor pains, bleeding or other obstetric emergencies. We calculated the time taken from initial presentation in emergency room till the patient is attended by the doctor. We found that there was inconsistency, as the time varied between 5-120 minutes.

We used obstetrical triage acuity scale (OTAS) system to reduce patients waiting time. Obstetrical triage acuity scale (OTAS) is a five-level scale used to assess the acuity of pregnant women in obstetrical triage as resuscitative, emergent, urgent, less urgent, and non-urgent.

**Results:** We found that median waiting time for patients consulting the obstetrician in emergency department was  $82 \pm 9$  minutes in one month. Study is ongoing after applying obstetrical triage system and final results will be analyzed by SPSS.

**Conclusion:** Obstetric triage system methodically categorizes and prioritize women according the care requirements by systematic assessment, thus ensuring quality care and safety, acuity distribution and bed utilization.

**Keywords** – OTAS, waiting time, clinical outcome

#### **FRF-67 A retrospective Feedback analysis of Video assisted OSCE of Final Year medical students of RMU**

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**Introduction:** Osces are used for the assessment of students. Technology should be integrated into medical school curricula to provide students with more effective Medical education. Instructional videos have been proven to be beneficial in the process of learning. Recently Video assisted OSCE is been conducted in RMU of final year medical students. The aim of this study was to evaluate students perception with video assisted OSCE which was attempted to transform the format of face-face OSCE to a video OSCE.

**Methods:** Study Design: Cross-Sectional Study  
Data Collection Process: There are more than 350 students in the final year of MBBS of RMU 50 students were enrolled in feedback taken through Google form regarding their overall experience and satisfaction with Video assisted OSCE. Feedback comprised of 15 questions on the basis of Likert scale.

**Results:** Study is ongoing. 10 out of 50 students have given their feedback and data will be analysed after completion of data collection.

**Conclusion:**

Study will be concluded after complete data collection.

**Key Words:** OSCE, Likert scale, perception

#### **FRF-68 One Stop Breast Clinic Enhancing Standards Of Early And Effective Patient Care Since August Revamp Of Hfh**

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In Pakistan incidence of breast cancer in women of all ages is reported to be one of highest in Asia 69.1 per one lac women. Unfortunately about two third of breast cancer cases in Pakistan are diagnosed when the disease is at the advanced stage. As per National Cancer Registry of Pakistan its among the top ten cancers in females of all age groups that occupy 38.8 percent and in the global ranking of Pakistan is 58. So to fight with this monstorous disease and for early diagnosis, Surgical Unit 1 HFH inaugurated Breast Clinic in 2014 under kind supervision of prof Jahangir Sarwar Khan which after revamping of HFH became more organized as we have started One stop breast clinic where patient is examined by senior surgery consultant followed by same day Usg/ Mammography and tru-cut biopsy for early diagnosis followed by early oncology opinion regarding down staging. Although we were not fully functional in DHQ during revamp we still continued our services in DHQ hospital. Currently we are doing breast clinic regularly every Wednesday and facilitating almost 50 patients per opd, which includes 4 breast cancer patients on average per opd. After triple assessment and MDM diagnosed patients are either advised neoadjuvant therapy after liaison with NORI or if candidate for surgery pt then admitted on same day for early possible surgery. Apart from breast cancer the major chunk of breast clinic opd includes mastalgia, fibroadenoma, breast abscess. With these better facilities patients are presenting early, getting diagnosed early and getting treated early. So SU 1 HFH one stop breast clinic bringing change in lives, giving new hope to patients and becoming source for easy and affordable high standard treatment services.

#### **FRF-69 Combining Problem-based Learning (PBL) and Team-based Learning (TBL) in clinical teaching of plastic and reconstructive surgery can enhance knowledge acquisition and classroom**

### **efficiency, leading to the development of skilled professionals.**

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Introduction: Balancing theoretical knowledge with practical application is challenging in plastic and reconstructive surgery.

- Combining PBL and TBL can optimize knowledge acquisition and classroom efficiency.

Methods: 12 plastic surgery residents were selected and divided into experimental and control groups.

The experimental group received combined PBL-TBL teaching, while the control group received traditional teaching.

Teaching effectiveness was evaluated based on student satisfaction and academic performance.

Results: Resident satisfaction was higher in the experimental group than in the control group ( $P < 0.05$ ). Subjective academic performance scores by instructors were higher in the experimental group ( $P < 0.05$ ). Satisfaction rates: Control group - 33.3%, Experimental group - 83.3%.

Conclusion: The combination of PBL and TBL had a significant positive effect in plastic and reconstructive surgery clinical practice.

### **FRF-70 From epidemic insights to educational impact: Severe dengue as a catalyst for medical curriculum reforms**

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Introduction: Infectious diseases (IDs) know no borders, and dengue fever dramatically illustrated that widespread globalization-related trade, travel, migration, and human environmental stressors have worsened its threat. Those global public health risks steadily grow in both frequency and salience “exacerbated by budgetary cuts to research, surveillance, and preparedness; the deterioration of both public health and medical infrastructures. Understanding how unique and often highly complex ID disasters can be is more important than ever for both infectious disease disaster-related stakeholders and students. Dengue infection considered to be an endemic diseases and occurs in >100 countries in tropical and subtropical regions of Asia-Pacific, the Americas, the Middle East, and Africa with >3 billion people at risk. Despite current control interventions against dengue fever in endemic countries, the disease is associated with considerable

healthcare utilisation, personal costs to patients and caregivers, productivity loss, and human suffering. Methods: This is a descriptive cross sectional retrospective study conducted over a period of four months at pediatric department Benazir Bhutto hospital Rawalpindi over 167 patients during recent epidemic 2024. Data was collected from hospital records and included age, sex, clinical features and their relation to severity and outcome. Percentages were calculated for quantitative data.

Results: A total of N=103 patient admitted in pediatric dengue ward were included in this study. 60% were male patients with 50% among 5-10 years of age. 40% patient presented with severe abdominal pain. 17.4% were triple positive (NS1, IgM, IgG). This epidemic has 36% patient presented with dengue shock syndrome.

Conclusion: Leveraging research on dengue fever to transform medical education not only equips future pediatricians to manage epidemics but also contributes to better patient outcomes and public health preparedness. This study underscores the need for a dynamic, research-informed approach to medical training, particularly in the face of emerging healthcare challenges like dengue fever.

Keywords: Dengue epidemic, infectious disease outbreaks, emerging infectious disease, improvement planning, Dengue outbreak governance, lessons learned

### **FRF-71 Pattern of abdominal sonographic findings in dengue patients at a tertiary care hospital**

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Objective: The study aims to evaluate the role of ultrasound as an essential adjunct to clinical and laboratory assessments in diagnosing dengue fever.

Methods: This retrospective study was conducted from July to October 2024, during a dengue fever outbreak in Rawalpindi. A total of 5,926 patients presenting with suspected dengue fever were referred to our center. Upon arrival in the emergency department, all patients underwent immediate abdominal sonography. The diagnosis of dengue fever was subsequently confirmed through serological testing.

Results: Among the 5,926 patients, 27% demonstrated edematous gallbladder (GB) wall thickening, 21% had ascites, 20% showed pleural effusion, 7% exhibited splenomegaly, while 24% had normal ultrasound findings. The most frequent combination of findings included edematous GB wall

thickening, ascites, and pleural effusion.

**Conclusion:** Abdominal sonography proves to be a valuable primary imaging modality for patients with suspected dengue fever, enabling the early detection of key disease indicators even before serological confirmation. This is particularly beneficial in regions grappling with dengue fever outbreaks, facilitating prompt diagnosis and management.

**Keywords:** Ascites; dengue fever; edematous gallbladder wall thickening; pleural effusion; splenomegaly; ultrasound.

### **FRF-72 Reshaping Clinical Learning: Utilizing Diphtheria Outbreak Data in Medical Education**

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**Introduction:** The global incidence of diphtheria has declined substantially owing to extensive vaccination coverage; nevertheless, the disease remains endemic in many countries, although accurate reports on the incidence in these countries are limited.

Implementation of the DTP vaccine programme has reduced childhood diphtheria in several countries. Recent researches have identified overall challenges and the need for innovations in the structure and process of medical education at all levels. These researches suggest that doctors need to be prepared for a more demanding society, and be ready to cope with the explosion of scientific knowledge and technology. Doctors would need to have an aptitude for lifelong learning and be prepared to be part of a working team.

**Methods:** A descriptive cross sectional retrospective study over a period of 1 year at Benazir Bhutto Hospital Rawalpindi over 47 patients with pharyngeal diphtheria through file review during recent epidemic. Variables reviewed were age at presentation, sex, vaccination status, family history of contact, complications, outcome and mortality risk factors.

**Results:** Total patient included in this study with pharyngeal diphtheria were n=47.60% were male with 65% were older than 5 years.14% were vaccinated(3 doses of DPT) .100% of patient had tonsillar membrane.

**Conclusion:** The frequencies of the health conditions and their statistical treatment made it possible to identify topics that should be fully developed within medical education. The classification also suggested limits between topics that should be developed in depth, including knowledge and development of skills and attitudes, regarding topics that can be concisely presented at the level of knowledge.

**key words:** Diphtheria outbreak, Curriculum;

Epidemiology; Education, medical, undergraduate, health knowledge.

### **FRF-73 Audit of Post-Operative Notes Against the Royal College of Surgeons Guidelines: A Quality Improvement Initiative**

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**Introduction:** Effective medical record keeping is a pivotal component of patient management. It helps in the scientific evaluation of the patient profiles, aiding in the analysis and formulation of treatment plans. It is also essential in current practice with regard to the issue of medical negligence. Operative notes are one of the most important medical records in a surgical unit. Maintaining a full and proper record of operative notes is the professional responsibility of every surgeon. A comprehensive record serves to streamline the patient management approach of the entire surgical team. It also serves as an effective defense in medico-legal cases where illegible or incomplete notes can weaken the surgeons' case.

Operative notes are one of the first medical records that are analyzed post-operatively by the critical care and surgical teams. They serve to orient healthcare professionals regarding the details of the procedure as well as essential post-operative care that the patient needs. Surgeons are directly involved in ascertaining the need of certain interventions such as thromboprophylaxis and antibiotics. These crucial decisions are made by surgeons on a case-to-case basis, and the post-operative team often seeks guidance regarding such management in the post-operative notes. Hence, the quality of operative notes is directly related to the effective management of the surgical patient.

In 2014, the Royal College of Surgeons of England introduced good surgical practice guidelines, which outline information that should be present in operative notes [3]. These guidelines are considered the standard against which the performance of several institutes has been audited previously [4-9]. The purpose of this audit was to evaluate the quality of operative notes against this recognized standard, identify pitfalls and make recommendations to improve operative notes in the Department of Surgery Unit 1, Benazir Bhutto Hospital, Rawalpindi

**Technical report**

**Methods:** This study was conducted in the Department of Surgery Unit 1, Benazir Bhutto Hospital, Rawalpindi. The approval for this audit was sought and granted in August 2024 by Head of Department. All data were collected prospectively

using a checklist that evaluated 18 parameters. These parameters were based on the 2014 Royal College of Surgeons of England's good surgical practice guidelines [3]. Operative notes were documented on a pro forma in Department of Surgery Unit 1, Benazir Bhutto Hospital, Rawalpindi. The data on the current practices were collected in August and September 2024. The data were analyzed and presented to the local committee in November 2024. All data were analyzed using SPSS Version 28.0.0.1 (IBM SPSS, Armonk, New York).

Data extracted from the pro forma was in the form of present, absent, or not applicable. Conditions of non-application of parameters were discussed in the local meeting preceding the first round of data collection. The checklist assessed the patient's information, date of procedure, time of the procedure, elective/emergency surgery, names of the operating surgeon and assistant, name of the theater anesthetist, the operative procedure carried out, incision, operative diagnosis, operative findings, any problems/complications, any extra procedure performed and the reason why it was performed, details of tissue removed/added or altered, details of closure technique, anticipated blood loss, antibiotic prophylaxis (where applicable), deep vein thrombosis (DVT) prophylaxis (where applicable), detailed post-operative care instructions, and signature and legibility of written operative notes.

Results: Fifty operative notes were analyzed prospectively against the checklist in the initial audit conducted in August and September 2024 (Table 1). Date of procedure, name of the surgeon, name of procedure, operative diagnosis and operative finding were documented in 100% (50), making them the most documented parameters. Type of operation, complication were not documented in any of the 50 notes. Anticipated blood loss, DVT prophylaxis and details of closure technique were documented in 14% (7) operative notes, making them the least documented parameters.

Discussion: In our observations, we found that in the initial audit, 61.6% of the evaluated parameters were documented in operative notes in the Department of Surgery Surgery Unit 1, Benazir Bhutto Hospital, Rawalpindi .

The first loop of the audit of operative notes highlighted several shortcomings in the process of documentation of these notes. These included inadequacies in the operative notes pro forma (Figure 1) and a lack of orientation regarding standards according to which these notes need to be documented

Conclusion: Our study showed significant improvements needed in the quality of operative notes and the implementation of recommendations

following the initial audit of operative notes in Benazir Bhutto Hospital, Rawalpindi . Such audits should be conducted routinely in all surgical departments to maintain and improve standards of documentation of operative notes.

#### Improvements Required

The pro forma for operative notes was redesigned to include a section for several parameters, which were absent in the initial notes (Figure 2). These included Separate section for Type of procedure (elective / emergency) in operative notes instead of pre-op orders Separate section for Complications( if any) occurred during the surgery  
 â€¢ Separate section for DVT prophylaxis (if any).  
 â€¢ A recommendation was also made to consider electronic medical records for the purpose of operative notes documentation, and this has been shown to increase the efficiency of documentation [10]. A poster detailing good practice guidelines for operative notes documentation was displayed in the surgeons' room, and surgeons should encouraged to document surgical notes soon after the procedure to improve accuracy

Finally, it was recommended that this audit should be conducted every six months to ensure sustainability in practice.

#### **FRF-74 Our Experience With Effective Percutaneous Release Of Trigger Finger Using 16 Gauge Hypodermic Needle As Definitive Treatment**

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Introduction: Trigger finger, also known as stenosing tenosynovitis, is a common condition characterized by pain, swelling, and difficulty in flexing or extending the affected finger due to a constricted flexor tendon at the A-1 pulley. It often leads to a noticeable "clicking" or "locking" sensation during finger movement. Traditional treatments for trigger finger include conservative management such as corticosteroid injections and splinting, while surgical intervention is considered for cases that do not respond to these methods. Recently, percutaneous techniques, particularly percutaneous release using a hypodermic needle, have gained attention as a less invasive alternative. This procedure involves the release Of the affected tendon sheath under local anesthesia, with minimal soft tissue disruption. While effective, the long-term outcomes and complications of this technique remain under investigation. This study aims to assess the clinical efficacy of the 16 gauge hypodermic needle technique for trigger finger

release, focusing on pain relief, functional improvement, and recurrence rates.

**Objective:** To evaluate the outcome of percutaneous release of trigger finger using a 16-gauge hypodermic needle in terms of pain relief and functional recovery.

**Methods:** A prospective cohort study with consecutive sampling was conducted with a sample size of 45 patients who underwent percutaneous release for trigger finger. Mostly patients presented with ring finger triggering. Most common grade was grade 2, that was 55% followed by grade 3 that was 33%. Most common age group was between 35 to 45 years i.e 70%. The primary outcome measures included the Visual Analog Scale (VAS) for pain assessment and the Quinell's grading system for functional improvement. Patients were followed up at 3 and 6 months post-procedure to assess pain relief, recurrence, and any complications.

**Results:** At the 3 and 6-month follow-up, there was a significant improvement in pain, with most patients reporting minimal to no discomfort. The majority of patients showed complete release of trigger finger. Only one patient experienced recurrence, and two patients had Symptoms of pain and tenderness at scar point which was treated successfully with massage and analgesics

**Conclusion:** Percutaneous release of trigger finger using a 16-gauge hypodermic needle is a safe and effective treatment option, offering significant pain relief and functional improvement with minimal complications.

**Keywords :** trigger finger, percutaneous release, hypodermic needle, VAS, Quinell grading system

#### **FRF-75 Comparison Between Kocher's<sup>TM</sup> Method And Scapular Manipulation Technique For Reduction Of Shoulder Dislocation: A Randomized Controlled Trial**

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**Introduction:** The glenohumeral joint is the most mobile joint in the body, capable of movement in multiple directions. This multiaxial mobility renders it susceptible to dislocations, with an estimated incidence of 15.31 to 56.31 per 10,000 person-years. Anterior shoulder dislocation is the most common type, accounting for approximately 97% of all cases. Various reduction techniques have been described, each with comparable success rates, but none achieve 100% effectiveness.

**Objective:** This study compares the Scapular Manipulation Technique (SMT) and Kochers Method

for the reduction of anterior shoulder dislocations, focusing on the mean reduction time, success rates, and resource utilization.

**Methods:** In this single-center, randomized controlled trial, 60 patients (ages 16-60) presenting with acute anterior shoulder dislocation were randomly assigned to one of two groups: Group A (Scapular Manipulation Technique) and Group B (Kocher Method). Group A received reduction without sedation, while Group B underwent the procedure with intravenous sedation and analgesia. The primary outcome was the time taken to achieve reduction, measured from the start of manipulation to clinical reduction. Data were analyzed using SPSS, with an independent samples t-test to compare the reduction times.

**Results:** Both techniques achieved a 100% success rate. However, Group A (SMT) demonstrated significantly faster reduction times (mean: 2.7 ± 0.46 minutes) compared to Group B (Kocher Method, mean: 4.13 ± 0.6 minutes, p = 0.000). No complications were reported in either group post-reduction.

**Conclusion:** The Scapular Manipulation Technique was more efficient in reducing anterior shoulder dislocations, requiring less time and fewer resources than Kochers Method. This makes SMT an attractive option, particularly in resource-limited settings, as it offers a safe, effective, and faster alternative for shoulder dislocation management in emergency departments.

**Keywords:** SMT, Kochers method, Shoulder dislocation, reduction techniques.

#### **FRF-76 Video-Assisted Peer Feedback (Vapf) Versus Qualified Instructor Feedback (Qif) Approach For Surgical Training Skills In Post Graduate Trainees**

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**Introduction:** Normally teaching is done by qualified instructor feedback (QIF). Nowadays newly developed video-assisted peer feedback (VAPF) method is being used for teaching. Training methods based on peer feedback are even recommended in the current international guidelines on CPR published by the American Heart Association (AHA) and the European Resuscitation Council (ERC).

**Methods:** This study was carried out at three teaching hospitals of Rawalpindi Medical University. 30 post graduate trainees were divided in two groups A and

B. In Group A QIF intervention was done while in Group B VAPF intervention was done. In QIF participants received feedback from a qualified instructor. In VAPF the participants did video recording of each other while performing fiberoptic nasopharyngoscopy and gave feedback to each other by using a standardized checklist. Then objectively structured clinical examination (OSCE) was done to check the participants score after the study. Results: OSCE scores showed that there was significant improvement in score ( $p < 0.05$ ) before and after watching videos. The trainees also agreed that watching videos helped them improve their examination skills. Conclusion: Video Assisted Peer Feedback (VAPF) is very effective method of improving skills in post graduate trainees. Keywords: video assisted peer feedback, qualified instructor feedback, VAPF, QIF, surgical skills, post graduate trainees

### **FRF-77 Strength In Silence: The Journey Of Mothers Raising Children With Hydrocephalus**

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**Introduction:** Raising a child with hydrocephalus can be very challenging, especially in low- and middle-income countries. In Pakistan, mothers being the primary caregivers for their hydrocephalic children are under tremendous stress. The motive of this study is to shine a light on the unmet needs of Pakistani mothers raising children with hydrocephalus, exploring the challenges they face and the strength and resilience that define their journey in order to inspire change and improve their lives. **Methods:** This study explores the challenges faced by Pakistani mothers raising children with hydrocephalus, employing a qualitative methodology through focus group discussions comprising ten mothers of hydrocephalic babies at Tertiary Care Hospital in Pakistan. **Results:** The findings highlight three main themes: emotional toll, social isolation, and financial strain. Mothers experience significant emotional stress due to societal stigma and a lack of support, particularly from their husbands and family. Social isolation is prevalent, as mothers fear sharing their burdens and face physical confinement due to their children's needs. Financial strain is another major issue, with high medical costs adding to their economic difficulties. **Conclusion:** The study emphasizes improved access

to specialized care, awareness campaigns to reduce stigma, financial assistance, and stronger community support networks to support these mothers better. Addressing these unmet needs is crucial for empowering Pakistani mothers in their caregiving roles and improving the quality of life for their children with hydrocephalus. **Keywords:** Hydrocephalus, Child neurology, Pediatric care, Neurodevelopmental disorders, Special needs children, Parent-child relationships, Caregiver stress, Mental health.

### **FRF-78 Functional Outcome of Bristow Procedure in Patients with Anterior Shoulder Dislocation**

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**Functional Outcome of Bristow Procedure in Patients with Anterior Shoulder Dislocation**

**Introduction:** Recurrent anterior shoulder dislocations are common in active individuals, particularly athletes. The Bristow procedure addresses this issue by transferring the coracoid process with the conjoint tendon to the anterior glenoid, providing both a bony block and dynamic stabilization. This study evaluates the functional outcomes of the Bristow procedure, focusing on stability, range of motion (ROM), strength, and return to activities.

**Methods:** Study Design: Retrospective cohort study. Participants: 50 patients (ages 18-45) with recurrent anterior shoulder dislocation and significant glenoid bone loss ( $>20\%$ ).

**Surgical Procedure:** Open Bristow procedure performed by a single surgical team.

**Assessment Tools:**

Constant Shoulder Score (CSS).

Rowe Score for shoulder instability.

Pre- and postoperative radiographs for glenoid assessment.

Follow-up at 6 months, 1 year, and 2 years.

**Exclusion Criteria:** Multidirectional instability, prior stabilization surgery, and rotator cuff tears.

**Results:** Stability: 94% of patients reported no recurrent dislocations at 2 years. Substantial improvement in Rowe Score (mean score: pre-op 40; post-op 90).

**Range of Motion:** Mild loss of external rotation ( $\sim 10^\circ$  compared to the unaffected side).

Overhead motion largely preserved in 85% of patients.

**Strength and Function:** Constant Shoulder Score improved significantly (pre-op: 55; post-op: 85).

Full return to non-contact sports in 90% of cases;

contact sports in 80%.

Complications: 4% experienced minor complications (e.g., hardware irritation, transient nerve symptoms).

Conclusion: The Bristow procedure is an effective surgical option for managing recurrent anterior shoulder dislocations, especially in cases with significant glenoid bone loss. It provides excellent stability and functional outcomes, with high patient satisfaction. Although mild external rotation loss is common, this does not significantly impair daily activities or athletic performance. The low complication rate supports its continued use as a reliable stabilization technique.

Keywords: Bristow procedure, Anterior shoulder dislocation, Functional outcome, Shoulder stabilization, Glenoid bone loss

### **FRF-79 Correlation Of Crp With Hba1c And Lipid Profile In Type 2 Diabetic Patients As A Measure Of Oxidative Stress**

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Objective: To determine the correlation between CRP, HbA1c and lipid profile as an indirect measure of oxidative stress in type 2 diabetic patients.

Study Design: Descriptive study.

Duration Of Study: Six months after approval

Methods: Quantitative and qualitative data was collected and analyzed. Effect modifiers were controlled through stratification to see the effect of these on the outcome variable. Post stratification Pearson correlation was applied taking p-value of  $\alpha=0.05$  as significant.

Results: 155 patients who met the inclusion and exclusion criteria were included in this study. Mean age, CRP, HbA1c, cholesterol, LDL, HDL and triglyceride in our study was  $51.14 \pm 16.49$  years,  $8.17 \pm 6.24$  mg/L,  $8.30 \pm 2.15\%$ ,  $238.6 \pm 53.94$  mg/dl,  $156.6 \pm 32.84$  mg/dl,  $46.02 \pm 13.44$  mg/dl and  $280.1 \pm 69.31$  mg/dl respectively. 74 (47.7%) and 81 (52.3%) were male and female respectively.

Correlation of HbA1c and CRP, cholesterol, LDL and triglyceride showed positive correlation except HDL which showed negative correlation.

Conclusion: The correlation analysis revealed a positive association. These findings suggest a potential interplay between glycemic control and various cardiovascular risk factors, emphasizing the need for comprehensive management strategies in individuals with diabetes.

Key Words: Diabetes mellitus, HbA1c, CRP, cholesterol, HDL, LDL, triglycerides.

### **FRF-80 Challenges In Implementing Early Clinical Exposure In Radiology To Undergraduates And Its Impact In Framing Medical Education**

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Introduction: Early clinical exposure to radiology is increasingly recognized as a critical component of undergraduate medical education, essential for developing diagnostic acumen and clinical reasoning skills. Despite its importance, integrating radiology into the early stages of medical curricula faces numerous challenges. These include curricular overload, limited faculty resources, high costs associated with imaging equipment, and the absence of standardized educational guidelines. Furthermore, the rapid pace of technological advancements in radiology makes it challenging to ensure the curriculum remains relevant and up-to-date, further complicating its integration into undergraduate education.

Methods: To address these challenges, innovative educational strategies have been explored.

Simulation-based learning offers practical, hands-on experiences in controlled environments, allowing students to interact with radiological tools and concepts effectively. E-learning platforms provide accessible and flexible learning opportunities, accommodating the constraints of time and resources. Interdisciplinary teaching approaches integrate radiology with other medical disciplines, highlighting its relevance across various clinical contexts.

Additionally, incorporating artificial intelligence tools into radiology education introduces students to cutting-edge technologies, preparing them for future advancements in diagnostic methodologies.

Results: The implementation of these innovative strategies has shown promising results. Early exposure to radiology enhances medical students understanding of anatomy and pathology, fostering a multidisciplinary approach to clinical problem-solving. Simulation-based learning has proven effective in building interpretive and diagnostic skills, while AI tools introduce students to advanced technologies, enhancing their readiness for modern clinical practice. The adoption of e-learning platforms has mitigated challenges related to faculty shortages and curricular constraints, while interdisciplinary approaches have improved student engagement and highlighted the critical role of radiology in patient care.

Conclusion: By addressing the barriers to early

radiology education with innovative strategies, medical schools can integrate radiology into undergraduate curricula effectively. Early exposure equips future physicians with essential diagnostic and interpretive skills, preparing them for the complexities of clinical practice and the rapid evolution of medical technology. As radiology continues to play an integral role in modern medicine.

further research are essential to mitigate CL/P prevalence and improve maternal and child health outcomes in Pakistan.

**Keywords:** cleft lip, cleft palate, congenital anomaly, risk factors, consanguinity

### **FRF-81 Epidemiology And Risk Factors Of Cleft Lip And Palate In Pakistan: A Case-Control Multi-Centric Study**

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**Introduction:** Pakistan has one of the highest incidences of cleft lip and palate (CL/P) around the world. Moreover, there is a scarcity of data on the socio-demographic determinants and etiology of CL/P in the multiethnic populations of Pakistan.

**Objective:** To elucidate the determinants of CL/P in a multiethnic population of Pakistan, and to identify maternal and obstetric risk factors associated with CL/P.

**Methods:** A multicenter case-control study was carried out in Punjab Pakistan, from 2020-2023.

Individuals with CL/P were recruited from tertiary care hospitals, surgical camps, and rural areas.

Healthy control individuals were recruited from the same localities. Data on socio-demographic variables, and maternal and obstetric risk factors were collected. Descriptive statistics, bivariate and multivariable logistic regression were employed.

**Results:** A total of 700 participants, 350 cases and 350 controls were recruited. There was very high representation of CL/P individuals from Punjab province. In multivariable logistic regression, five out of 13 socio-demographic variables were statistically significantly associated with disease status, ie age of subject, province, caste-system, extended family type, and fathers occupation. Among the maternal and obstetric risk factors, maternal depression during pregnancy, inadequate consumption of folic acid and vitamins, first parity, and parental consanguinity, were significantly associated with increased odds of CL/P.

**Conclusion:** The study underscores the multifactorial nature of CL/P etiology, emphasizing the interplay of socioeconomic, maternal, environmental and genetic, factors. A comprehensive approach encompassing public health initiatives, clinical interventions, and



## Resident Research Forum



# Resident Research Forum



## Message from the Vice Chancellor

Residents' Research forum has been a vision I've held for long now and to see it finally materialize has been a source of limitless pride and delight to me. There is little more pleasing for a mentor than to see his pupils and juniors strive to Excel and compete to be at par with the world at large. At Rawalpindi Medical University we are fervently committed to grooming our residents to the best possible international standards to produce top tier professionals. Research is undeniably a need of the hour being instrumental to the very life of a good health care system. It is imperative for our country to harbor and foster a drive and duty to it. The world of medicine and healthcare is evolving at a relentless pace and the Doctor of today must be trained and educated accordingly. Beginnings are always tough at first and introducing a new system and culture of thought and directives tougher. However, to find multiple like-minded individuals who made the inception of the forum possible has been a relief and repose for me. Together, I believe Rawalpindi Medical University is on the brink of a new precedent of the current medical terrain. With the grace of God almighty and a vision rooted in noble and necessary aspirations, I hope to see all our residents be a part of the forum and work together for its agenda and resolution.

## Office Bearers



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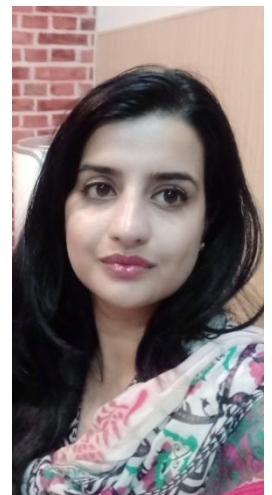
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### **RRF-01 Frontalis Sling for ptosis**

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Surgical Procedure of Ptosis Post Op: Adjustment and Assess Visual Function Frontalis sling surgery is a valuable tool in the armamentarium of oculoplastic surgeons for the management of severe ptosis. This procedure provides a reliable method of restoring eyelid height and function in patients with poor levator muscle function. When performed with care and attention to detail, frontalis sling surgery can achieve excellent cosmetic and functional results.

### **RRF-02 Coverage of exposed tibia in high-velocity injuries: A Case Report**

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Introduction: Lower extremity trauma is often seen in the setting of polytrauma. Appropriate trauma management is vital in these patients. The management includes stabilizing the patient, managing vascular and bony injuries and then after stabilization, definitive treatment of exposed tibia is done. The goal of reconstruction is to achieve soft tissue coverage to aid the skeletal reconstruction replacing like with like when possible. When tibia is exposed, different parts of the leg have different coverage options. In this case, upper and middle tibia were covered by gastrocnemius and hemisoleus flaps. The objective of presenting this case is that provision of definitive coverage to exposed tibia can prevent complications and amputations.

Case: A 25-year-old male, presented with history of high velocity injury to right lower limb with exposed tibia in upper and middle thirds of leg. After initial management and stabilization of patient, definitive coverage with medial gastrocnemius and hemisoleus flap was done to cover the exposed tibia. Split thickness skin graft was placed over the flaps to provide the skin coverage

Methods: A retrospective analysis was conducted on a case involving a patient with exposed tibia after high velocity injury. Medial gastrocnemius and hemisoleus flaps with STSG were done. Flap monitoring was done post-operatively and patient remained on bed rest with limb elevation for 3 weeks. Assessment of post-operative outcomes including function preservation, bone coverage, aesthetics and

patient satisfaction was done on follow-up. Patient remained non-weight bearing on that limb until cleared by the orthopedic department. Results: The case study demonstrated successful limb salvage along with significant improvement in limb function, aesthetics and patient satisfaction. Conclusion: Flap coverage of exposed tibia in high velocity injuries is an effective method to reduce patient morbidity. Keywords: flap coverage, exposed tibia, high velocity injuries, split thickness skin graft, patient satisfaction, functional outcomes.

### **RRF-03 Disorder of sexual Development**

#### **A taboo , that needs social awareness**

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### **RRF-04 A Quality improvement project (QIP) of patients Satisfaction from healthcare providers in department of ENT and Head and Neck surgery of a Tertiary Care Hospital.**

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Background: Patient satisfaction is an important aspect of healthcare delivery since it includes peoples subjective experiences and opinions about the care they receive. The purpose of this QIP is to assess the patients satisfaction and implement necessary actions to improve overall health care quality and satisfaction of patients.

Methods: A total of 60 patients were involved in this cross-sectional audit-based study, 30 patients in pre-intervention and 30 patients in post-intervention group. This study was conducted in department of Otorhinolaryngology and head and neck surgery Benazir Bhutto Hospital Rawalpindi. Mean patients satisfaction score was compared pre and post intervention among doctors, nurses and hospital environment. P-value less than 0.05 was considered significant.

Results: The mean score of patient satisfaction score from doctors was  $82.26 \pm 15.53$ , and from nurses was  $60.08 \pm 17.51$  and similarly, the mean patient satisfaction score from overall hospital environment was  $81.60 \pm 18.83$ . According to pre-intervention analysis, the mean score of patients satisfaction was much lower from management of attending nurses as compared to doctors and overall hospital

environment. The mean score of patient satisfaction score from doctors was  $91.33 \pm 9.28$ , and from nurses was  $85.16 \pm 4.25$  and similarly, the mean patient satisfaction score from overall hospital environment was  $79.86 \pm 11.33$ . According to post- intervention analysis, the mean score of patients satisfaction was very much improved for nurses and doctors, however; satisfaction mean score for hospital environment was comparable before and after intervention.

**Conclusion:** A significant difference in mean values of patients satisfaction was observed pre- and post- intervention. Intervention was found to be very effective in increasing overall patient satisfaction from attending doctors and nurses, however; the satisfaction score was comparable between two groups.

**Keywords:** Quality Improvement, Patient satisfaction, otorhinolaryngology,

### **RRF-05 Building Tomorrows Leaders: Enhancing Clinical Leadership Skills through Targeted Training**

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**Introduction:** Leadership skills are critical in clinical practice for effective teamwork and optimal patient outcomes. Observed gaps in communication and decision-making within the Department of ENT and Head and Neck Surgery at Benazir Bhutto Hospital emphasized the need for targeted interventions. This project assessed the baseline leadership skills of postgraduate trainees and evaluated the effectiveness of a structured intervention combining didactic presentations and simulation-based training.

**Methods:** Thirteen postgraduate trainees participated in a program structured around the NHS Clinical Leadership Competency Framework (CLCF). The intervention included a presentation covering all five CLCF domains followed by simulation-based training designed to reinforce these skills in clinical scenarios. Leadership competencies were assessed using the CLCF Self-Assessment Tool before and after the intervention. Data were analyzed with IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY), and a paired t-test determined statistical significance ( $p < 0.05$ ).

**Results:** The intervention significantly improved leadership skills across all domains of the CLCF, with "Improving Services" showing the largest improvement, reflecting better quality improvement

and innovation capabilities. Qualitative feedback highlighted increased confidence, appreciation for hands-on learning, and recognition of leadership as an essential clinical skill.

**Conclusion:** This intervention effectively enhanced leadership skills among postgraduate trainees, demonstrating the value of integrating leadership training into clinical education. Simulation-based training, combined with didactic learning, provides a scalable model for fostering leadership development. Periodic reinforcement through repeat simulations and feedback is recommended to sustain these gains.

### **RRF-16 lymphedema was managed by free vascularized lymph node transfer**

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preoperative and postoperative results were compared of limb girth after free vascularized lymph node transfer

### **RRF-07 Unveiling Harlequin Ichthyosis: A Clinical Case Study from Rawalpindi**

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Harlequin ichthyosis (HI) is a rare, life-threatening autosomal recessive genetic disorder caused by mutations in the ABCA12 gene, leading to impaired lipid barrier function and severe skin keratinization. This condition, with an estimated incidence of 1 in 300,000 births, poses significant neonatal challenges, including dehydration, infection, and respiratory distress, often resulting in early mortality.

We report the case of a 35-year-old mother with a consanguineous marriage, who delivered a term female infant with classic HI features, including deep skin fissures, generalized hyperkeratosis, ectropion, eclabion, and flattened nasal and auricular structures. Despite immediate NICU admission and multidisciplinary care involving dermatology, ophthalmology, and ENT specialists, the neonates condition rapidly deteriorated due to septic shock, respiratory failure, and metabolic derangements, culminating in mortality on the second day of life. This case highlights the critical need for prenatal genetic testing, particularly in high-risk populations with consanguineous marriages, and the importance of early diagnosis and targeted interventions, including systemic retinoid therapy. Furthermore, it

emphasizes the significant gaps in resources and expertise in managing rare genetic disorders in low-resource settings. While advanced therapies and multidisciplinary approaches have improved survival rates in developed countries, their unavailability remains a major barrier in resource-constrained regions like ours.

By documenting this case, we aim to enhance awareness and advocate for genetic counseling, early diagnostic protocols, and collaborative efforts to develop accessible and effective care strategies to reduce the burden of rare disorders like HI in developing countries.

### **RRF-08 Residents' Perception of Work-Life Balance During Residency Training at Benazir Bhutto Hospital Rawalpindi**

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**Background:** Achieving a work-life balance during residency is a critical yet often challenging aspect of medical training. This study explores the perception of residents at Benazir Bhutto Hospital, Rawalpindi, regarding their work-life balance and its impact on their professional and personal lives.

**Methods:** A cross-sectional survey was conducted among 150 residents from 10 departments (Medicine, Surgery, ENT, Eye, Dermatology, Radiology, Pathology, Urology, Orthopedics, Pediatrics, and Gynaecology). Data were collected using a validated questionnaire covering work hours, sleep patterns, personal time, job satisfaction, burnout, and coping mechanisms.

**Results:** The study surveyed 150 residents from 10 departments at Benazir Bhutto Hospital, with a response rate of 90%. Among respondents, 75% worked over 80 hours per week, with the highest workloads in Surgery (90%), Pediatrics (85%), Gynaecology (83%), Urology (80%), Orthopedics (78%), and Medicine (75%). ENT (72%), Eye (68%), and Dermatology (70%) were moderately demanding, while Radiology (40%) and Pathology (45%) reported the lowest workloads.

Burnout symptoms were prevalent in 70% of residents, with the highest rates in Gynaecology (80%), Surgery (78%), Pediatrics (75%), Medicine (73%), Orthopedics (72%), and Urology (70%). Eye (65%), Dermatology (68%) and ENT (62%) showed moderate burnout, while Radiology (35%) and Pathology (40%) reported the lowest. Sleep deprivation was common, with 68% sleeping fewer than six hours per night. ENT (72%), Orthopedics (70%), and Surgery (70%) had the highest

deprivation, while Dermatology (58%) and Eye (60%) reported moderate levels.

Coping strategies were employed by 40% of residents, with Dermatology (50%), Eye (48%), and Medicine (50%) being the most proactive. Surgery (25%), Pediatrics (30%), and ENT (35%) used coping mechanisms the least. Personal life satisfaction was reported by 30%, highest in Dermatology (55%), Eye (50%), and Radiology (60%), and lowest in Surgery (20%), Gynaecology (25%), and ENT (28%).

**Conclusion:** Residents' work-life balance varies significantly across departments, with Surgery, Pediatrics, and Gynaecology being most affected. Targeted interventions are needed to improve wellness and support residents across all departments.

### **RRF-09 Adherence to protocols in teaching tracheostomy care to postgraduate trainees**

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**Introduction:** Tracheostomy is a standard procedure used to manage upper airway obstruction. This may be secondary to trauma to tracheo-laryngeal structures, inoperable laryngeal tumors, laryngeal soft tissue infections, prolonged intubation, or severe neurological injury. Tracheostomy care is crucial for postoperative management, particularly in the early postoperative phase, to guarantee the best possible outcomes for patients. However, since this care is complex and due to the lack of local standardized guidelines, postgraduate trainees find it difficult to adhere to such protocols. We evaluated the standard of adherence to protocols in teaching tracheostomy care to postgraduate trainees of the ENT Department at Rawalpindi Teaching Hospital (RTH), according to international guidelines.

**Methods:** This retrospective audit involved 20 patients for whom the ENT department performed tracheostomies from January to November 2024. Semi-structured interviews to determine tracheostomy care practices and adherence to protocols among the postgraduate trainees.

**Results:** Up to 40% had limited information on tracheostomy dressing, 55% were aware of guidelines for changing the tracheostomy tube, and 20% of postgraduate trainees knew about cuff pressure monitoring. Traumatic suction of the newly created tracheostomy tube was seen in 65% of patients. Our survey also revealed inconsistencies in the frequency and techniques of airway suctioning among our trainees.

**Conclusion:** Due in part to the absence of clear

guidelines, tracheostomy care in the local context remained uneven. A tracheostomy care checklist has been created to provide standard treatment for patients in the ENT department. We advise holding instructive and hands-on training for Postgraduate trainees on managing tracheostomy patients.

### **RRF-11 Calm Under Pressure: The Impact of Mindfulness Training on Stress and Clinical Performance**

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**Introduction:** Stress significantly impacts the performance and well-being of healthcare professionals. Mindfulness training has emerged as a promising approach to alleviate stress and enhance focus and decision-making skills. This audit aimed to evaluate the effect of an 8-week mindfulness training program on perceived stress levels and clinical performance among postgraduate medical trainees in the Department of ENT and Head and Neck Surgery at Benazir Bhutto Hospital.

**Methods:** Thirteen postgraduate trainees participated in an 8-week mindfulness training program using the Calm mobile app. Participants were instructed to complete a 10-minute daily guided meditation session and the "7 Days of Calm" introductory program during the first week, followed by self-selected meditations addressing topics such as stress and focus. Pre- and post-intervention assessments included the Perceived Stress Scale (PSS) and Objective Structured Clinical Examination (OSCE) performance scores, measured as a percentage of a total score (75) and evaluated for errors, completion times, and task accuracy. Statistical analysis was conducted using IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY), and paired t-tests were used to compare pre- and post-intervention results, with a significance level set at  $p < 0.05$ .

**Results:** The mean PSS score significantly decreased from  $45.46 \pm 5.25$  at baseline to  $37.08 \pm 5.25$  post-intervention ( $p < 0.001$ ). OSCE performance improved from  $56.2\% \pm 14.0\%$  to  $72.7\% \pm 12.4\%$  post-intervention ( $p < 0.001$ ). Participants reported reduced perceived stress, improved focus, enhanced decision-making abilities, and better composure under pressure. Adherence was high, with no dropouts.

**Conclusion:** The mindfulness training program demonstrated a significant reduction in stress and improvement in clinical performance metrics. These findings support the inclusion of mindfulness training

in clinical education to foster resilience and enhance professional skills. Further research with larger cohorts is recommended to validate these results and explore long-term benefits.

### **RRF-12 Informed Consent- Is it more than a formality?**

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**Background:** Informed consent is part and parcel of clinical practice. A well-written and easily understandable consent form is not only a basic right of patients; it also saves doctors from false allegations in case a mishap occurs. The goal of this project is identify the areas of improvement in consenting patients before a surgical procedure and subsequently implementing changes for optimization of health services.

**Methods:** This quality improvement project consisted of 80 patients i.e. 40 in each cycle. Participants were interviewed and questionnaires were filled assessing their understanding of different components of the informed consent before a surgery. Areas of improvement were identified. Doctors were educated and new detailed consent forms were introduced mentioning all details. Cycle 2 was carried out. PDSA cycle was followed throughout.

**Results:** The results showed that consent forms were incomplete in 15% (6) patients in cycle 1 whereas the error was reduced to zero in cycle 2. Procedure explanation was not written in 57.5% (23) of cases in cycle 1. In cycle 2, the percentage dropped down to 10% (4). Potential complications were not mentioned in 37.5% (15) of patients in cycle 1 and procedure was not verbally explained in 32.5% (13) patients whereas post-intervention these errors were just 10% (4) and 5% (2) respectively. Right to withdraw from the surgical procedure was not given to 12.5% (5) participants in cycle 1 giving us a room of improvement in cycle 2 with no such mistake post-intervention.

**Conclusion:** Informed consent is more than a formality. It is the legal right of a patient to know about the details of the procedure he's undergoing. A significant improvement is seen post-intervention in cycle 2 emphasizing importance of a well-structured informed consent mentioning all necessary details.

### **RRF-13 Teaching Patient Confidentiality and Consent in ENT Procedures**

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**Introduction:** Patient confidentiality and informed consent are foundational principles of medical ethics. ENT procedures, often involving sensitive issues like hearing loss, voice changes, and facial aesthetics, highlight the need for effective teaching in these areas.

**Importance of Confidentiality and Consent**  
Confidentiality protects patient privacy, fosters trust, and complies with legal requirements. Consent ensures patients understand procedure risks, benefits, and alternatives, empowering them to make informed decisions.

**Objectives of Teaching**

1. Train students and trainees to maintain patient confidentiality.
2. Ensure understanding of the ethical and legal aspects of consent.
3. Develop effective communication skills for obtaining informed consent.

**Teaching Methods:**

Case-based discussions and role-playing simulate real-world scenarios, while observational learning showcases best practices. Challenges in ENT Complex procedures, sensitive topics, and cultural barriers complicate teaching but are addressed through empathy-driven strategies and active listening.

**Assessment of Learning**

OSCEs and feedback mechanisms ensure trainees competence in applying confidentiality and consent principles.

**Conclusion:** By addressing challenges and employing diverse teaching methods, educators prepare ENT professionals to deliver ethical, patient-centered care.

#### **RRF-14 Evaluating Research Skill Enhancement through Peer-Assisted Learning: A Study on Student Perceptions at Rawalpindi Medical University- a Cross-sectional Study**

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**Background:** Developing research skills in undergraduate medical students is essential for fostering evidence-based practice and enhancing future contributions to medical knowledge. Peer-Assisted Learning (PAL), a collaborative learning approach where students support each other through

structured peer interactions, offers a promising method for improving research literacy. At Rawalpindi Medical University (RMU), an integrated undergraduate research curriculum (IUGRC) incorporates PAL sessions supervised by public health specialists, particularly during the 4th year of MBBS.

**Objective:** To assess the perceptions of 4th-year MBBS students regarding the impact of PAL research projects on their research skills development.

**Methods:** A descriptive cross-sectional study was conducted at RMU with 250 4th-year MBBS students. The study evaluated their perceptions of research skill improvement through a structured questionnaire. The sample comprised 66.4% females and 33.6% males, with a mean age of 22.3 years. **Results:** 62.4% agreed, and 18.4% strongly agreed that PAL research projects enhanced their understanding of the research process. 56% felt more confident in designing research projects, while 24.8% were neutral. 55.2% reported improvement in conducting literature search, while 25.6% were neutral. Balancing academic responsibilities with research was difficult for 45.6%, with 32% remaining neutral. Additionally, 23.2% faced challenges in selecting appropriate titles and statistical methods, while 26.4% had high expectations of their research mentors.

**Conclusion:** The findings indicate that PAL research projects positively impact students' research skills, particularly in understanding research processes, project design, and literature reviews. However, challenges such as balancing academic and research responsibilities and selecting research methodologies were reported. Addressing these challenges through enhanced mentor guidance and structured support could further optimize the effectiveness of PAL in medical education.

#### **RRF-15 Comparison of topical versus intravenous tranexamic acid on blood loss in modified radical mastectomy**

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**Background:** Modified radical mastectomy (MRM) is one of the surgical procedures for breast cancer management. Many complications are associated

with wound healing, like hematoma, dehiscence, infection, chronic seroma and skin necrosis. The objective of this study was to compare the mean blood loss in drain output of topical versus intravenous tranexamic acid (TXA) use among patients undergoing modified radical mastectomy. Methods: This randomized controlled trial was conducted at department of surgery, Holy Family hospital, Rawalpindi from November 2019 to November 2020. 130 patients were randomly divided into two groups. Group A patients received tranexamic acid topically while group B patients received intravenous tranexamic acid during modified radical mastectomy. Drain output and blood loss was recorded after twenty-four hours of the surgery.

Results: Mean age was  $51.15 \pm 10.33$  in group A, while it was  $50.58 \pm 10.59$  in group B. Mean duration of breast cancer among the patients was  $11.45 \pm 8.70$  months. Mean blood loss, 24 hours after MRM was  $40.68 \pm 20.79$  ml in the topical group, while it was  $50.83 \pm 26.38$  ml in the intravenous group ( $p=0.016$ ). Conclusions: Topical tranexamic acid showed significantly better control on blood loss as compared to intravenous TXA.

#### **RRF-16 EGS P42 Prospective diagnostic accuracy of Alvarado score and CT scan in evaluation of suspected appendicitis**

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Background: Appendicitis is most common general surgical emergency with a life time risk of 7%. Appendicitis is considered as disease of the younger age group with only 5-10% of cases occurring in the elderly population. Ultrasound and CT scan are helpful in diagnosing acute appendicitis. The rationale of this study is to find out the group of patients based on the Alvarado score that will certainly benefit from the use of city scan. As CT is the preferred imaging modality in diagnosing acute appendicitis. Alvarado score is used to stratify patients into a subgroup that will certainly benefit from CT use.

Methods: Cross-sectional validation study was conducted for six months from (30/03/2017) to (30/09/2017) in Surgical unit-1, holy family hospital, Rawalpindi. Alvarado score was calculated, and the patients then underwent a contrast-enhanced CT scan. For the data of CT scan, patients were divided into two groups Positive and negative of appendicitis. All

selected patients underwent an appendectomy. Histological specimens were collected and interpreted. All the collected data was entered and analyzed on SPSS version 19.

Results: The mean age of the patients was  $28.93 \pm 10.21$  years. The male to female ratio was 1:1.1. The mean Alvarado score was  $6.05 \pm 0.68$ . The sensitivity, specificity and diagnostic accuracy of CT scan for diagnosing acute appendicitis was 84.75%, 78.69% & 81.67% respectively taking histopathology as the gold standard.

Conclusions: According to our study CT scan is a reliable and useful diagnostic tool at Alvarado score of 5-6 in males and 6-7 in females, in predicting acute appendicitis keeping histopathology as a gold standard.

#### **RRF-17 Enhancing Patient Care Through Structured Assessment Of Supracondylar Fractures: A Quality Improvement Project At Holy Family Hospital, Rawalpindi Medical University**

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Introduction: Supracondylar fractures make up for about one-fifth of all pediatric fractures and 60% of all elbow fractures in children. It has been reported that about 10-20% of the cases, the fracture also results in certain neurological injuries. While vascular complications have been reported in 20% of the cases. Our study was designed to investigate the neurovascular status documentation of supracondylar fractures in the pediatric population and to devise and implement a new assessment proforma for the evaluation of these fractures.

Methods: This QIP was conducted in two cycles at Department of Orthopedic Surgery, Holy Family Hospital from October 2022 to October 2023. The first cycle was retrospective data collection and second cycle was prospective data collection. In total, there were 112 children with supracondylar fractures. The evaluation was conducted in three stages: the initial stage consisted of examining the patient on presentation, the second stage focused on evaluating after applying plaster of Paris (POP)/backslab/manipulation, and the third stage involved assessing the patient post-surgery.

Throughout each stage of evaluation, any changes in vascular assessment (Yes/No) and any changes in neurological assessment (Motor and Sensory) were documented. The data was analyzed using 95% confidence interval and a significance level set at

p<0.05.

Results: Cycle: 1

In cycle 1, pre-Operatively, 6 patients (11.5%) had documented neurological status, 25(48.07%) had documented vascular status, and 10 (19.2%) as "NVI." After POP/backslab/manipulation, neurological status was documented in 3 patients (5.8%), vascular status in 21(40.3%), and "NVI" in 8(15.4%). Postoperatively, neurological status in 5(9.6%), vascular status in 23(44.2%), and "NVI" in 16 patients (30.8%).

Cycle: 2

On presentation in cycle 2, neurological status documentation was present in 41 patients (68.3%), vascular status documentation in 55(91.6%), and "NVI" in 40(66.7%). After POP/backslab/manipulation, neurological status documentation was in 48 patients (80%), vascular status documentation in 52(86.7%), and "NVI" in 53(88.3%). Postoperatively, neurological status documentation was in 52(86.7%), vascular status documentation in 56(93.3%), and "NVI" in 57(95.0%).

Conclusion: This QIP suggest that structured assessment of supracondylar fractures can significantly enhance patient care.

Key words: Quality improvement project, Supracondylar fractures, Neurovascular documentation.

### **RRF-18 Association of Dietary and Obstetric Factors with the Type of Gallstone**

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Objective: Dietary and many other factors have been shown to increase the risk of gallstones, but their association with stone type is poorly understood. This study aims to assess the association of dietary and obstetric factors with the type of gallstone.\

Methods: 116 consecutive patients requiring cholecystectomy due to gallstone disease, admitted in our hospital, from January 2019 to December 2020 were included in this study. Demographic details, medical history, lifestyle and dietary habits, obstetric history and laboratory parameters were recorded using a data collection form developed by the researchers. Removed gallstones were classified as being cholesterol or pigment by gross visual inspection.

Results: Cholesterol gallstones were found in 76

(65.5%) and pigment stones in 40 (34.5%) of 116 total patients. Drug use was significantly higher in pigment stone group as compared to cholesterol group (p=0.002). Patients with cholesterol stones consumed significantly higher beef, fish and confectionery items than patients with pigment stones with a p-value of 0.043, 0.017 and 0.041, respectively. Parity was significantly higher in patients with pigment stones as compared to patients with cholesterol stones (p=0.023). A logistic regression model to assess the effect of beef, fish and confectionery item consumption and age at first pregnancy with the likelihood of having cholesterol gallstone was statistically significant (p=0.017) and showed that risk is higher in patients with age  $\geq 20$  years at first pregnancy [OR 6.89 (95% CI 1.24–38.15), p=0.027].

Conclusions: This study concludes that diet and obstetric factors can influence the type of gallstone.

### **RRF-19 Assessing the Impact of Work Base Assesment on Resident Performance**

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Introduction: Workplace-Based Assessment (WBA) evaluates postgraduate residents in real-world clinical settings. Tools such as Topic Presentations, Direct Observation of Procedural Skills (DOPS), and Clinical Examinations are critical for competency-based training. This study aims to demonstrate the measurable benefits of WBA in enhancing clinical competence, procedural skills, and professional growth.

Study Design;

Participants: 100 postgraduate residents from various specialties.

Duration: 3 months.

Methods: Residents assessed quarterly using Topic Presentations, DOPS, and Clinical Examinations. Feedback and performance data collected through structured tools and surveys. Comparison of pre-WBA baseline skills vs. post-WBA outcomes.

Key Assessment Tools Studied

Topic Presentations

Improves knowledge synthesis and public speaking.  
Develops critical thinking through peer discussions.  
DOPS (Direct Observation of Procedural Skills)  
Ensures procedural proficiency through real-time observation. Builds confidence and technical accuracy.

Clinical Examinations;

Sharpens diagnostic reasoning and patient interaction skills. Aligns clinical practice with evidence-based

guidelines.

Results:

Skill Development:

85% of residents showed improved procedural accuracy after repeated DOPS assessments. 78% reported enhanced diagnostic skills from clinical exams.

Confidence and Communication:

Topic presentations increased communication skills in 88% of participants. 92% found that immediate feedback promoted better clinical decision-making.

Patient Outcomes:

Improved patient satisfaction scores in clinics with WBA-trained residents.

Conclusion: This study confirms the benefits of Workplace-Based Assessments such as Topic Presentations, DOPS, and Clinical Exams. These tools significantly enhance postgraduate residents' clinical competence, procedural accuracy, and overall professional development, ensuring better patient care outcomes.

#### **RRF-20 Preoperative scoring system in predicting difficulty in laparoscopic cholecystectomy.**

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Objective: To evaluate a scoring system in predicting difficulty in laparoscopic cholecystectomy. Study Design: Non-Randomized Prospective study. Setting: Surgical Unit-1 of Holy Family Hospital, Rawalpindi. Period: January 2018 to September 2018. Material & Methods: Patients with symptomatic gallstone disease that were admitted in SU-1 of Holy family hospital during the above period were included in the study. For collection of data, a pre-tested questionnaire was used after taking informed oral consent. On admission, one day before the surgery, preoperative points were allotted on basis of patients history, examination, hematological (CBC), biochemical (LFTs) and ultrasound results. Preoperative scores up to 5 was summed up as easy, scores 6 “ 10 as difficult, 11 “ 16 as very difficult. Calculated sample size was 229. SPSS version 22 and WHO Anthro calculator version 3.2.2 were used for data entry and analysis. Results: Among 230 patients that were included in the study, 188 were female and 42 were male. Various risk factors were found to have significant positive correlation with intraoperative difficulty during cholecystectomy. These are: Previous episodes of cholecystitis and pancreatitis ( $p=0.00$ ), ERCP ( $p=0.00$ ), tenderness in right hypochondrium ( $p=0.002$ ), hepatitis serology

( $p=0.02$ ), and Total Leukocyte Count ( $p=0.006$ ).

Whereas the following factors had insignificant relation with intraoperative difficult cholecystectomy: ALT and ALP ( $p>0.05$ ,  $p=0.06$  and  $0.26$  respectively) and hepatitis serology ( $p=0.406$ ). A significant correlation was found between preoperative and intraoperative scores of the patients ( $p=0.003$ ) indicating that preoperative assessment of various risk factors can predict the level of difficulty of cholecystectomy and its conversion to open cholecystectomy. Conclusion: We may conclude that the scoring system evaluated in our study is a sturdy, reliable and useful benchmark to predict difficult cases. Preoperative prediction of the risk factors of conversion or difficulty of operation is an important point for operative planning and the high-risk patients may be informed accordingly.

Keywords: Gall Bladder, Laparoscopic Cholecystectomy, Total Lymphocyte Count, Ultrasound Abdomen

#### **RRF-21 Topical Calcium channel blockers for effective post operative analgesia for hemorrhoidectomy patients; A Randomized Control Trial at a Tertiary Care Hospital**

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Objective: To compare the mean pain scores after hemorrhoidectomy in patients given topical calcium channel blocker and patients being given routine post-operative treatment only. Study Design: Randomized Controlled Trial. Setting: Surgical Department of Holy Family Hospital. Period: 7th January 2022 to 7th July 2022. Material & Methods: Patients fulfilling the inclusion criteria were divided into two groups. Group A patients will receive topical calcium channel blockers whole group B will receive conventional analgesic medications. Patients in both groups underwent open hemorrhoidectomy under saddle block anesthesia. At the end of procedure, a lignocaine gel-soaked pack was placed in rectum which was removed after 6 hours. The post-operative treatment of test group was similar in all regards except that they were given 2% diltiazem ointment to apply to perianal region twice a day. Oral stool softeners were started after NPO duration. The patients were advised to start warm sitz bath and application of 2% lignocaine gel to perianal region 12 hourly after removal of pack. The patients in both groups were compared for the degree of pain on the

second post-operative day using visual analogue scale. Results: In this study, on comparison of mean pain scores after hemorrhoidectomy in patients given topical calcium channel blocker and patients being given routine post-operative treatment only shows that pain in Group-A was  $5.89 \pm 0.80$  and in Group-B  $3.60 \pm 0.77$ , p value was 0.0001. Conclusion: Topical Calcium Channel Blockers are effective in managing post hemorrhoidectomy pain.

Keywords: Hemorrhoidectomy, Mean Postoperative Pain Score, Topical Calcium Channel Blocker

### **RRF-22 Transcriptional Profiling of Sonic Hedgehog in a Prospective Cohort of Breast Cancer in a Pakistani Population**

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Background/aim: Constitutive activation of Sonic hedgehog (SHH) has been observed in different types of cancers. In the present study, expressional profiling of SHH in a breast cancer cohort (n=150) of a Pakistani population and its association with different molecular subtypes have been explored. Methods: qRT-PCR and IHC were performed for expression analysis of SHH and its association with ER, PR, HER2 and Ki-67 were also statistically analyzed.

Results: A significant over-expression of SHH was observed in tumor tissues in comparison to their respective controls ( $p < 0.0001$ ). A strong positive correlation was seen between SHH and proliferation marker ( $r = 0.635$ ,  $p = 0$ ). SHH expression was significantly high among patients with advanced tumor grade, stage, nodal involvement and metastasis. Furthermore, both luminal-B and triple-negative subtypes of cohort showed increased expression of SHH.

Conclusion: Based on these findings, SHH may be used as a potential biomarker for breast carcinogenesis.

Keywords: Breast cancer; Sonic hedgehog; biomarker development; clinicopathological features; qRT-PCR.

### **RRF-23 Fluorescence Spectroscopy: A Rapid Tool for Bacterial Pathogen Identification in Clinical Samples**

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Introduction: Fluorescence spectroscopy (FS) is a potential means for the analysis of clinical bacterial infections. This study analyzes their distinct spectral characteristics and proposes a method for categorizing one of the priority bacteria.

Methodology: Emission spectra were obtained using excitation wavelengths incremented by 10 nm.

Principal component analysis and classified clustering statistical tools were applied for evaluation of spectra.

Results: Reproducible results were obtained.

Conclusion: The study demonstrated high reproducibility and clear differentiation between two resistant strains when correlated to gold standard method.

Keywords: Bacteria, fluorescence spectroscopy

### **RRF-24 Choledocholithiasis: Treatment Options in a Tertiary Care Setup in Pakistan**

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Introduction Among patients with cholelithiasis, choledocholithiasis may also be present in about 18% of cases. They can be treated through various endoscopic, laparoscopic, and open surgical procedures. Objective The objective of this study was to determine the outcome of patients with choledocholithiasis being treated in our setup.

Methods This descriptive case series was conducted at Holy Family Hospital, Rawalpindi, Pakistan over two years from January 2015 to December 2016. All patients with choledocholithiasis admitted to Surgical Unit 1 were included in this study. All patients underwent elective endoscopic retrograde cholangiopancreatography (ERCP). In patients with successful ERCP, laparoscopic or open cholecystectomy was performed at a later date. In patients in whom ERCP failed, open surgical clearance of the common bile duct (CBD), along with cholecystectomy, was done. Results A total of 200 cases of choledocholithiasis were admitted during the study period. Most of the participants (73%) in this study were female. Liver function tests were found to be deranged in 88 patients (44%) and normal in 112 patients (56%). At presentation, 3.5% (n=7) had concomitant acute biliary pancreatitis and 8% (n=16) had cholangitis. Successful ERCP followed by

cholecystectomy was performed in 88.5% of cases. On the other hand, 11.5% (n=23) patients had failed ERCP due to impacted stones. They underwent open surgical procedures, i.e. 43.48% (n=10) had choledochotomies, 47.82% (n=11) had choledochoduodenostomies and 8.69% (n=2) had hepaticojejunostomies. No postoperative mortality was observed. However, anastomotic leaking occurred in 8.69% cases (n=2). Conclusion A two-staged procedure consisting of ERCP, followed by laparoscopic cholecystectomy, should be the first line of treatment for common bile duct (CBD) stones. In cases where ERCP fails, open surgical procedures still remain a relevant and a definitive option in resource-constrained setups.

Keywords: choledochodeudonostomy; choledocholithiasis; choledochotomy; cholelithiasis; ercp.

#### **RRF-25 The Efficacy of Tamsulosin vs Combination of Tamsulosin & Solifenacin in the Management of Double-J stent related Lower Urinary Tract Symptoms**

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Introduction: Double J stents are a cornerstone in the management of wide range of urological ailments. Although DJS can be beneficial, it also poses inherent risks from medical perspectives, like pain and LUTs. The purpose of this study is to determine whether tamsulosin alone or in combination with solifenacin is better in controlling these symptoms. Methods: This was a RCT conducted from July 23<sup>rd</sup> to July 24<sup>th</sup> in the department of Urology, Benazir Bhutto Hospital, Rwp. LUTs were assessed using IPSS and pain was assessed using VAS, with scores recorded pre-operatively and 2 weeks post-op. 64 patients were enrolled aged 18-65 undergoing unilateral temporary DJS fixation, divided into 2 groups, Group A with Tamsulosin 0.4mg x OD alone, Group B with Tamsulosin 0.4mg + Solifenacin 5mg x OD. Exclusion criteria included urological anomalies, bilateral stents, prior use of these medicines. Data was analyzed using IBM SPSS v27, with statistical significance set at  $p < 0.05$ . Results: Total of 64 patients, 32 in each group. Mean age, gender distribution, BMI was comparable. Comorbidities were present in 37.5% of patients in monotherapy and 40.6% in combination therapy group. There were no statistically significant difference in baseline demographic or clinical variables between the two groups.

Mean duration of stent use was also comparable. Mean preoperative IPSS were not statistically significant, however after 2 weeks treatment, postoperative IPSS was significantly lower in combination therapy,  $p < 0.001$ . postoperative VAS showed greater improvement in the combination therapy group,  $p < 0.001$ .

Conclusion: This study adds to the growing body of evidence that combination therapy is superior treatment strategy for DJS related symptoms compared to monotherapy.

Keywords: Tamsulosin, Solifenacin, combination therapy, Double J stent, ureteral stent related symptoms, LUTs

#### **RRF-26 Impact Of Early Urological Intervention In The Emergency Management Of Patients Presenting With Obstructive Uropathy: A Six-Month Study At Benazir Bhutto Hospital**

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Background: Obstructive uropathy (OU) is a common urological emergency that can lead to irreversible renal damage if not addressed promptly. The role of early urological intervention in improving patient outcomes remains a subject of clinical interest. This study aims to assess the impact of early urological intervention on the outcomes of patients with obstructive uropathy in the emergency setting at Benazir Bhutto Hospital.

Methods: A prospective, observational study was conducted over a period of 6 months (January 2024 to June 2024) at Benazir Bhutto Hospital, Rawalpindi. The study included patients presenting to the emergency department (ED) with symptoms indicative of obstructive uropathy, confirmed through clinical examination, imaging (ultrasound and CT scan), and laboratory tests (renal function tests). Patients were categorized into two groups: Group A (early intervention) and Group B (delayed intervention). Early intervention was defined as urological management initiated within 6 hours of admission, while delayed intervention was initiated after 6 hours. Primary outcomes assessed included resolution of obstruction, renal function improvement, length of hospital stay, and the incidence of complications such as sepsis and acute kidney injury (AKI).

Results: A total of 120 patients were enrolled in the study, with 60 patients in each group. The mean age of the cohort was 48.5 years, with a male-to-female

ratio of 2:1. The most common cause of obstructive uropathy was nephrolithiasis (42%), followed by benign prostatic hyperplasia (25%) and ureteral stricture (18%). Resolution of Obstruction: In Group A, early intervention resulted in a complete resolution of obstruction in 85% of patients within 48 hours. In contrast, only 58% of patients in Group B had successful obstruction resolution within the same timeframe ( $p<0.05$ ). Renal Function Improvement: The mean improvement in serum creatinine levels was 2.1 mg/dL in Group A, compared to 1.5 mg/dL in Group B ( $p=0.02$ ). Notably, 92% of Group A patients showed normalization or significant improvement in renal function, while only 75% of Group B patients showed similar results.

Length of Hospital Stay: The average length of stay in Group A was 4.2 days, significantly shorter than the 6.5 days observed in Group B ( $p<0.01$ ).

Complications: The incidence of AKI was significantly lower in Group A (12%) compared to Group B (28%) ( $p=0.03$ ). Similarly, the rate of sepsis was reduced in Group A (6%) compared to Group B (15%) ( $p=0.04$ ).

Conclusion: Early urological intervention in patients with obstructive uropathy significantly improves outcomes, including faster resolution of obstruction, better renal recovery, and reduced complications, when compared to delayed intervention. The findings from this study highlight the importance of prompt diagnosis and timely management in the emergency setting to reduce morbidity and improve patient outcomes. Early intervention should be prioritized for optimal management of obstructive uropathy in the emergency department.

Keywords: Obstructive uropathy, early intervention, emergency management, renal function, acute kidney injury, Benazir Bhutto Hospital, obstructive uropathy outcomes.

#### **RRF-27 An Innovation In The Ureteroscopic Management Of Ureteric Stones**

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Introduction: Renal stones are common urological disorder that affects millions of people worldwide. These stones are formed by the crystallization of substances such as calcium, oxalate, uric acid, and cysteine in urine. The prevalence of stones varies depending upon geographic location, age, gender, and ethnicity. The management depends on the size, location and composition of stones. The aim of this study was to evaluate the efficacy of ureteroscopy and lithoclasty with & without DJ stenting for the

management of urteric stone

Methods: This was an Interventional Comparative study, carried out in the Department of Urology, BBH, Rwp, between July23' to Dec 23' for 6months. Patients undergoing temporary reterograde DJS fixation, Ureteric stone of 6-15mm and adults aged 18-65yrs were included. Exclusion criteria was patients with urological anomalies, pregnant females, urethral strictures, enlarged prostate and ureteric calculi <6mm or >15mm

Results: All patients were divided into 2 groups, Group A had 105 patients without DJS indertion& Group B was with DJS insertion. Data was analyzed by chi-square test and p-value was calculated. LUTs was observed in 20 non stented patients and 38 stented patients, which was statistically significant. Hematuria was seen in 4 non-stented patients and 8 stented patients, not statistically significant. flank pain was seen in 22 non-stented patients and 19 stented patients, not statistically significant. Failure to pass stone at 1 week in non-stented patient was 5 and 8 stented patient, statistically significant. However, failure to pass stone at 1 month in non-stented patient was seen in 2 patients and in stented patient was 3, which was not statistically significant. Conclusion: URS & Lithotripsy are procedure of choice for ureteric calculi. It can be performed safely and successfully without DJS insertion in most of the cases.

Keywords: Ureterscopy, Lithotripsy, DJ stenting

#### **RRF-28 Surgical Safety Checklist According To WHO, Compliance: Clinical Audit**

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Introduction: WHO launched Safe Surgery Saves Lives in 2006, which highlighted the essential objectives for safe surgical practice, and the WHO surgical safety checklist (SSC) was formulated as an effort to provide surgeons with a concise layout to follow these recommendations that ensure patient safety during surgical procedures

Methods:The observational clinical audit is being conducted in Surgical Unit 2, Benazir Bhutto Hospital, Rawalpindi, Pakistan.

Compliance with the surgical safety checklist will be observed before and after the educational intervention.

Results: Improvement seen in domains of displaying of images, marking the site, introduction, explaining critical events.

Conclusion: implementation of surgical safety

checklist will result in reduced intra and perioperative complications

Keywords: Surgical safety checklist, compliance, clinical Audit

### **RRF-29 Bilateral Asynchronous Phyllodes Tumor in a Young Female: A Rare Case Report**

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**Introduction:** Phyllodes Tumor is a rare type of fibroadenoma that is presented in less than 0.3% to 0.1% of the cases. WHO define Phyllodes Tumor as well circumscribed fibroepithelial neoplasm showing a prominent intracanalicular architectural pattern with leaf-like stromal fronds [1, 2]. These rare tumors are made even more rare when they occur bilaterally.

#### **Case Report:**

A 29 Y/O female presented in September with asynchronous massive phyllodes tumor (PT) in left breast measuring 13 x 10 x 6 cm. CT scan showed a huge multilobulated lesion sparing underlying muscle and fat with no indications of Li Fraumeni Syndrome. Breast size started increasing a year back and was painful with bloody discharge for the last 3 to 4 weeks and was relieved by ejection of milk. She had PT in her right breast 5 years back for which she had total mastectomy. USG showed a well-defined, lobulated, hyperechoic lesion involving all 4 quadrants. TruCut Biopsy evidenced Benign Phyllodes Tumor.

#### **Surgical Intervention**

Since no indication of malignant phyllodes tumor was seen, wide local excision with 1 cm free margins were done. The final plan involved reconstruction of left breast with ipsilateral Latissimus Dorsi flap and silicone breast implant on the right side with the plastic surgery MDT, however, patient refused reconstruction. Nipple sparing mastectomy was done with wide local excision and tumor free margins were achieved as evidenced on tissue biopsy post operatively. Follow-up with the patient shows optimal recovery and healthy wound healing.

**Conclusion:** Bilateral asynchronous benign phyllodes tumor is a very rare case that affect <2.1 million females especially at such a young age group. It is however common in the Asian population [3, 4]. Although benign, and malignancy even more rare, surgical excision with 1 cm clear margins remain the mainstay treatment. Although recurrence in the same breast is not uncommon, recurrence in the

contralateral breast is even more rare. Reconstruction of the breast with implants and LD flaps are the latest modalities of treatment [5].

Keywords: Phyllodes Tumor, breast tumor, benign breast lesions, breast surgery, breast reconstruction

### **RRF-30 Quality Care Through Clinical Audit: Enhancing Patient Satisfaction in the Inpatient Surgical Unit Of A University Affiliated Teaching Hospital**

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**Background:** Patient satisfaction is a critical indicator of healthcare quality, influencing clinical outcomes and patient well-being. This study aimed to assess patient satisfaction in the inpatient surgical unit of a university-affiliated teaching hospital.

**Methods:** A prospective study was conducted with 50 patients admitted for at least one week. Patients with oxygen dependency, Glasgow Coma Scale (GCS) <15, or learning difficulties were excluded. Data were collected through a self-designed questionnaire covering key satisfaction parameters, including communication, hospital environment, staff responsiveness, quality of care, and patient involvement. The results were analyzed using SPSS version 24 and paired T-tests.

**Results:** The findings revealed that 64% of patients felt their doctors were thorough during examinations, and 68% were satisfied with the effectiveness of their treatment. However, only 44% reported comfort with the hospital environment, and 52% found staff responsiveness satisfactory. Trust in doctors' capabilities was high (72%), but 60% of patients desired more information regarding their diagnosis and treatment.

**Conclusion:** The study highlights the importance of improving hospital environment, communication, and staff responsiveness to enhance patient satisfaction. Clinical audits can serve as a valuable tool for identifying and addressing gaps in care delivery.

Keywords: Patient satisfaction, Clinical audit, Surgical inpatient care, Healthcare quality, Hospital environment, Staff responsiveness, Patient-provider communication, Patient-centered care, University-affiliated teaching hospital, SPSS analysis

### **RRF-31 Comparison Of Seroma Formation Between Flap And Non Flap Fixation Technique For Different Stages Of Breast Cancer**

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**Objective:** To compare the effect of flap fixation and non-flap fixation for preventing seroma formation depending upon stage of surgery in patients undergoing mastectomy at RMU Allied Hospitals following mastectomy in our local population. **Study Design:** Randomized Controlled Trial. **Setting:** Surgical Units of Holy Family Hospital, Benazir Bhutto Hospital, DHQ Hospital (RMU & Allied Hospital). **Period:** October 2020 to April 2021. **Material & Methods:** Sample size of 114 cases was included in the study. It was Non probability, consecutive sampling technique. Patients were equally randomized to flap-fixation (Group A) and non-flap fixation (Group B). Patients of both groups were followed up to 48 hours postoperatively for seroma formation. Results were analysed using SPSS software and compared by applying chi-square test and p-value  $\leq 0.05$  considered significant. **Results:** Statistically significant difference (p-value  $\leq 0.05$ ) for seroma formation was noted only in disease stage IIIA. In group A (Flap Fixation), seroma formation was noted in 22.8% (n=13) patients, while in group B (Non-Flap Fixation) it was noted in 45.6% (n=26) patients only. **Conclusion:** The patients with stage IIIA undergoing mastectomy are significantly (p-value  $\leq 0.05$ ) associated with seroma formation. Whereas, flap fixation is more useful technique for minimizing seroma formation. **Keywords:** Flap Fixation, Mastectomy, Seroma Formation

### **RRF-32 Diagnostic Accuracy Of Chest Ultrasonography In Diagnosing Pneumothorax Taking CT Chest As A Gold Standard**

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**Introduction:** Ultrasound of lung is an emerging diagnostic technique for diagnosing pneumothorax in patients with traumatic injury or other causes with fairly decent sensitivity and specificity. It has numerous advantages when compared to chest radiography and CT scanning, which includes not

using ionizing radiations, being portable, capable of real-time imaging, and ideally suited for repeat examinations. Additionally, it is widely available and is not expensive. Despite of literature supporting the efficiency of chest ultrasound in establishing diagnosis of pneumothorax, very few studies are reported from Pakistan in this context.

**Objectives:** To determine the diagnostic accuracy of chest ultrasonography in diagnosing pneumothorax taking CT chest as a gold standard.

**Study design:** Cross-sectional validation study.

**Settings:** Department of Radiology, Holy Family Hospital, Rawalpindi

**Study duration:** 30th November 2022 to 29th May 2023.

**Methods:** A total of 90 pediatric and adult patients of all age groups of either gender, presenting in the Emergency department with clinical suspicion of pneumothorax either traumatic or spontaneous were included. Critically ill patients, patients requiring urgent surgery, patients with tension pneumothorax, those with hemodynamic instability and pregnant females were excluded. All included patients were undergone chest ultrasound using Honda HS-2600 ultrasound machine equipped with high frequency (5 - 10 MHz) linear probe. Pneumothorax was diagnosed by identifying sonological signs including absence of lung sliding sign, seashore sign and presence of barcode sign at the same location. All included patients were subsequently scanned using plain CT chest imaging modality for confirmation of diagnosis.

**Results:** Overall sensitivity, specificity, positive predictive value, negative predictive value and diagnostic accuracy of chest ultrasonography in diagnosing pneumothorax taking CT chest as a gold standard is 92.85%, 91.17%, 94.54%, and 88.57% respectively.

**Conclusion:** This study concluded that diagnostic accuracy of chest ultrasonography in detecting pneumothorax is quite high and ultrasonography is readily available, portable, can be completed within few minutes and almost economical.

**Keywords:** pneumothorax, ultrasonography, sensitivity.

### **RRF-33 The Role Of Myoinositol Supplementation In The Prevention Of Gestational Diabetes Mellitus In High-Risk Pregnant Women**

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**Introduction:** Gestational diabetes mellitus (GDM) is a condition characterized by impaired glucose tolerance and insulin resistance, linked to severe maternal and newborn morbidities. Myoinositol, a vitamin B substance, may reduce GDM risk.

**Methodology:** A randomised controlled study has been conducted in department of Obstetrics & Gynaecology Holy Family Hospital Rawalpindi over a period of six months. Singleton pregnant females between gestational amenorrhea of 11 to 13+6 having risk factors for gestational diabetes mellitus were included in the study and divided into two groups equally. From 11+6 weeks until 24 to 28 weeks of gestation, Group A is given myoinositol (2g) & folic acid (200 mcg) twice a day, whereas Group B is given only folic acid. A 75g two-hour oral glucose tolerance test (OGTT) has been used to evaluate the results at 16+20 weeks and 24+28 weeks. SPSS version 25 will be used to analyse the data.

**Results:** The most prevalent risk factor was first-degree relatives with diabetes (78.26%), followed by combinations with a history of GDM (3.48%). At 16-20 weeks, GDM was diagnosed in 1.85% of Group A and 9.84% of Group B. At 24-28 weeks, GDM prevalence had risen to 10.37% in Group A and 29.51% in Group B. Chi-square analysis showed a significant correlation ( $p < 0.05$ ) between study groups and GDM diagnosis at 16-20 or 24-28 weeks.

**Conclusion:** The significant incidence of first degree relative with diabetes mellitus emphasises its significance as a risk factor for GDM. While GDM diagnosis increased with gestational age, significant relationship seen between study groups and OGTT outcomes.

**Key Words:** High Risk Pregnancy, Gestational Diabetes mellitus, Myoinositol, Oral Glucose tolerance test

### **RRF-34 On The Edge: Evaluating Clinicopathological Outcomes Of Patients With Close And Involved Surgical Resection Margins In Early-Stage Tongue Squamous Cell Carcinoma**

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**Background:** Early-stage oral tongue cancers, predominantly squamous cell carcinomas, originate in the anterior two-thirds of the tongue. Surgical resection remains the cornerstone of treatment,

aiming to excise the tumour along with a margin of healthy tissue. Ensuring clear surgical margins is essential, as it substantially influences prognosis by minimizing the likelihood of local recurrence and enhancing overall survival rates.

**Objectives:** This study examines the outcomes of early-stage squamous cell carcinoma of the oral tongue with close and involved surgical resection margins, focusing on recurrence rates, survival outcomes, and the necessity for adjuvant treatment.

**Methods:** This retrospective cohort study was conducted at Shaikat Khanum Memorial Cancer Hospital and Research Centre in Lahore, Pakistan from January 1, 2011, to December 30, 2021. A total of 158 patients, aged 18 to 75 years, diagnosed with early-stage oral tongue cancer (stages I and II) were included through consecutive sampling. Patients with metastatic disease, prior head and neck cancers, concurrent malignancies, or significant comorbidities that could affect treatment or prognosis were excluded. Data analysis was performed using SPSS Statistics 27, and Kaplan-Meier analysis was employed to evaluate overall and recurrence-free survival.

**Results:** Among the  $n=158$  patients,  $n=123$  (77.8%) had close margins,  $n=35$  (22.2%) had involved margins. Males were the majority in both groups ( $p=0.846$ ). The estimated mean survival time was  $110.04 \pm 9.92$  months for patients with close margins and  $69.94 \pm 2.03$  months for those with involved margins. Patients with involved margins exhibited a lower mean survival time ( $p=0.394$ ). The overall 5-year survival rates were approximately 89.20% (95% CI: 79.60%-99.90%) for close margins and 96.9% (95% CI: 91.00%-100%) for involved margins. The estimated recurrence-free mean survival time was  $93.33 \pm 10.36$  months for close margins and  $54.97 \pm 4.65$  months for involved margins ( $p=0.549$ ). The 5-year recurrence-free survival rate was 73.90% (95% CI: 91.90%-89.30%) for close margins and 58.9% (95% CI: 38.30%-90.60%) for involved margins.

**Conclusion:** This study evaluated the outcomes of early-stage oral tongue squamous cell carcinoma (SCC) with close and involved surgical resection margins. The results indicate that patients with involved margins experienced lower mean survival times and higher recurrence rates, although these differences were not statistically significant. The study underscores the critical importance of precise margin assessment during surgery, as margin status can significantly impact survival and recurrence rates. The high overall and recurrence-free survival rates observed reflect effective management strategies, highlighting the potential role of adjuvant treatment decisions based on margin status. These findings contribute to refining treatment approaches

and optimizing outcomes for patients with early-stage oral tongue SCC.

### **RRF-35 The Hidden Struggles: Understanding Preoperative Anxiety Among Surgical Patients At Rawalpindi Medical University**

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**Introduction:** Anxiety is defined as a future-oriented mood state during which one is prepared to attempt to address approaching negative events. Stress in patients planning surgery is important as it can influence their decision to seek or delay medical care. The aim of the study was to determine the prevalence and factors causing anxiety in preoperative period in patients undergoing major elective surgery procedures.

**Methods:** This multi-centered cross-sectional study was carried out Rawalpindi medical university allied hospitals. We selected 363 patients of elective surgery for the study. Structured Performa was used to obtain demographic data and factors contributing to anxiety. Visual analogue scale (VAS) was used to measure anxiety and a score of  $\geq 45$  was considered as high anxiety. Data was entered and analyzed using the statistical package for social sciences (SPSS) software, version 22. Two sided Chi square test was used to determine the statistical significance between anxiety and gender

**Results:** 228 (62.8 %) patients had preoperative anxiety score  $> 45$ . There was significant correlation ( $\chi^2=0.005$ ) between female gender and preoperative anxiety. Among the common reasons for preoperative anxiety in respondents were the fear of surgery being postponed 240 (69.9%), Nakedness on operating table 207 (57.7%) Not waking up from surgery 194 (54%), Inability to pay hospital bills 193 (53.8%).

**Conclusion:** Patients in our setting experience significantly high levels of preoperative anxiety. Addressing preoperative anxiety requires robust patient education and clear communication. Offering detailed insights into surgical procedures, anesthesia, and recovery, complemented by preoperative consultation clinics, can significantly enhance patient readiness and alleviate anxiety.

**Keywords:** preoperative, anxiety, surgery,

### **RRF-36 Frequency Of Dyslipidemia In Ischemic Stroke Patients**

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**Introduction:** The frequency of dyslipidemia in ischemic stroke patients has been a subject of varying results in existing literature. Given the inconsistency in findings, this study was designed to specifically assess the prevalence of dyslipidemia in ischemic stroke patients.

**Methods:** This descriptive case study was conducted at Department of Medicine, Rawalpindi Teaching Hospital for a period of six months. One hundred and fifty five (155) patients attending the medical outdoor of Rawalpindi Teaching Hospital who met the inclusion criteria were enrolled into this study. Written informed consent and detailed history was taken from every patient. Blood samples were taken by using aseptic measures and standard procedure after an 8 hour of overnight fasting on next day of admission. Dyslipidemia was diagnosed as per operational definition.

**Results:** The study sample consisted of 155 ischemic stroke patients with a mean age of  $53.39 \pm 11.52$  years. Dyslipidemia was present in 120 out of 155 ischemic stroke patients, representing 77.4% of the study sample.

**Conclusion:** The study found a high prevalence of dyslipidemia among ischemic stroke patients

**Key Words:** Dyslipidemia, Ischemic Stroke, Cholesterol, LDL Cholesterol, HDL Cholesterol

### **RRF-37 Post-Chikungunya Rheumatic Disorder “A Single Centre Study From Pakistan”**

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**Background:** Chikungunya is an arthropod borne viral infection transmitted by female Aedes mosquito. Acute CHIKV infection is heralded by an abrupt onset fever and rash, along with self-limiting arthralgia, myalgia, and arthritis. This study was designed to collect evidence about post-chikungunya rheumatic disorder in Pakistani population, during epidemic 2017 in Rawalpindi city, that is defined as arthralgias or arthritis lasting more than 3 months after initial infection.

**Methods:** This prospective, cross-sectional study was undertaken at Clinic for Arthritis and Rheumatic Diseases (CARD), DHQ Hospital, Rawalpindi Medical University, Pakistan. Adult patients of both

genders, who presented with Chikungunya infection suspected on the basis of fever and arthralgias and confirmed by positive polymerase chain reaction and/or specific positive IgM antibody test between January and December 2017 were included in the study. Information was collected for all patients regarding demographic profile (age, gender), clinical features (duration and intensity of fever, rash, arthralgia/arthritis, and myalgia) at initial presentation and follow up visits scheduled at 3, 6 and 12 months. Chi-square test was used to assess statistical significance between categorical variables. A p-value of  $\leq 0.05$  was considered statistically significant.

**Results:** 27 patients (51.8% males and 48.1% females) were included in the study. At initial presentation, all patients had fever (mean duration of 5.5 days) and 7.5% (4/27) had rash. Leucopenia (less than 4000) was seen in 40% (11/27) and thrombocytopenia (less than 150,000/mm<sup>3</sup>) in 70% (19/27) patients. Rheumatic manifestations at initial presentation included polyarthralgia in 100% (27/27), polyarthritis in 22.2% (6/27), backache in 22.2% (6/27) and myalgias in 70% (19/27). At 3 months 40% (11/27) patients had mild polyarthralgia and myalgias while 18.5% (5/27) had polyarthritis. 11.11% (3/27) patients had polyarthritis that persisted at 6 months and 1 year. The difference between male and female patients regarding persistence of polyarthralgia at 3 months was statistically significant ( $p = 0.009$ ). There was no significant difference in the occurrence of leukopenia and thrombocytopenia between patients with and without persistent symptoms at 3 months ( $p > 0.05$ ). **Conclusions:** Chikungunya infection should be suspected in patients presenting with acute febrile illness with polyarthralgia and cytopenia. Post chikungunya rheumatic disorder was seen in 60% patients with polyarthritis persisting in 11.11% patients at 1 year. Further studies are warranted to explore long term rheumatic sequelae of chikungunya infection in Pakistani population.

**Keywords:** Chikungunya, arthritis, rheumatic disorder, epidemic, Pakistan.

### **RRF-38 Diagnostic Accuracy Of O-RADS MRI Score In Differentiating Benign And Malignant Adnexal Masses**

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**Introduction:** In clinical practice, adnexal masses are commonly encountered in routine, which are mostly benign, but can also be malignant at times.

Accurate preoperative diagnosis is crucial to ensure accurate clinical management and to avoid unnecessary surgical intervention. This article explores the diagnostic performance and clinical relevance of O-RADS MRI scoring system.

**Methods:** Total 70 patients were included whose contrast enhanced MRI pelvis was performed at radiology department of holy family hospital Rawalpindi using cross section validation study. O-RADS-MRI is accurate in differentiating benign and malignant adnexal masses and is compared to histopathology of adnexal lesion biopsy after surgery, or three months follow-up ultrasound in cases where surgery not performed. Sensitivity, specificity, positive predictive value, and negative predictive value for the O-RADS MRI score was calculated, using  $\geq 4$  as the cutoff for malignancy.

**Results:** We found that an O-RADS MRI score of 4 or 5 was associated with malignancy of an adnexal mass, with a sensitivity of 91.11% (95% CI: 83.23-96.08), specificity of 94.92% (95% CI: 90.86-97.54), positive predictive value of 89.13% (95% CI: 81.71-93.77), negative predictive value of 95.90% (95% CI: 92.34-97.84), and overall accuracy of 93.73% (95% CI: 90.27-96.24).

**Conclusion:** Our findings support the use of the O-RADS MRI score for evaluating adnexal masses, especially those considered indeterminate on ultrasound. The updates made recently to the O-RADS MRI score facilitate its interpretation and will allow its more widespread use, with no loss of diagnostic accuracy.

**Keywords:** Magnetic resonance imaging, Adnexal diseases/diagnostic imaging, Ovarian neoplasms/diagnostic imaging.

### **RRF-39 Perceptions And willingness Related To The Use Of AI In Medical Education Among Postgraduate Trainees Of Holy Family Hospital**

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**Introduction:** The integration of artificial intelligence (AI) in medical education has the potential to revolutionise the way medical trainees learn and practice. AI technologies can enhance educational experiences by providing personalised learning, real-time feedback, and advanced simulation scenarios.

However, the perceptions and willingness of postgraduate trainees to embrace AI in their education remain underexplored. This study was

planned to address this gap.

**Methods:** This study used a cross-sectional design to assess residents' perceptions and willingness. A convenient sampling technique was used. Data were collected using a structured questionnaire that was disseminated online. SPSS version 25 was used for data analysis. Fischer's exact test was used to establish associations.

**Results:** A total of 52 postgraduate trainees filled out the questionnaires, 53.8% of whom were female. A majority of residents agreed that AI would have a positive impact on medical education (69.2%), AI incorporation will ease the learning process (61.5%), and AI will prepare them for clinical practice (69.2%), while only half of the residents believed that AI would replace them as a physician. 83.3% of the PGTs in their 5th year ( $p$ -value=0.01) and 90% of the PGTs who always used computer technology for learning ( $p$ -value=0.01), were very willing to use AI in medical education. At the same time, no effect of previous AI training was found on the willingness to use AI for learning ( $p$ -value=0.10).

**Conclusion:** Most residents believed that AI positively impacts medical education and were very willing to use AI to improve their learning experience. Most thought that AI could not replace their role as physicians but could be used as an aid for medical decision-making.

**Keywords:** Academic training, Artificial Intelligence, Medical Education, Perceptions

#### **RRF-40 Delayed Presentation Of SMA Syndrome**

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Hafsa 12 years old fc presented with generalised severe abdominal pain and vomiting from last 1 year on and off , for which gastro jejunostomy done.

#### **RRF-41 Career Trends & Influences On Medical Career Choice Among Female Medical Students**

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**Objective:** To determine the factors that influence the future career choice among female medical students of Rawalpindi Medical University (RMU). **Study Design:** Descriptive Cross Sectional study. **Setting:** Rawalpindi Medical University, Rawalpindi. **Period:** 1st July 2021 to 31st August 2021. **Material &**

**Methods:** Female students of 3rd, 4th and final year MBBS were included. Students were asked to complete a pre-designed questionnaire, which included demographic details and parameters such as, marital status, plan to have children in future, house job and post graduation preferences. **Results:** Four hundred fifty three students were included in this study. 69.8% students were neither married nor engaged. 32.5% had no intention of extending their family in next 5 years. Majority of the students (73.1%) chose medical profession on their own wish. About 96.2% females were planning to do house job. Out of these, 97.5% had already planned to pursue their post graduation. A quarter of medical students planned to pursue postgraduate training as well as family progression in the next 5 years (66.7% vs 25.7%). Current marital status, family extension in next 5 years, and reasons for adopting medical profession were found to be statistically significant, when compared to future career progression. ( $P < 0.05$ ). **Conclusion:** Female medical students in pakistan are becoming more career oriented and taking decisions independently.

#### **RRF-42 Enhancement Of Early Detection And Treatment Of Anemia In Pregnancy: A Quality Improvement Project**

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**Introduction:** Anemia is a common often overlooked in pregnancy. It is especially concerning when diagnosed late at or close term, as inadequate management can lead to significant complications for both the mother and fetus.

In study conducted last year at Holy Family Hospital, Rawalpindi 35% of patients presented with anemia at the time of delivery, majority having moderate anemia. complications observed were 38% requiring blood transfusions, 11 cases of preterm labor, and 14 of primary PPH. 15% of babies had a birth weight less than 2kg.

To prevent these complications, healthcare providers must understand the importance of early detection and treatment of anemia

**Rationale:**

In oct 2024, 196 patients were admitted to the antenatal ward, 25% of them were admitted for anemia correction, 50% patients were non-booked, 26% were registered and 24 % were booked at Holy Family Hospital. Majority of the

booked patients had mild anemia at their booking visit and worsened to moderate and severe anemia with continuation of pregnancy due to lack of awareness among health care providers. Anemia in pregnancy could be due to multiple reasons but one key issue is the lack of knowledge among healthcare providers regarding its prompt recognition and early management. Furthermore, 2.1% of women required blood transfusions in the emergency highlighting the need for continuous enhancement of the knowledge of healthcare providers

**Aims:** To enhance the knowledge of post graduate residents running the antenatal OPDs about the timely diagnosis and management of anemia in pregnancy.

**Method:** Context: Holy Family Hospital is a tertiary care teaching Hospital affiliated with Rawalpindi Medical University, Rawalpindi. Doctors including House officers, post-graduate residents of FCPS, MS, MRCOG come for training. They may have varying levels of knowledge, skills. Their skill of diagnosis and management of anemia could be different depending upon their year of training.

**Methodology**

**Method:** A clinical audit

**Intervention:** A workshop on anemia in pregnancy following the RCOG guidelines was conducted in the OBGYN department in which 18 post-graduate trainees participated. The intervention included:

1. Pre-test: Baseline assessment of knowledge regarding anemia in pregnancy.
2. Educational Session: A structured presentation according to RCOG guidelines covering the pathophysiology, causes, diagnostic criteria, complications, prevention, and treatment options for anemia during pregnancy was conducted.
3. Post-test: A follow-up assessment to evaluate the effectiveness of the workshop in improving knowledge. Similar workshop will be held monthly for 6 months, and clinical data from the subsequent month will be collected and compared to assess the improvement in the prompt management strategies for correction of anemia. Measures chosen for the study:

The scores of pretest and post tests were calculated and compared.

**Analysis:** Quantitative analysis was performed to assess the difference in knowledge before and after the intervention.

**Results:** Pre-test: The average score was 7 out of 10 (Range 5-8). Post-test: The average score increased to 9 out of 10 (Range 7-10).

The results demonstrate a significant improvement in the participants' knowledge of anemia in pregnancy after the educational intervention

**Conclusion:**

The study underscores the importance of the knowledge of doctors regarding prompt recognition and management plan for anemia in pregnancy. Incorporating regular educational programs into continuous professional development for doctors is essential to improving maternal and fetal health outcomes.

**Keywords:** Anemia, Pre-test, Post-test, Educational intervention

### **RRF-43 Delayed Presentation Of SMA Syndrome**

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**Introduction,:** sma syndrome is one of the rarest cause of small bowel obstruction, it's exact incidence is not known it is due to decrease in aortomesenteric angle

**Case presentation :** hafsa 12 years old fc presented in opd with epigastric pain and vomiting from last 1 month, which was not aggravative or relieving on ct scan there is compression of third part of duodenum ,for which exploratory laparotomy done

(gastrojejunostomy). **Discussion:** sma syndrome is one the rare causes of small bowel obstruction, incidence of sma syndrome reported in literature is ranging from 0.1-0.3%, the most common cause is significant weight loss which leads to loss of retroperitoneal fat ,treatment is usually conservative, but surgical intervention should be considered if conservative management failed.

**Conclusions:** sma syndrome is rare cause of intestinal obstruction but should be kept in mind ,persistent vomiting after history of weight loss, should raise the suspicion of diagnosis. Upper gi endoscopy is necessary to exclude mechanical case of duodenal obstruction, contrast ct scan useful in help to diagnosis sma syndrome.

### **RRF-44 Aphalia: a psychological challenge**

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### **RRF-45 Primary Sjogren's Syndrome Presenting As Ptosis And Eyelid Swelling: A Case Report**

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**Introduction:** Primary Sjögren's syndrome (pSS) is an idiopathic, autoimmune disorder characterized by both localized and systemic manifestations. The most common clinical presentations include the sicca or dryness symptoms such as xerostomia and keratoconjunctivitis sicca due to diminished salivary gland and lacrimal gland function, respectively. Patients may also present with nonspecific symptoms such as fatigue and arthralgia, as well as pulmonary, gastrointestinal, neurological and renal involvement. Secondary Sjögren's syndrome can coexist with other autoimmune disorders such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE).

**Methods:** Prospective study

**Results:** Both supportive and specific measures were carried out. She was put on azathioprine and prednisolone. Surgical procedure-sling oculoplasty, also improved her lifestyle. Further, rituximab was also initiated, next dose is due after 6 months.

Her quality of life has markedly improved.

**Conclusion:** Our case highlights a unique ophthalmological manifestation of pSS and provides key insight into managing this autoimmune disease. We must always look at the clinical picture of a disease instead of relying solely on investigations as elucidated in our case where a positive anti-acetylcholine receptor antibody test led to a misleading diagnosis of MG which was ruled out subsequently.

**Keywords:** Sjögren, Xerostomia, RA, SLE

#### **RRF-46 Aphelia : A Misdiagnosed Rare Finding**

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Aphelia means absence or underdevelopment of penis that is a rare medical condition and affects male infant. It may present with significant challenges and affect individual with medical and psychological problems.

#### **RRF-47 Quality Care Through Clinical Audit: Documentation Practices With Soap Notes By House Officers In The Surgery Department Of A University Affiliated Teaching Hospital**

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**Introduction:** Effective clinical documentation is the cornerstone of healthcare systems. The SOAP (Subjective, objective, Assessment, plan) note format, introduced by Larry Weed 50 years ago, has become a widely adopted standard for structuring patient information. Effective clinical documentation is greatly enhanced by the use of SOAP notes, which facilitate clear, concise, and standardized recording of patient information thereby ensuring seamless continuity of care. This audit aims to assess adherence to SOAP note format among healthcare professionals and identify areas for improvement."

**Objective:** 1. to assess the adherence to SOAP note format among health care professionals.

2. Identify Gaps in documentation practices

3. Recommend improvements to standardize documentation practices

**Methods:** This quality improvement initiative was conducted in two phases:

**Phase 1 (Observational):** 80 patient files were reviewed using a self-generated form to assess baseline adherence to the SOAP note format.

**Phase 2 (Post-Intervention):** The same number of files were re-reviewed to evaluate improvements in SOAP note documentation following targeted interventions.

**\*Audit Results:\***

**Phase 1 (Baseline)**

- SOAP: S-67%, O-79.2%, A-77.5%, P-79.7%

- Additional Elements: Entry Details-81.3%, Patient Identity-73.16%

**Phase 2 (Post-Intervention)**

- SOAP: S-82% (+15%), O-88.6% (+9.4%), A-81% (+3.5%), P-92% (+12.3%)

**Conclusion:** This audit demonstrates significant improvement in SOAP note adherence post-intervention, enhancing continuity of care. Ongoing monitoring and feedback are crucial to sustaining best practices in clinical documentation and driving quality improvement. Patient Identity: 92% (+18.84%)

**Keywords**

SOAP notes

Clinical documentation

Quality improvement initiative

#### **RRF-48 Exploring The Impact Of Subspecialty Observerships Among Plastic Surgery Residents As A Special Training Initiative**

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**Introduction:** Subspecialty observerships provide plastic surgery residents with unique exposure to

specific practice areas, enhancing their training. During these observerships, residents may witness and participate in advanced procedures, connect with specialists, and learn unique techniques. Subspecialty observerships may improve resident motivation, skill acquisition, and career growth. This research explores plastic surgery residents' subspecialty observership perspectives.

**Methods:** This study used a phenomenological approach to explore the perceptions of plastic surgery residents. A purposive sampling technique was used, as only those residents who had done subspecialty observerships at three specialised plastic surgery setups as part of the initiative were included in the sample. Data were collected through structured interviews conducted in person, audio-recorded, and transcribed. Thematic analysis was performed to identify key themes and patterns in the data.

**Results:** The residents responded that they were able to see different variety of cases in these specialised setups, including craniofacial abnormalities, birth defects, and esthetics. Additional procedural skills acquired included hair transplantation, microvascular anastomosis formation, and facial reconstruction. The teaching also differed because there were a few specialised cases per day, so the interaction with the teacher was more effective. The residents also had the opportunity to work with international teams, which enhanced their confidence and expertise. The residents also learned that the types of cases and patient outcome expectations vary according to setups. These observerships helped the residents decide their future field and place of practice.

**Conclusion:** The residents believed that these subspecialty observerships had a significant impact on their professional development and training

**Keywords:** Clinical training, Craniofacial Abnormalities, Esthetics, Plastic Surgery, Social Skills.

#### **RRF-49 Evaluation Of Surgical Site Infections: A Clinical Audit**

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**Problem:** Surgical site infections (SSIs) are a significant cause of postoperative morbidity and mortality, affecting up to 2-5% of patients following surgery. These infections not only contribute to prolonged hospital stays, increased healthcare cost, and patient discomfort but also pose serious long-term health risks. In obstetrics and gynecology, SSIs

can complicate recovery and lead to adverse outcomes such as delayed wound healing, organ dysfunction, and, in severe cases, sepsis. Among all, the main contributor to SSIs is doctors' failure to consistently follow standardized attire and footwear protocols both inside and outside the operating theater, undermining infection control measures and increasing the risk of surgical site infections.

**Rationale:** In obstetrics and gynecology, SSIs following major surgical procedures contribute to prolonged hospital stay, increased treatment cost, and poor patient outcome. We collected data of SSIs in the last 6 months from June 2024 to Nov 2024 in the procedures done in the Gynae Unit 2 of Holy Family Hospital Rawalpindi. Total 1644 patients underwent surgery. Overall SSI rate was 3.1% (n = 51). This varied in terms of gynecological & obstetrical procedures, being 5.5% for major gynecological surgery (n = 7/126), 6% (n = 25/366) for elective cesareans section, 1.6% (n = 19/1152) for emergency cesareans section. Out of the 51 patients who developed surgical site infections (SSIs) in the last 6 months, 35% (n = 18/51) underwent cesarean hysterectomies, 37% (n = 19/51) were non-booked or emergency cases, which often involve inadequate preparation and inconsistent use of prophylactic antibiotics. Pre-existing comorbidities, such as diabetes and obesity, were present in 17% (n = 9/51), further compromising healing and immune response. Furthermore, a lack of adherence to standardized infection prevention protocols and a generally poor healthcare worker approach towards SSIs, such as negligence, and inconsistent practices exacerbate the problem.

**Aim:** To assess the residents' knowledge before and after educational workshop based on NICE guidelines of SSIs.

**Methods:** Context: Holy Family Hospital is a referral tertiary care teaching Hospital affiliated with Rawalpindi Medical University, Rawalpindi. The hospital consistently manages emergency cases, facing inadequate protocols, limited preparation time, and insufficient resources. Moreover, the medical staff, including doctors and healthcare providers, often struggle to adhere to standardized infection control protocols due to these constraints.

**Intervention:** We conducted a structured educational session for residents, focusing on the NICE (National Institute for Health and Care Excellence) standards for the prevention, detection of SSIs. The session will cover key topics, including risk factors for SSIs, best practices for infection prevention, appropriate antibiotic use, and strategies for early detection and management.

To assess the effectiveness of the educational session, a pre-test was conducted 25 participating residents

prior to the session to evaluate their baseline knowledge of SSIs. After the completion of the educational class, a post-test was conducted to measure the improvement in their understanding of the NICE standards and the overall knowledge of SSIs. We will hold monthly educational sessions on SSIs for six months, and collect clinical data from the following months to compare adherence to the NICE guidelines for SSIs.

#### Measures Chosen for the Study:

The scores of pretest and post tests were calculated and compared.

#### Analysis:

Quantitative analysis was performed to assess the difference in knowledge before and after the intervention.

Results: Pre-test: The average score was 5 out of 10 (Range 4-6).

Post-test: The average score increased to 7 out of 10 (Range 7-10).

The results demonstrate a significant improvement in the participants' knowledge of SSIs in pregnancy after the educational intervention.

Conclusion: In conclusion, the educational activity on surgical site infections (SSIs) for gynecology residents has proven to be a valuable tool in enhancing their understanding of SSI prevention, risk factors, and management strategies. By providing comprehensive training based on current guidelines, the session has equipped residents with the knowledge to implement best practices in infection control. Continued education and regular reinforcement of these principles are essential to improving patient outcomes and reducing the incidence of SSIs in gynecological surgeries.

Keywords: SSIs, NICE, Pre-test, Post-test, Educational intervention, Healthcare professional, Cesarean sections, Hysterectomies.

### **RRF-50 Treatment Of Bacterial Vaginosis: A Comparison Of Topical Metronidazole And Clindamycin**

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Introduction: Bacterial vaginosis (BV) is a common vaginal infection caused by an imbalance in the vaginal microbiota, characterized by a shift from lactobacilli-dominant flora to an overgrowth of anaerobic bacteria. It is diagnosed clinically using Amsel's criteria, which requires the presence of at least three of the following four features: (1) thin,

homogenous, grayish-white vaginal discharge, (2) vaginal pH > 4.5, (3) positive whiff test (release of a fishy odor on addition of potassium hydroxide to vaginal discharge), and (4) presence of clue cells on microscopic examination of vaginal fluid.

BV is associated with adverse obstetric and gynecological outcomes, including preterm birth and increased susceptibility to sexually transmitted infections. The primary goal of treatment is to restore normal vaginal flora and alleviate symptoms. Topical metronidazole and clindamycin are widely used treatments, but their comparative efficacy, safety, and patient tolerability remain areas of interest. This study aims to evaluate and compare the effectiveness of topical metronidazole and clindamycin for the treatment of BV.

Methods: A randomized controlled trial was conducted at Benazir Bhutto Hospital over a period of 6 months duration from August 2023 to, February 2024. A total of 140 women aged 18-45 years, diagnosed with BV based on Amsel's criteria were randomly assigned to two groups. Group A received topical metronidazole (0.75% gel) once daily for 5 days, while Group B received topical clindamycin (2% cream) once daily for 7 days. Primary outcomes included clinical cure (resolution of Amsel's criteria) assessed at 7 and 28 days post-treatment. Adverse effects and patient satisfaction were secondary outcomes.

Results: Of the total 140 participants, 70 in each group, 85.7% (60/70) in the metronidazole group and 78.6% (55/70) in the clindamycin group achieved clinical cure at day 7 ( $p = 0.20$ ). Microbiological cure rates at day 28 were 82.9% (58/70) for metronidazole and 75.7% (53/70) for clindamycin ( $p = 0.25$ ). Both treatments were well-tolerated, but the incidence of adverse effects, such as local irritation and discharge, was higher in the clindamycin group (28.6% (20/70)) compared to the metronidazole group (15.7% (11/70),  $p = 0.04$ ). Patient satisfaction scores were higher for metronidazole due to its shorter treatment duration and fewer adverse effects.

Conclusion: Topical metronidazole and clindamycin are both effective for the treatment of bacterial vaginosis, with comparable clinical cure rates. However, metronidazole demonstrated better patient compliance and fewer adverse effects, making it a preferable option for many patients. Further research may explore the long-term recurrence rates following treatment.

Keywords: Bacterial vaginosis, Metronidazole, Clindamycin, Vaginal infection, Treatment efficacy, Randomized controlled trial

### **RRF-51 Multimodal Approach For Managing Rare Paediatric Renal Ewing Sarcoma**

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Ewing sarcoma (ES), a rare and aggressive pediatric malignancy, predominantly affects bones and soft tissues, with renal involvement being exceptionally uncommon. The management of pediatric renal Ewing sarcoma requires a multimodal approach involving surgery, chemotherapy, and radiation therapy. This abstract reviews the current treatment strategies and challenges in managing this rare condition, emphasizing the importance of early diagnosis, a multidisciplinary approach, and individualized treatment regimens. 3y male child presented with left flank swelling for 3 months. multimodal approach was taken and radiology department, oncology department and paediatric surgery department coordinated with each other and after diagnosis of left Ewing sarcoma of kidney, plan of neoadjuvant chemotherapy, surgery and adjuvant chemotherapy followed.

### **RRF-52 Impact Of Maternal Stress And Socioeconomic Factors On Birth Outcomes In A Tertiary Care Hospital**

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**Introduction:** Maternal stress and socioeconomic factors significantly influence birth outcomes, affecting both maternal and neonatal health. Elevated maternal stress is linked to preterm birth, low birth weight, and neonatal intensive care unit (NICU) admissions. Socioeconomic disparities, including income, education, and access to healthcare, further exacerbate these risks. This study aims to assess the combined impact of maternal stress and socioeconomic factors on birth outcomes in Benazir Bhutto Hospital, providing evidence for targeted interventions to improve perinatal health. **Methods:** A cross-sectional study was conducted at Benazir Bhutto Hospital over a period of 6 months. A total of 148 pregnant women between 28 to 40 weeks gestation were enrolled. Data on maternal stress were collected using the Perceived Stress Scale (PSS-10), while socioeconomic data, including income, education, and employment status, were obtained through structured interviews. Birth

outcomes such as gestational age at delivery, birth weight, Apgar scores, and NICU admissions were recorded. Statistical analysis was performed using chi-square tests for categorical variables and multivariate logistic regression to determine the combined effects of stress and socioeconomic factors on birth outcomes.

**Results:** Of the 148 participants, 62% (n = 92) experienced moderate to high levels of maternal stress, while 45% (n = 67) belonged to low-income households. Preterm birth occurred in 26% (n = 38) of participants, with a significantly higher incidence in mothers with high stress levels (35% vs 16%, p = 0.02). Low birth weight (<2500g) was observed in 29% (n = 43) of neonates, with a higher prevalence among women from low-income households (40% vs 20%, p = 0.01). NICU admissions were higher in neonates born to mothers experiencing high stress and low socioeconomic status (33% vs 14%, p = 0.03). Multivariate analysis revealed that maternal stress (AOR = 2.1, 95% CI: 1.2–3.6) and low socioeconomic status (AOR = 1.9, 95% CI: 1.1–3.4) were independent predictors of preterm birth and low birth weight.

**Conclusion:** Maternal stress and socioeconomic disparities have a profound impact on birth outcomes, including an increased risk of preterm birth, low birth weight, and NICU admissions. Interventions aimed at stress reduction and addressing socioeconomic inequities are essential to improve perinatal outcomes. Screening for stress and targeted support for at-risk populations in tertiary care hospitals could reduce adverse birth outcomes.

**Keywords:** Maternal stress, socioeconomic factors, birth outcomes, preterm birth, low birth weight, NICU admissions, tertiary care hospital.

### **RRF-53 Residents Opinion Regarding Work-Life Balance In Plastic Surgery Training**

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### **RRF-54 From Female To Male: The Medical And Psychosocial Journey Of Gender Identity Transition**

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**Gender Identity Transition in DSD Disorders/Differences of Sex Development (DSD)** encompass a range of congenital conditions where

biological sex characteristics, such as chromosomes, gonads, or anatomy, do not fit typical definitions of male or female. For individuals with DSD, gender identity transition may involve additional layers of complexity. These transitions are deeply personal and can occur when an individual's experienced or expressed gender differs from the gender assigned at birth, which may have been influenced by medical or social decisions made during infancy or childhood. This presentation explores the intersection of DSD and gender identity, emphasizing the importance of patient-centered care, informed decision-making, and the role of medical, psychological, and social support in navigating this journey.

#### **RRF-55 Change in perception of plastic surgery trainees before and after joining their department**

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#### **RRF-56 Building Tomorrows Leaders: Enhancing Clinical Leadership Skills Through Targeted Training**

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**Introduction:** Leadership skills are critical in clinical practice for effective teamwork and optimal patient outcomes. Observed gaps in communication and decision-making within the Department of ENT and Head and Neck Surgery at Benazir Bhutto Hospital emphasized the need for targeted interventions. This project assessed the baseline leadership skills of postgraduate trainees and evaluated the effectiveness of a structured intervention combining didactic presentations and simulation-based training.

**Methods:** Thirteen postgraduate trainees participated in a program structured around the NHS Clinical Leadership Competency Framework (CLCF) [1]. The intervention included a presentation covering all five CLCF domains followed by simulation-based training designed to reinforce these skills in clinical scenarios. Leadership competencies were assessed using the CLCF Self-Assessment Tool before and after the intervention. Data were analyzed with IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY), and a paired t-test determined statistical significance ( $p < 0.05$ ).

**Results:** The intervention significantly improved leadership skills across all domains of the CLCF,

with "Improving Services" showing the largest improvement, reflecting better quality improvement and innovation capabilities. Qualitative feedback highlighted increased confidence, appreciation for hands-on learning, and recognition of leadership as an essential clinical skill.

**Conclusion:** This intervention effectively enhanced leadership skills among postgraduate trainees, demonstrating the value of integrating leadership training into clinical education. Simulation-based training, combined with didactic learning, provides a scalable model for fostering leadership development. Periodic reinforcement through repeat simulations and feedback is recommended to sustain these gains.  
**Keywords:** Leadership, Education, Medical, Graduate, Simulation Training, Clinical Competence, Professional Development

#### **RRF-57 Calm Under Pressure: The Impact Of Mindfulness Training On Stress And Clinical Performance**

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**Introduction:** Stress significantly impacts the performance and well-being of healthcare professionals. Mindfulness training has emerged as a promising approach to alleviate stress and enhance focus and decision-making skills. This audit aimed to evaluate the effect of an 8-week mindfulness training program on perceived stress levels and clinical performance among postgraduate medical trainees in the Department of ENT and Head and Neck Surgery at Benazir Bhutto Hospital.

**Methods:** Thirteen postgraduate trainees participated in an 8-week mindfulness training program using the Calm mobile app. Participants were instructed to complete a 10-minute daily guided meditation session and the "7 Days of Calm" introductory program during the first week, followed by self-selected meditations addressing topics such as stress and focus. Pre- and post-intervention assessments included the Perceived Stress Scale (PSS) and Objective Structured Clinical Examination (OSCE) performance scores, measured as a percentage of a total score (75) and evaluated for errors, completion times, and task accuracy. Statistical analysis was conducted using IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY), and paired t-tests were used to compare pre- and post-intervention results, with a significance level set at  $p < 0.05$ .

Results: The mean PSS score significantly decreased from  $45.46 \pm 5.25$  at baseline to  $37.08 \pm 5.25$  post-intervention ( $p < 0.001$ ). OSCE performance improved from  $56.2\% \pm 14.0\%$  to  $72.7\% \pm 12.4\%$  post-intervention ( $p < 0.001$ ). Participants reported reduced perceived stress, improved focus, enhanced decision-making abilities, and better composure under pressure. Adherence was high, with no dropouts.

Conclusion: The mindfulness training program demonstrated a significant reduction in stress and improvement in clinical performance metrics. These findings support the inclusion of mindfulness training in clinical education to foster resilience and enhance professional skills. Further research with larger cohorts is recommended to validate these results and explore long-term benefits.

Keywords: Mindfulness; Stress, Psychological; Healthcare Professionals; Education, Medical, Graduate; Clinical Competence

#### **RRF-58 Audit On Adherence To AAO Guidelines For Tonsillectomy: Insights From A Tertiary Care Hospital In Pakistan**

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Introduction: Recurrent tonsillitis significantly impacts the quality of life, particularly in children, and tonsillectomy remains the primary intervention. Adherence to evidence-based guidelines, such as the AAO-HNS Key Action Statements (KAS), is crucial for optimizing outcomes but presents challenges in resource-limited settings [1]. This study evaluates adherence to AAO-HNS guidelines for tonsillectomy at the Department of ENT and Head and Neck Surgery, Benazir Bhutto Hospital, Rawalpindi, before and after an educational intervention aimed at improving compliance.

Methods: A clinical audit was conducted using a two-cycle design with pre- and post-intervention phases. Data were collected prospectively from patients undergoing tonsillectomy during each cycle. The intervention involved educating surgeons on AAO guidelines, including preoperative, perioperative, and postoperative care. Adherence rates to specific KAS were compared using descriptive statistics and significance tests.

Results: Significant improvements were observed in adherence to multiple KAS post-intervention. Intraoperative dexamethasone use (KAS 11)

increased from 60% to 100% ( $p < 0.01$ ), perioperative counseling (KAS 9) improved from 20% to 48.3%, and postoperative pain management adherence (KAS 13) rose from 6.7% to 63.3%. However, no changes were noted in perioperative antibiotic use, and polysomnography (PSG) remained underutilized due to financial constraints.

Conclusion: The educational intervention significantly improved adherence to AAO guidelines, highlighting the value of continuous professional development. Persistent barriers, such as financial limitations and entrenched clinical practices, underscore the need for tailored strategies. Future efforts should focus on sustainable improvements through regular audits and cost-effective diagnostic tools.

Keywords: tonsillectomy, clinical audit, AAO guidelines, recurrent tonsillitis, educational intervention, resource-limited settings.

#### **RRF-59 Residents' Perception Of Work-Life Balance During Residency Training At Benazir Bhutto Hospital Rawalpindi**

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Introduction: Achieving a work-life balance during residency is a critical yet often challenging aspect of medical training. This study explores the perception of residents at Benazir Bhutto Hospital, Rawalpindi, regarding their work-life balance and its impact on their professional and personal lives.

Methods: A cross-sectional survey was conducted among 150 residents from 10 departments (Medicine, Surgery, ENT, Eye, Dermatology, Radiology, Pathology, Urology, Orthopedics, Pediatrics, and Gynaecology). Data were collected using a validated questionnaire covering work hours, sleep patterns, personal time, job satisfaction, burnout, and coping mechanisms.

Results: The study surveyed 150 residents from 10 departments at Benazir Bhutto Hospital, with a response rate of 90%. Among respondents, 75% worked over 80 hours per week, with the highest workloads in Surgery (90%), Pediatrics (85%), Gynaecology (83%), Urology (80%), Orthopedics (78%), and Medicine (75%). ENT (72%), Eye (68%), and Dermatology (70%) were moderately demanding, while Radiology (40%) and Pathology (45%) reported the lowest workloads.

Burnout symptoms were prevalent in 70% of residents, with the highest rates in Gynaecology

(80%), Surgery (78%), Pediatrics (75%), Medicine (73%), Orthopedics (72%), and Urology (70%). Eye (65%), Dermatology (68%) and ENT (62%) showed moderate burnout, while Radiology (35%) and Pathology (40%) reported the lowest. Sleep deprivation was common, with 68% sleeping fewer than six hours per night. ENT (72%), Orthopedics (70%), and Surgery (70%) had the highest deprivation, while Dermatology (58%) and Eye (60%) reported moderate levels.

Coping strategies were employed by 40% of residents, with Dermatology (50%), Eye (48%), and Medicine (50%) being the most proactive. Surgery (25%), Pediatrics (30%), and ENT (35%) used coping mechanisms the least. Personal life satisfaction was reported by 30%, highest in Dermatology (55%), Eye (50%), and Radiology (60%), and lowest in Surgery (20%), Gynecology (25%), and ENT (28%).

Conclusion: Residents' work-life balance varies significantly across departments, with Surgery, Pediatrics, and Gynaecology being most affected. Targeted interventions are needed to improve wellness and support residents across all departments.

Keywords: Work-Life Balance; Internship and Residency; Burnout, Professional; Job Satisfaction; Coping Mechanisms; Medical Education

#### **RRF-60 Acute Liver Failure Pediatrics Patient With Dengue Shock Syndrome And Hepatitis A Co Infection**

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#### **RRF-61 Frequency Of H. Pylori In Patients With Iron Deficiency Anemia**

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#### **RRF-62 The Efficacy Of Intra-Articular Platelet-Rich Plasma Injection Versus Corticosteroid Injection In The Treatment Of Knee Osteoarthritis: A Prospective Comparative Analysis**

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Introduction: Knee osteoarthritis (KOA) is the most typical cause of knee pain and impairment worldwide. It is typified by slow and progressive degeneration of the articular cartilage of the knee joint. Although KOA is being managed with a variety of therapies, the comparison of the effectiveness of different intra-articular injections in KOA treatment in Pakistan is still not thoroughly investigated. Therefore, the purpose of this current study is to compare the efficacy of intra-articular administration of platelet-rich plasma (PRP) and corticosteroids (CSs) in the treatment of KOA.

Methods: This prospective comparative study was performed among one hundred patients diagnosed with KOA in Rawalpindi, for one year from April 2022 to March 2023. Specified inclusion and exclusion criteria were employed for patient enrollment. Patients were divided into two equal groups through simple random sampling. Group A patients received an intra-articular injection of PRP solution whereas group B patients received an intra-articular injection of CSs. A self-designed proforma based on interviews was used to collect data. The data analysis in Statistical Package for the Social Sciences (IBM SPSS Statistics for Windows, IBM Corp., Version 25.0, Armonk, NY) was carried out via descriptive statistics and an independent t-test.

Results: Women (N=71, 71%) had a higher prevalence of KOA than men (N=29, 29%). The means of study variables like age, Visual Analog Scale (VAS) score, and Western Ontario and McMaster Universities (WOMAC) score were  $56.10 \pm 8.70$  years,  $8.08 \pm 1.6$ , and  $70.08 \pm 8.76$  respectively. The frequency of KOA on the right side was 62% (N=62) while it was 38% (N=38) on the left side. In the study population, 69% (N=69) patients had grade II KOA, and 31% (N=31) patients had grade III KOA. At the first-month, second-month, and third-month follow-up visits, there were statistically significant differences in the mean scores of the WOMAC and VAS between the study groups. However, at the first-month follow-up visit, mean scores of VAS and WOMAC were lower in group B than in group A while these were lower in group A as compared to group B, at the second-month and third-month follow-up appointments.

Conclusions: Intra-articular infiltration of both PRP and CSs was efficacious in the treatment of KOA-related pain and functional limitations; however, overall improvement in the PRP group was higher than CS group.

Keywords: Comparative, prospective, knee osteoarthritis, treatment, corticosteroids, platelet-rich plasma, intra-articular, efficacy

### **RRF-63 Risk Factors of Postoperative Acute Heart Failure in Elderly Patients After Hip Fracture Surgery**

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**Introduction:** Postoperative acute heart failure (AHF) in elderly patients after hip fracture surgery is a common complication. Therefore, this study aimed to identify the risk factor of AHF after hip fracture surgery among the older population.

**Methods:** This retrospective cohort study was performed on 88 admitted patients whose hip fractures were fixed via internal fixation surgery in a tertiary care hospital in Rawalpindi, Pakistan, from January 2022 to March 2023. Recruitment of patients was made through established inclusion and exclusion criteria. A self-designed form was used to collect data. Data analysis was carried out in the IBM SPSS Statistics for Windows, Version 25 (Released 2017; IBM Corp., Armonk, New York, United States). Both descriptive and inferential statistics were applied to compare the attributes of the patients with AHF and patients without AHF. Multivariate logistic regression was used to evaluate the association between the postoperative AHF and its potential risk factors.

**Results:** Out of 88 enrolled patients, 12 (13.64%) had developed postoperative AHF. Age  $\geq 65$  years (OR = 2.606, 95% CI = 1.035~4.160,  $p = 0.010$ ), anemia (OR = 3.178, 95% CI = 1.847~5.990,  $p = 0.029$ ), hypertension (OR = 2.019, 95% CI = 1.110~4.034,  $p = 0.012$ ), diabetes mellitus (OR = 2.003, 95% CI = 1.115~4.012,  $p = 0.015$ ), hypoalbuminemia (OR = 2.486, 95% CI = 1.218~4.619,  $p = 0.030$ ), and operation time  $\geq 120$  minutes (OR = 1.702, 95% CI = 1.099~2.880,  $p = 0.018$ ), were the risk factors of postoperative AHF in elderly patients after hip fracture surgery.

**Conclusions:** In the study population, the incidence of postoperative heart failure was significant and age  $\geq 65$  years, anemia, hypertension, diabetes mellitus, hypoalbuminemia, and operation time  $\geq 120$  were significantly involved in the development of it. Preoperative identification and management of AHF risk factors could lead to the prevention of postoperative complications.

**Key Words:** Risk, Factors, Postoperative, Heart, Failure, Elderly, Hip, Fracture, Surgery

### **RRF-64 Comparison of the Effectiveness of Intra-articular Infiltration of Hyaluronic Acid and Corticosteroids in the Management of Knee Osteoarthritis: A Prospective Comparative Study**

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**Introduction:** Knee osteoarthritis (KOA) is a chronic and progressive disease of the knee joint characterized by articular cartilage destruction. It is the most common cause of knee disability and pain globally. Various treatments are used for the management of KOA; however, the role of intra-articular injections in KOA management in Pakistan remains understudied. Therefore, this study aims to evaluate the effectiveness of intra-articular injections of hyaluronic acid (HA) and corticosteroids in the management of KOA.

**Methods:** This randomized, prospective, comparative study was conducted among 88 patients diagnosed with KOA in Rawalpindi, from January 2022 to January 2023. For patient enrolment, structured inclusion and exclusion criteria and a simple random sampling technique were used. Data collection was done via a self-structured and interview-based proforma. Data analysis was performed through descriptive statistics and independent t-tests using SPSS version 25 (IBM Corp., Armonk, NY, USA).

**Results:** KOA was more prevalent in women (60, 68.18%) than men (28, 31.82%). The means for study variables such as age, Visual Analog Scale (VAS) score, and Western Ontario and McMaster Universities (WOMAC) score were  $58.08 \pm 7.89$  years,  $7.66 \pm 1.8$ , and  $71.86 \pm 8.90$ , respectively. The incidences of right-sided and left-sided KOA were 57 (64.77%) and 31 (35.23%), respectively. Likewise, the frequency of grade II KOA was 55 (62.50%), while the frequency of grade III KOA was 33 (37.50%). Differences in the mean scores of both VAS and WOMAC between study groups were statistically significant at the second-week, sixth-week, and third-month follow-up visits. However, the mean scores of VAS and WOMAC were lower in group B than in group A at the second-week follow-up visit, whereas the scores were lower in group A compared to group B after the sixth week and third month of intra-articular injections.

**Conclusions:** Intra-articular injections of both HA and corticosteroids were adequately effective in the management of KOA-associated pain and functional restrictions; nevertheless, the benefits of

corticosteroids were acute and short-term, whereas the outcomes of HA were gradual and long-term.  
Keywords: Prospective, knee osteoarthritis, management, corticosteroids, hyaluronic acid, intra-articular, effectiveness, comparison

### **RRF-65 Incidence Of Microalbuminuria And Factors Affecting It In Patients With Type 2 Diabetes Mellitus**

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**Introduction:** Microalbuminuria prevalence is high in patients with type 2 diabetes mellitus (T2DM) all over the world and its prevalence is affected by several factors. In Pakistan, microalbuminuria and factors that play a role in its development in patients with T2DM are under-researched. This study aimed to determine the incidence of microalbuminuria and the factors affecting it in patients with T2DM.

**Methods:** This descriptive cross-sectional study was performed on 129 diagnosed patients with T2DM in tertiary care hospital, Rawalpindi, for approximately six months from August 2021 to January 2022.

Patients were recruited in the study through a non-probability consecutive sampling technique and established inclusion and exclusion criteria. A self-structured and interview-based questionnaire was used for the collection of data. Descriptive statistics and a chi-square test were applied for the data analysis using Statistical Package for the Social Sciences (SPSS) version 25 (Armonk, NY: IBM Corp.).

**Results:** The incidence of microalbuminuria in the study population was 31.78%. The association between microalbuminuria and age ( $p = 0.002$ ), gender ( $p = 0.003$ ), duration of diabetes mellitus ( $p = 0.001$ ), therapy type ( $p = 0.03$ ), control of diabetes mellitus, ( $p = 0.001$ ), and hypertension ( $p = 0.002$ ) was statistically significant. Higher age group, male gender, longer duration of diabetes mellitus, oral hypoglycemic agents, poorly controlled diabetes mellitus, and history of hypertension, all were found to raise the incidence of microalbuminuria.

**Conclusion:** Microalbuminuria incidence is significantly high in the study population. The factors such as increasing age, male gender, longer duration of the diabetes mellitus, oral hypoglycemic agents, poorly controlled diabetes mellitus, and history of hypertension, all raise the incidence of microalbuminuria in patients with T2DM to a statistically significant extent. Screening of

microalbuminuria patients with T2DM should be added to the routine investigations for diabetes mellitus for the early detection of renal and cardiovascular complications

Keywords: Incidence, Diabetes Mellitus, Microalbuminuria, Factors, Type 2

### **RRF-66 Incidence Of Microalbuminuria And Factors Affecting It In Patients With Type 2 Diabetes Mellitus**

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**Introduction:** Microalbuminuria prevalence is high in patients with type 2 diabetes mellitus (T2DM) all over the world and its prevalence is affected by several factors. In Pakistan, microalbuminuria and factors that play a role in its development in patients with T2DM are under-researched. This study aimed to determine the incidence of microalbuminuria and the factors affecting it in patients with T2DM.

**Methods:** This descriptive cross-sectional study was performed on 129 diagnosed patients with T2DM in tertiary care hospital, Rawalpindi, for approximately six months from August 2021 to January 2022.

Patients were recruited in the study through a non-probability consecutive sampling technique and established inclusion and exclusion criteria. A self-structured and interview-based questionnaire was used for the collection of data. Descriptive statistics and a chi-square test were applied for the data analysis using Statistical Package for the Social Sciences (SPSS) version 25 (Armonk, NY: IBM Corp.).

**Results:** The incidence of microalbuminuria in the study population was 31.78%. The association between microalbuminuria and age ( $p = 0.002$ ), gender ( $p = 0.003$ ), duration of diabetes mellitus ( $p = 0.001$ ), therapy type ( $p = 0.03$ ), control of diabetes mellitus, ( $p = 0.001$ ), and hypertension ( $p = 0.002$ ) was statistically significant. Higher age group, male gender, longer duration of diabetes mellitus, oral hypoglycemic agents, poorly controlled diabetes mellitus, and history of hypertension, all were found to raise the incidence of microalbuminuria.

**Conclusion:** Microalbuminuria incidence is significantly high in the study population. The factors such as increasing age, male gender, longer duration of the diabetes mellitus, oral hypoglycemic agents, poorly controlled diabetes mellitus, and history of hypertension, all raise the incidence of

microalbuminuria in patients with T2DM to a statistically significant extent. Screening of microalbuminuria patients with T2DM should be added to the routine investigations for diabetes mellitus for the early detection of renal and cardiovascular complications

Keywords: Incidence, Diabetes Mellitus, Microalbuminuria, Factors, Type 2

### **RRF-67 Comparison Of Vacuum-Assisted Closure Dressing And Conventional Dressing Outcomes Among Patients With Chronic Diabetic Foot Ulcers**

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**Introduction:** The prevalence of diabetes mellitus is rising in Pakistan. A typical consequence of diabetes mellitus is chronic non-healing diabetic foot ulcer (DFU) which creates a significant healthcare burden. Traditional wound care techniques sometimes lead to delayed healing durations, which raises the risk of infection, hospitalization, and amputation. A contemporary treatment method called vacuum-assisted closure (VAC) therapy presents a potentially better way to manage these ulcers.

**Methods:** This prospective comparative study was carried out at Benazir Bhutto Hospital, Rawalpindi, Pakistan, for 2 years from January 2022 to January 2024. 110 patients with diagnosed chronic non-healing DFUs were randomly divided into VAC dressing and conventional dressing groups.

Reduction in the wound size and healing time were the primary outcomes whereas patient satisfaction and cost-effectiveness were the secondary outcomes of the current study.

**Results:** Reduction in wound size was significantly higher in VAC dressing group (66.20%) as compared to conventional dressing group (41.50%) with p-value of 0.002. Likewise, difference in healing time was also significant between groups (6.4 weeks in VAC dressing group while 11.3 weeks in conventional dressing group) with p-value of 0.004. Furthermore, the patients with VAC dressing had higher satisfaction and more cost-effectiveness than the patients with conventional dressing group. Informed consent was acquired from each participant. Data was gathered via self-designed proforma. Data analysis was performed using IBM SPSS Statistics for Windows, Version 25.0 (Released 2017; IBM Corp., Armonk, NY, USA) through chi-squared tests and t-independent test, with a significance threshold

set at  $p < 0.05$

**Conclusions:** In short, VAC dressing was more effective in the management chronic non healing DFUs as patients with VAC dressing had more reduction in wound size, faster healing, better patient satisfaction, and more cost-effectiveness than patients with conventional dressing. Increasing the use of VAC dressing in our hospital settings could greatly improve diabetic foot care outcomes.

Keywords: Outcomes, DFUs, VAC, Conventional, Wound, dressings

### **RRF-68 Awareness Of Mothers Regarding The Weaning Practices And Factors Affecting Them: A Descriptive Cross-Sectional Study**

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**Introduction:** Exclusive breastfeed after 6 months of age is not adequate for the growing body of infants, so, the start of weaning at this age is very essential for the proper growth of infants and the prevention of malnutrition. Weaning practices are affected by various factors; hence, this study was conducted to assess the awareness levels of mothers regarding weaning practices and factors impacting them.

**Methods :** This descriptive cross-sectional study was conducted among the mothers of infants in the general population of Rawalpindi. Convenient sampling was applied to recruit participants. A self-structured proforma was used to collect data which was analyzed via IBM SPSS version 25. The Chi-square test was used to assess the association between awareness regarding weaning and factors affecting it.

**Results:** There was a high percentage of mothers who were not aware (33.90%) of age at which weaning should start, type of feed used for weaning (39.80%), and quantity of food that should be given to infants during weaning (41.50%). Awareness of mothers regarding the age of weaning was affected significantly by all included factors (Mothers age, Mothers educational status, Mothers working status, Socioeconomic status, and Parity). However, in the current study, awareness of mothers regarding the type of food for weaning was affected significantly by four of the included factors except for mothers working status, whereas, awareness regarding the quantity of food for weaning was affected significantly only by three factors with the exclusion of mothers working status and socioeconomic status.

**Conclusion:** In a nutshell, there is a high prevalence of unawareness among mothers regarding weaning. Various factors affect awareness, and by controlling

these factors we can improve awareness about weaning and subsequently, we can also achieve improvement in the growth of infants and prevent malnutrition.

Key Words: Awareness, Weaning, Mothers, Infants, Cross-Sectional.

### **RRF-69 Severity Of Late Onset Sepsis And Factors Affecting It Among The Neonates In A Tertiary Care Hospital: A Cross-Sectional Study**

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**Introduction:** Sepsis is a major health problem all over the world, and its more lethal among neonates because of their inadequate and developing immunity. Late-onset sepsis (LOS) develops when neonates get an infection from the community or the hospital and it has a very poor prognosis in neonates. It gets influenced by many maternal and neonatal factors.

**Objectives:** This study was conducted with the objectives to assess the severity of LOS and the factors that determine it.

**Methods:** This cross-sectional was conducted in a tertiary care hospital of Rawalpindi, Pakistan from June 2021 to August 2021. 325 participants were enrolled through nonprobability convenient sampling and fixed inclusion and exclusion criteria. Informed consent was taken from parents of all neonates and the objectives of the study were explained to them. Data was collected by self-designed proforma. Data was analyzed via descriptive and inferential statistics using IBM SPSS v 25. Chi-Square test was applied to determine the link between the severity of LOS and various included factors while a p-value less than 0.05 was considered significant.

**Results:** Severity of LOS was influenced significantly by mothers education, mothers parity, gender, gestational age, birth weight, cord clamping, congenital abnormality, feeding type, feeding hygiene, the passage of central catheter, while the impact of mothers age and socioeconomic status was insignificant. The Incidence of severe degree of LOS was higher among neonates whose mothers had, illiterate educational status, young age, parity >3, lower-class status, and those neonates who had, male gender, preterm birth, low birth weight, early cord clamp, congenital abnormality, bottle feed, poor feeding hygiene, and the central catheter.

**Conclusion:** In brief, the severity of the late-onset sepsis is affected by various maternal and neonatal

factors. By proper handling of these factors, we could bring a decline in neonatal mortality, and consequently, it would lead to a decrease in load over limited resources of public sector hospitals and a decline in burnout among physicians.

Key Words: Severity, Sepsis, Factors, Neonates, Hospital.

### **RRF-70 Comparison of the Effectiveness of Intra-articular Infiltration of Hyaluronic Acid and Corticosteroids in the Management of Knee Osteoarthritis: A Prospective Comparative Study**

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**Introduction:** Knee osteoarthritis (KOA) is a chronic and progressive disease of the knee joint characterized by articular cartilage destruction. It is the most common cause of knee disability and pain globally. Various treatments are used for the management of KOA; however, the role of intra-articular injections in KOA management in Pakistan remains understudied. Therefore, this study aims to evaluate the effectiveness of intra-articular injections of hyaluronic acid (HA) and corticosteroids in the management of KOA.

**Methods:** This randomized, prospective, comparative study was conducted among 88 patients diagnosed with KOA in Rawalpindi, from January 2022 to January 2023. For patient enrolment, structured inclusion and exclusion criteria and a simple random sampling technique were used. Data collection was done via a self-structured and interview-based proforma. Data analysis was performed through descriptive statistics and independent t-tests using SPSS version 25 (IBM Corp., Armonk, NY, USA). **Results:** KOA was more prevalent in women (60, 68.18%) than men (28, 31.82%). The means for study variables such as age, Visual Analog Scale (VAS) score, and Western Ontario and McMaster Universities (WOMAC) score were  $58.08 \pm 7.89$  years,  $7.66 \pm 1.8$ , and  $71.86 \pm 8.90$ , respectively. The incidences of right-sided and left-sided KOA were 57 (64.77%) and 31 (35.23%), respectively. Likewise, the frequency of grade II KOA was 55 (62.50%), while the frequency of grade III KOA was 33 (37.50%). Differences in the mean scores of both VAS and WOMAC between study groups were statistically significant at the second-week, sixth-week, and third-month follow-up visits. However, the mean scores of VAS and WOMAC were lower in

group B than in group A at the second-week follow-up visit, whereas the scores were lower in group A compared to group B after the sixth week and third month of intra-articular injections.

Conclusions: Intra-articular injections of both HA and corticosteroids were adequately effective in the management of KOA-associated pain and functional restrictions; nevertheless, the benefits of corticosteroids were acute and short-term, whereas the outcomes of HA were gradual and long-term.

Keywords : Prospective, knee osteoarthritis, management, corticosteroids, hyaluronic acid, intra-articular, effectiveness, comparison

### **RRF-71 The Efficacy of Intra-articular Platelet-Rich Plasma Injection Versus Corticosteroid Injection in the Treatment of Knee Osteoarthritis: A Prospective Comparative Analysis**

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Introduction: Knee osteoarthritis (KOA) is the most typical cause of knee pain and impairment worldwide. It is typified by slow and progressive degeneration of the articular cartilage of the knee joint. Although KOA is being managed with a variety of therapies, the comparison of the effectiveness of different intra-articular injections in KOA treatment in Pakistan is still not thoroughly investigated.

Therefore, the purpose of this current study is to compare the efficacy of intra-articular administration of platelet-rich plasma (PRP) and corticosteroids (CSs) in the treatment of KOA.

Methods: This prospective comparative study was performed among one hundred patients diagnosed with KOA in Rawalpindi, for one year from April 2022 to March 2023. Specified inclusion and exclusion criteria were employed for patient enrollment. Patients were divided into two equal groups through simple random sampling. Group A patients received an intra-articular injection of PRP solution whereas group B patients received an intra-articular injection of CSs. A self-designed proforma based on interviews was used to collect data. The data analysis in Statistical Package for the Social Sciences (IBM SPSS Statistics for Windows, IBM Corp., Version 25.0, Armonk, NY) was carried out via descriptive statistics and an independent t-test. Results: Women (N=71, 71%) had a higher prevalence of KOA than men (N=29, 29%). The means of study variables like age, Visual Analog Scale (VAS) score, and Western Ontario and

McMaster Universities (WOMAC) score were  $56.10 \pm 8.70$  years,  $8.08 \pm 1.6$ , and  $70.08 \pm 8.76$  respectively. The frequency of KOA on the right side was 62% (N=62) while it was 38% (N=38) on the left side. In the study population, 69% (N=69) patients had grade II KOA, and 31% (N=31) patients had grade III KOA. At the first-month, second-month, and third-month follow-up visits, there were statistically significant differences in the mean scores of the WOMAC and VAS between the study groups. However, at the first-month follow-up visit, mean scores of VAS and WOMAC were lower in group B than in group A while these were lower in group A as compared to group B, at the second-month and third-month follow-up appointments.

Conclusions: Intra-articular infiltration of both PRP and CSs was efficacious in the treatment of KOA-related pain and functional limitations; however, overall improvement in the PRP group was higher than CS group.

Keywords: Comparative, prospective, knee osteoarthritis, treatment, corticosteroids, platelet-rich plasma, intra-articular, efficacy

### **RRF-71 Risk Factors of Postoperative Acute Heart Failure in Elderly Patients After Hip Fracture Surgery**

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Introduction: Postoperative acute heart failure (AHF) in elderly patients after hip fracture surgery is a common complication. Therefore, this study aimed to identify the risk factor of AHF after hip fracture surgery among the older population.

Methods: This retrospective cohort study was performed on 88 admitted patients whose hip fractures were fixed via internal fixation surgery in a tertiary care hospital in Rawalpindi, Pakistan, from January 2022 to March 2023. Recruitment of patients was made through established inclusion and exclusion criteria. A self-designed form was used to collect data. Data analysis was carried out in the IBM SPSS Statistics for Windows, Version 25 (Released 2017; IBM Corp., Armonk, New York, United States). Both descriptive and inferential statistics were applied to compare the attributes of the patients with AHF and patients without AHF. Multivariate logistic regression was used to evaluate the association between the postoperative AHF and its potential risk factors.

Results: Out of 88 enrolled patients, 12 (13.64%) had

developed postoperative AHF. Age  $\geq 65$  years (OR = 2.606, 95% CI = 1.035~4.160,  $p = 0.010$ ), anemia (OR = 3.178, 95% CI = 1.847~5.990,  $p = 0.029$ ), hypertension (OR = 2.019, 95% CI = 1.110~4.034,  $p = 0.012$ ), diabetes mellitus (OR = 2.003, 95% CI = 1.115~4.012,  $p = 0.015$ ), hypoalbuminemia (OR = 2.486, 95% CI = 1.218~4.619,  $p = 0.030$ ), and operation time  $\geq 120$  minutes (OR = 1.702, 95% CI = 1.099~2.880,  $p = 0.018$ ), were the risk factors of postoperative AHF in elderly patients after hip fracture surgery.

Conclusions: In the study population, the incidence of postoperative heart failure was significant and age  $\geq 65$  years, anemia, hypertension, diabetes mellitus, hypoalbuminemia, and operation time  $\geq 120$  were significantly involved in the development of it. Preoperative identification and management of AHF risk factors could lead to the prevention of postoperative complications.

Key Words: Risk, Factors, Postoperative, Heart, Failure, Elderly, Hip, Fracture, Surgery

#### **RRF-72 Resident Reflections: Impact Of Journal Club In Psychiatry Training**

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Introduction: Journal clubs are a key component of postgraduate medical education, promoting critical thinking, evidence-based practice, and professional growth. This study aimed to assess the impact of journal clubs at the Institute of Psychiatry, Benazir Bhutto Hospital, with a focus on attendance, skill development, challenges, and resident satisfaction. Methods: Eighteen psychiatry residents from all four years of training participated in the study. An online questionnaire was used to gather data over three months. Key metrics evaluated included attendance, content relevance, skill development, challenges, and satisfaction levels.

Results: Journal clubs were found to be well-attended and highly valued by the residents. Participants reported notable improvements in professional and academic skills, particularly in critical appraisal, group discussions, public speaking, and presentation skills. The relevance of articles and the overall structure of journal clubs were rated positively.

Conclusion: Journal clubs are an essential and effective element of psychiatry training at the Institute of Psychiatry, BBH. They significantly enhance residents' skills and satisfaction, supporting their professional development.

Keywords: Journal club, Psychiatry training,

Postgraduate education, Critical thinking, Resident satisfaction, Skill development.

#### **RRF-73 Risk Factors And Secondary Infections In Dengue Hemorrhagic Fever Patients**

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**ABSTRACT:** Background: Dengue hemorrhagic fever (DHF) is a fatal manifestation of dengue disease. DHF's risk factors profile holds significance importance in the clinical practice and efficient care plan are required during dengue disease flare-up. The aim of this study was to investigate the risk factors for pathogenesis of dengue disease and dengue hemorrhagic fever.

Methods: In this descriptive cross-sectional study, data was obtained from 256 patients with diagnoses of Dengue hemorrhagic fever (DHF). Comprehensive history, physical assessment and biochemical estimations were recorded. Patients were followed to identify and assess the risk factors for DHF. The Statistical Package of Social Sciences for analysis of data. Stratification of residence and socioeconomic status to see effect of these on result variable by applying chi square test.  $p$  value of  $<0.05$  was taken as significant.

Results: Among the 256 patients, the mean age of the age (Mean $\pm$ SD) of study population was  $28.4\pm 12.1$  years, 162 (63.28%) were less than 40 years of age and 94 (36.72%) were  $>40$  years. The males were 181 (70.70%) and females were 75 (29.30%). The frequency of risk factors was observed to be 26 (10.8%) patients had Diabetes Mellitus, 55 (21.5%) hypertension, 25 (9.8%) hyperlipidemia. Secondary infection occurred in 192 (75%) but results were insignificant ( $p>0.05$ ). All diseases were common in participants who belonged to the urban area.

Conclusion: Secondary infection was most common risk factor in patients with DHF and found mostly in less than 40 age than older patients. Whereas, males were predominately affected more than the females ( $p<0.05$ ).

Keywords: Severe Dengue, Dengue Hemorrhagic Fever, Risk Factor.

## **RRF-74 Evaluating The Impact Of Steroids On Mortality Rates For Severe Pneumonia Patients**

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### **Evaluating the Impact of Steroids on Mortality Rates of Severe Pneumonia Patients**

Severe pneumonia remains one of the leading causes of mortality worldwide, particularly among vulnerable populations such as the elderly, immunocompromised individuals, and patients with comorbid conditions. Despite advances in antimicrobial therapy and supportive care, managing severe pneumonia continues to pose significant challenges, especially in cases associated with an excessive inflammatory response, which contributes to organ dysfunction and increased mortality.

#### **Background**

Steroids, as potent anti-inflammatory agents, have been proposed as an adjunctive therapy in severe pneumonia to modulate the exaggerated immune response that often leads to complications such as acute respiratory distress syndrome (ARDS) and sepsis. The rationale for their use is rooted in their ability to reduce cytokine release, suppress inflammation, and potentially improve oxygenation. However, their role remains controversial, with studies yielding mixed results regarding efficacy, safety, and impact on mortality.

#### **Objectives**

The primary aim of this study is to evaluate the impact of corticosteroids on mortality rates among patients with severe pneumonia. Secondary objectives include analyzing their effects on the length of hospital stay, progression to mechanical ventilation, and the incidence of complications such as secondary infections or hyperglycemia.

**Methods:** 1. Study Design: A prospective or retrospective cohort study/randomized controlled trial involving patients diagnosed with severe pneumonia.

2. Inclusion Criteria: Patients with community-acquired or hospital-acquired severe pneumonia, defined by clinical severity scores (e.g., CURB-65, PSI), and meeting specific respiratory failure or inflammatory markers thresholds.

3. Intervention: Administration of corticosteroids (e.g., dexamethasone, methylprednisolone) compared to standard care or placebo.

4. Outcomes: Mortality rates (primary outcome), duration of intensive care unit (ICU) stay, ventilator-free days, and rates of steroid-associated complications.

**Expected Results:** Positive Effects: Reduction in mortality, improved oxygenation, and shorter ICU stays in patients with hyperinflammatory responses or ARDS.

Negative Effects: Potential for increased risk of secondary infections, delayed viral clearance, or metabolic disturbances

#### **Significance of the Study**

This research is crucial for determining whether corticosteroids can be safely and effectively integrated into treatment protocols for severe pneumonia. If beneficial, this therapy could lead to improved patient outcomes and reduced healthcare costs by mitigating complications and reducing mortality. Conversely, if harmful, the study will highlight the risks, guiding clinicians toward more judicious use of steroids.

#### **Challenges and Limitations**

Variability in dosing regimens and timing of steroid administration.

Differences in patient populations (e.g., bacterial vs. viral pneumonia).

Risks of adverse effects associated with immunosuppression.

In conclusion, evaluating the role of steroids in severe pneumonia management is essential to optimize treatment strategies. This study will provide valuable insights to balance the benefits and risks of corticosteroid therapy in clinical practice.

## **RRF-75 Spectrum of Breast Diseases in a Breast Clinic of a Tertiary Care Hospital**

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**Introduction:** This study was conducted to determine the pattern and clinical presentation of breast diseases in different age groups presenting to a breast clinic.

**Methodology:** It was a retrospective descriptive study which included all patients presenting to a breast clinic for three years. Age at presentation, symptoms, clinical features, investigations, operative findings and specimen reports were recorded and submitted for analysis. .

**Results:** A total of 3568 patients were included.

Mastalgia was the commonest

findings(39.42%)followed by

fibroadenoma(15.83%)and carcinoma of breast

(12.61%). Pain in the breast was the

commonest presenting symptom(40.38%).Lump in

the breast was found in 22.84%, while pain and lump

were present in 27.27% of patients.

Among carcinoma breast, intra ductal carcinoma

was the commonest (57.55%) followed by malignant phyllodes tumour (17.77%).

Conclusion: Most common breast diseases presenting in our setting are mastalgia, fibroadenoma and breast carcinoma. Dedicated breast clinic in our public sector hospitals is need of time. It will help to create awareness about breast diseases among general public and will be a source to collect data about disease burden so that future policies can be streamlined.

Key Words: Breast Cancer, Acute mastitis, Mastalgia

### **RRF-76 Double Lumen Catheterisation Guidelines Audit in Nephrology Department of Holy Family Hospital**

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Introduction: Initially documented in the 1960s, double lumen catheterization represents a well-established and empirically validated methodology for the expedient access of the major venous system. The advantages it offers over peripheral access includes enhanced durability with reduced risk of infection, secure positioning of the line, prevention of phlebitis, larger lumen diameters, multiple lumens facilitating the rapid administration of drug combinations, a conduit for nutritional support. Methods: A standardised questionnaire on DLC insertion and guidelines was made which was filled by all the faculty members of nephrology department Holy Family Hospital involved in this procedure. Results: Data was collected from all the consultants, PGTs and House officers regarding following of Guidelines. 1st cycle's duration was 15/09/2024-29/09/2024. During this cycle the parameters of Guidelines check list were observed and analyzed according to questionnaire filled by all faculty members involved in this procedure. Then a workshop was held in which results of all parameters were displayed and improvement plan was also explained. After that 2nd cycle of Audit was from 1/10/2024-15/10/2024. Then again results of all parameters were displayed which were improved a lot than before as evident from their statistical review also.

Conclusion: The successful insertion of a double-lumen catheter requires adherence to evidence-based guidelines to ensure patient safety and optimal outcomes. Proper patient selection, aseptic technique,

accurate anatomical knowledge, and the use of ultrasound guidance are essential steps in minimizing complications. Regular staff training, protocol updates, and vigilant post-procedure monitoring further enhance the quality of care. By following these guidelines, healthcare professionals can significantly reduce infection rates, improve catheter functionality, and ensure better patient outcomes. Keywords: DLC, Nephrology, hemodialysis, clinical audit, procedures, questionnaire, guidelines, safety indicators.

### **RRF-77 Evaluating Patient Satisfaction with Care and Services in the Dialysis Unit of Holy Family Hospital Rawalpindi introduction; a clinical Audit**

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Introduction; Patient satisfaction is a key indicator of healthcare quality, particularly in dialysis units where long-term care is provided. This study evaluates patient satisfaction with the care and services at the Dialysis Unit of Holy Family Hospital, Rawalpindi, focusing on aspects like medical care, staff professionalism, facility comfort, and waiting times. The goal is to identify strengths and areas for improvement to enhance the overall patient experience.

Methods; Patient satisfaction with dialysis care and services was evaluated using a self-designed mixed-method questionnaire, administered to 20 scheduled dialysis patients in their native language. Following the initial audit cycle, a meeting was conducted with the dialysis nursing staff, postgraduate residents, house officers, and a nephrologist to review and analyze the data. A subsequent clinical audit was carried out using the same questionnaire to assess any improvements or changes based on the initial findings.

Results; The audit revealed that a significant majority of patients expressed high levels of satisfaction with the dialysis services at Holy Family Hospital. Specifically, 99% of patients reported being very satisfied with their overall dialysis experience, indicating strong positive feedback regarding the quality of care provided. 92% satisfied with medical care, 91% Satisfaction with staff professionalism, 83% Satisfaction with Waiting Times, 98% Satisfaction with Availability of Nephrologist, 92% Satisfaction with Facility Comfort, 88% Satisfaction with Communication,

93% satisfaction with hygiene.

Furthermore, patients consistently expressed satisfaction with the care and services offered, reinforcing the units reputation for quality clinical care. The results suggest that while the dialysis unit excels in providing professional medical care and ensuring the availability of specialized staff, these aspects are well-appreciated by patients, contributing to an overall high level of satisfaction.

conclusion; The audit revealed high patient satisfaction at the Dialysis Unit of Holy Family Hospital, with 95% of patients very satisfied with their overall dialysis experience and over 98% appreciating the availability of nephrologists. This reflects strong clinical care and accessibility to specialists. While patients were generally pleased with the services, addressing operational areas like waiting times and comfort could further improve their experience.

Key Words; Patient satisfaction, Dialysis unit Healthcare quality, Dialysis care, Medical care Staff professionalism

#### **RRF-78 Adherence To Morning Meeting Protocols In Nephrology Department Of Holy Family Hospital**

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Introduction: Morning meetings are essential for ensuring effective communication, coordination, and patient care in hospitals. However, adherence to morning meeting protocols can be inconsistent, leading to potential safety risks and compromised patient care. An audit on adherence to morning meeting protocols was conducted and improvement areas were described.

The aim was to improve meeting structure and organisation, attendance and participation, meeting content and outcomes and overall satisfaction and suggestions.

Methods: A mixed-methods approach was used, combining survey questionnaires (n=100) and focus group discussions (n=20) with healthcare professionals in a tertiary care hospital.

Results: The intervention led to significant improvements in compliance 1) meeting structure and organisation improved from 60 to 90%. 2) attendance and participation improved from 70 to 100%. 3) meeting content and outcomes improved from 80 to 100%. 4) overall satisfaction and

suggestions improved from 52 to 95%.

Conclusion: This study highlighted that providing structured intervention ,improved adherence to morning meeting protocols considerably.

Nevertheless efforts need to continued to counter deficiencies and maintain improvements. To achieve consistent compliance regular follow up audits and reinforcement strategies are recommended.

Keywords: Morning meetings protocols, clinical Audit, attendance, participation, action items, suggestions, satisfaction, patient care.

#### **RRF-79 Increasing Awareness Of Compartment Syndrome Among Orthopaedic Residents: A Complete Clinical Audit Loop**

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Introduction; Acute compartment syndrome (ACS) is a surgical emergency characterized by a significant increase in pressure within a closed osteofascial compartment, necessitating immediate diagnosis and treatment through fasciotomy and decompression. Delayed recognition and intervention are critical factors contributing to poor outcomes following ACS. As the primary point of contact for patients at risk of developing ACS, Orthopedic Postgraduate Residents (OPGRs) play a vital role in early diagnosis and intervention. This audit project aimed to assess the baseline knowledge of OPGRs regarding ACS, with the ultimate goal of enhancing awareness and facilitating early diagnosis of the condition.

Methods; To assess baseline knowledge, Orthopedic Postgraduate Residents (OPGRs) completed a 6-point pre-course questionnaire based on British Orthopaedic Association (BOA) guidelines for acute compartment syndrome (ACS) diagnosis, early signs and symptoms, immediate interventions, and complications of delayed diagnosis. After a targeted lecture, the questionnaire was repeated to evaluate knowledge retention. Additionally, a ward-based protocol was introduced, providing quick reference and highlighting an early escalation plan for ACS recognition. A follow-up questionnaire was administered 4 months later to assess sustained knowledge and practice changes.

Results; Before course a significant number of OPGRs had not adequate awareness about the different aspects of the ACS including ACS definition (14.28%), most common risk factor for ACS (35.71%), most common symptom of ACS

(42.85%), two most common signs of ACS (50.00%), immediate intervention to ACS (50.00%), and most serious complication of ACS (21.42%). Following the interventions in the form of targeted lecture and ward protocol about, the immediate response after course was 100% for all questions among OPRs. However, after follow-up of 4 months, when same questionnaire was filled by same OPRs, there was decline in knowledge about three questions of the initially used questionnaire including most common risk factor for ACS (14.28%), most common symptom of ACS (14.28%), and two most common signs of ACS (21.42%).

**Conclusion;** Our audit reveals that straightforward educational interventions, such as lectures and printed ward-based protocols, significantly enhance awareness and knowledge of acute compartment syndrome (ACS) among Orthopedic Postgraduate Residents (OPRs). The audit underscores the importance of ongoing teaching and training for OPRs to ensure sustained improvement in ACS recognition and management.

**Keywords:** Orthopaedics, Diagnosis, Acute compartment syndrome, Intervention,

### **RRF-80 Improvement in the Documentation of Inpatient Medical Records: A Complete Clinical Audit**

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**Introduction:** Effective documentation is vital for high-quality clinical practice, as medical notes facilitate crucial communication among healthcare professionals involved in patient care. To ensure medical records meet established standards, a quality assurance mechanism is necessary. This audit aimed to assess the quality of medical notes writing in the surgery department of Benazir Bhutto Hospital and identify solutions to improve existing medical records and address deficiencies.

**Methods;** A observational audit was conducted at Benazir Bhutto Hospital, encompassing 88 patient files across two audit cycles, with 44 files in each cycle. The audit involved collecting data from each file and benchmarking it against the standards set by the Royal College of Physicians. The collected data was then analyzed using SPSS version 26 to identify areas for improvement and assess the quality of care provided..

**Results;** A total of 88 samples were included. In the 1st cycle only 38.63% of doctors wrote the patients complete history, 31.81% wrote patients complete examination findings, 27.27% documented the patients investigations and management plan, 21.59% mentioned the patients diagnosis and progressive notes, 39.77% filled admission and discharge sections properly, and overall impression in excellent category was 10.00% only. In the 2nd cycle, 90.90% of doctors wrote the patients complete history, 81.81% wrote patients complete examination findings, 73.86% documented the patients investigations and management plan, 63.64% mentioned the patients diagnosis and progressive notes, 62.50% filled admission and discharge sections properly, and overall impression in excellent category was 61.36% in the 2nd cycle.

**Conclusion;** Documentation practices at our hospital initially fell short of standards, with high rates of poor and unsatisfactory practices. However, after orienting medical practitioners, significant improvement was seen in inpatient medical record completion, highlighting the importance of ongoing education.

**Keywords;** Medical records, Royal college, Physicians, Documentation, Clinical audit, Quality improvement

### **RRF-81 Learning by doing:Imparting Necessary Surgical Skills**

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The Flexner Report and Importance of Hands-On training

### **RRF-82 Undergraduate education laying the foundation**

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**Introduction;** Undergraduate medical education is pivotal in shaping the foundational skills of future healthcare professionals. The surgical department plays a key role in this process, providing students with essential knowledge and hands-on experience. Through exposure to various surgical techniques and patient care, students develop critical thinking and problem-solving abilities. This early immersion fosters both technical proficiency and compassionate care, preparing them for their medical careers. Our

department aims to instill a strong foundation in surgery for future doctors.

**Methods;** The methodology involves a combination of theoretical lessons, practical workshops, and clinical rotations within the surgical department. Students engage in interactive learning, observing surgeries, and participating in simulated procedures. A structured curriculum allows students to learn about anatomy, surgical techniques, and patient safety. They are mentored by experienced surgeons, ensuring a thorough understanding of both basic and advanced surgical concepts. Regular assessments called LMS are being carried on for assessment of the lectures.

**Results ;** Students who undergo training in the surgical department demonstrate enhanced clinical skills, improved decision-making abilities, and greater confidence in handling complex cases. Hands-on surgical experience allows students to gain technical competence while reinforcing their understanding of medical theories. The integration of multidisciplinary team ensure students learn how to work collaboratively in a clinical setting. This well-rounded education equips them with the skills necessary for residency and specialized training.

**Conclusion;** The surgical department plays a crucial role in undergraduate medical education, laying a solid foundation for future doctors. By combining theoretical learning with practical experience, it fosters the development of clinical, technical, and communication skills essential in modern healthcare. The exposure to real-life surgeries and patient care strengthens students ability to provide quality care. Ultimately, the department contributes significantly to producing competent and compassionate healthcare professionals.

**Keywords;** Undergraduate, communication

### **RRF-83 Innovation in Postgraduation training**

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**Introduction:** Innovation in medical education is pivotal in advancing health-care qualities and outcomes. As the field of medicine evolves rapidly due to technological advancements and shifting health-care needs, the educational methodologies employed must also adapt.

**Methods:** The dynamic nature of modern healthcare necessitates a transformative approach to education, thus keeping in view, Surgical Unit-I took a step ahead and started following innovative programs for the betterment of Post-Graduate training:

i. Multidisciplinary Tumor Board (MTB)

ii. Mini-CEX

iii. Meet the Expert

v. Workshop on Recent Advancement

v.E-Library

**Results:** Introducing these strategies in postgraduate training programs has proven to be very effective in developing skills in postgraduate trainees, their involvement as a surgeon and in acquiring remarkable competencies.

**Conclusion:** Keeping in view the advancements of medical education and challenges faced by health professionals such implementations should be made for a better future of trainees.

**Keywords:** Multidisciplinary tumor board meeting

Mini clinical evaluation

Meet the expert

Recent Advancements

### **RRF-84 Assessing anxiety in post operative patients with complications vs no complications**

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**Introduction:** postoperative anxiety is a common yet under recognised phenomenon that can significantly affect patient recovery and wellbeing .this study aims to assess the prevalence of post-operative anxiety and to evaluate the difference in level of anxiety in patients who develop post-operative complication vs those who have an uneventful course .this is the first study of post-operative evaluation in our region .anxiety level will be measured using the State-Trait Anxiety Inventory (STAI) at multiple time points post surgery .

**Methods:** study will be done in post-operative patients in surgical unit 1 benazirbhatto hospital rawalpindi including elective and emergency surgery .Both male and female patients greater than 15 yrs of an age will be included and patients with known depression and anxiety disorders will be excluded .patients will be assessed in two groups ,one without post -operative complications and other who have developed complications. Pre-operative level of anxiety score and post-operative anxiety score will be compared .study will be completed in 6 month period from 1st December 2024 to may 2025. They will be assessed using STAI and pain score (1-10).Data will be collected on structured performa in mother language of patients (urdu). Data will be collected and analyzed by SPSS 27 version

**Results:** we predict higher anxiety scoring for patients with post-operative complications .  
**conclusion:** post-operative anxiety levels are expected to differ in patients who develop

complications as compared to those who are discharged uneventfully .

### **RRF-85 Frequency of Burnout among Postgraduate Residents at a Tertiary Care Hospital of Pakistan**

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**Introduction ;** Surgical trainees operate in a high-stress environment, where they are constantly exposed to a multitude of challenges. These stressors include managing heavy patient loads, coping with adverse patient outcomes, navigating lengthy and complex operating room procedures, and dealing with the emotional toll of traumatic cases. As a result, it is not unexpected that burnout rates are significantly elevated among surgical residents, highlighting the need for targeted support and wellness initiatives. Therefore, this study aimed to determine frequency and impact of burnout among residents surgeons of different specialties at Benazir Bhutto Hospital (BBH), Rawalpindi. Pakistan.  
**Methods;** This cross-sectional study was carried out in the three departments of surgery specialties (General Surgery, Orthopaedics, and Obstetrics and Gynaecology) at BBH, Rawalpindi, over the period of one year from August 2023 to August 2024, among 66 participants. A self-designed proforma along with American Public Welfare Association (APWA) inventory was used for data collection. Data analysis was done via SPSS 26.0.  
**Results;** Out of 66 participants, n=28 (42.42%) were women while n=38 (57.58%) were men. The frequencies of various burnout grades were following no stress or professional burnout n=3 (4.54%), stress but no professional burnout n=5 (7.57%), fair chance to get burnout n=20 (30.30%), early burnout n=28 (42.42%), and advanced burnout , n=10 (15.16%). Female resident surgeons n=7 (70.00%) had higher frequency of advanced burnout than male resident surgeons n=3 (30.00%). Advanced Burnout was most prevalent among residents of general surgery n=5 (50.00%), followed by residents of Obstetrics and Gynaecology n=4 (40.00%), and orthopaedics n=1 (10.00%). Likewise, Advanced burnout was most prevalent among first year residents n=4 (40.00%), followed by second year residents n=3 (30.00%), third year n=2 (20.00%), and fourth year residents n=1 (10.00%).  
**Conclusion;** The high rate of burnout among surgical

residents can be attributed to excessive working hours, inadequate compensation, and dwindling job satisfaction. To address this pressing issue, proactive measures must be implemented to not only ensure patient safety but also to safeguard the personal and mental well-being of surgeons, ultimately promoting a healthier and more sustainable medical environment.

**Keywords;** Burnout, Resident Surgeon, Working Hours, Satisfaction.

### **RRF-86 Promotion Of Research Culture In SU-1, BBH.**

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Surgical unit 1 has been promoting research initiatives and providing opportunities to faculty and postgraduates.  
With multiple ongoing researches and audits, SU-1 is clearly taking part in research based learning and training of their members as per curriculum of RMU.

### **RRF-87 From Prospectus to Practice: An Evaluation of Postgraduate Surgical Trainees' Competence Against Prospectus Standards**

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**Introduction:** Postgraduate medical education requires rigorous evaluation to ensure trainees meet expected competence levels. This study aimed to evaluate the performance of postgraduate surgical trainees on completion of 1 year of their training in relation to the competence levels outlined in their prospectus.

**Methods:** Responses were gathered from supervisors in surgical units. A comparative analysis was conducted, revealing both strengths and weaknesses in trainee performance.

**Results:** The findings highlight areas for improvement in training programs, emphasizing the need for targeted interventions to bridge the gap between expected and actual competence levels.

**Conclusion:** This study contributes to the existing literature on postgraduate medical education, underscoring the importance of regular assessment and evaluation to ensure trainees meet required standards.

Keywords: Surgery department, clinical competence, staff development, outcome assessment

### **RRF-88 Factors That Lead to Failure of Meeting Deadlines by University Residents**

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#### **Objective:**

Investigate the factors causing university residents to miss deadlines.

#### **Importance:**

Understanding these factors can help improve time management and academic performance.

Introduction: Meeting deadlines is a critical skill for university residents, yet many face significant challenges in adhering to them. Factors such as poor time management, procrastination, mental health issues, and competing responsibilities often hinder academic success. Research highlights how procrastination, often driven by a lack of self-regulation or fear of failure, plays a major role in missed deadlines, leading to poor academic performance and stress. Additionally, external distractions, unclear instructions, and overlapping assignments further exacerbate the problem.

Addressing these challenges requires a holistic approach, including improved time management strategies, support systems, and fostering self-motivation, all of which can help students meet their deadlines more effectively.

#### **Methods: Study Design:**

Cross-sectional survey.

#### **Participants:**

University residents across multiple disciplines.

#### **Data Collection:**

Online questionnaires assessing personal, academic, and environmental challenges.

Sample size: 40 residents of different disciplines.

#### **Results:**

The survey of 40 university residents revealed that time management skills were moderately rated, with most respondents (19) scoring 3 or 4 on a 5-point scale. Procrastination was a notable issue, as 20 respondents rated themselves 4 or 5. Mental health factors like stress or burnout were impactful, with 27 respondents acknowledging either frequent (12) or occasional (15) effects. Half of the participants (20) reported overlapping assignments as a key factor in missed deadlines, and unclear instructions were moderately problematic, with 19 respondents rating their frequency as 3 or 4. Faculty support was rated low by 15 respondents (1 or 2), suggesting room for improvement. A conducive study environment was reported by 73% of respondents, while internet issues

affected 26 individuals. External distractions were common, with 21 respondents experiencing 2 or more distractions. When asked for solutions, most respondents suggested 3-5 recommendations, highlighting the need for better time management resources, clearer instructions, and stress management support.

#### **Conclusion: Call to Action:**

Collaboration between residents, faculty, and university administration is key to addressing these factors and promoting timely submission of assignment.

### **RRF-89 Assessing the Impact of WBA on Resident Performance**

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Introduction: Workplace-Based Assessment (WBA) evaluates postgraduate residents in real-world clinical settings. Tools such as Topic Presentations, Direct Observation of Procedural Skills (DOPS), and Clinical Examinations are critical for competency-based training. This study aims to demonstrate the measurable benefits of WBA in enhancing clinical competence, procedural skills, and professional growth.

#### **Study Design;**

Participants: 100 postgraduate residents from various specialties.

Duration: 12 months.

Methods: Residents assessed quarterly using Topic Presentations, DOPS, and Clinical Examinations. Feedback and performance data collected through structured tools and surveys. Comparison of pre-WBA baseline skills vs. post-WBA outcomes.

#### **Key Assessment Tools Studied**

##### **Topic Presentations**

Improves knowledge synthesis and public speaking.  
Develops critical thinking through peer discussions.  
DOPS (Direct Observation of Procedural Skills)  
Ensures procedural proficiency through real-time observation.

Builds confidence and technical accuracy.

##### **Clinical Examinations;**

Sharpens diagnostic reasoning and patient interaction skills.

Aligns clinical practice with evidence-based guidelines.

#### **Results; Skill Development:**

85% of residents showed improved procedural accuracy after repeated DOPS assessments. 78% reported enhanced diagnostic skills from clinical exams.

#### **Confidence and Communication:**

Topic presentations increased communication skills in 88% of participants.  
92% found that immediate feedback promoted better clinical decision-making.

Patient Outcomes:

Improved patient satisfaction scores in clinics with WBA-trained residents.

Conclusion; This study confirms the benefits of Workplace-Based Assessments such as Topic Presentations, DOPS, and Clinical Exams. These tools significantly enhance postgraduate residents' clinical competence, procedural accuracy, and overall professional development, ensuring better patient care outcomes.

### **RRF-90 "Impact of Age, Gender, and BMI on the Severity of Obstructive Sleep Apnea: A Cross-Sectional Study"**

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#### **Abstract**

Background: Obstructive sleep apnea (OSA) is a common and underdiagnosed sleep disorder characterized by recurrent airway obstruction during sleep, leading to disrupted sleep and reduced oxygen saturation. Factors like age, gender, and body mass index (BMI) significantly influence OSA severity. The aim of this study was to examine the combined effects of these factors on OSA severity.

Methods; This cross-sectional study was conducted in the Pulmonology Department of Fauji Foundation Hospital, Rawalpindi, between 01-06-24 and 10-07-24. A total of 80 adult participants diagnosed with OSA through polysomnography were included using non-probability convenience sampling. Data on demographics, BMI, menopausal status, and polysomnography results were collected. Chi-square tests and multiple regression analysis were used to assess associations and predictors of apnea-hypopnea index (AHI) severity. A p-value <0.05 was considered significant.

Results; Among 80 participants, the mean age was 58.05 years, and the mean BMI was 35.95. The sample comprised 68 females (85%) and 12 males (15%). Chi-square analysis revealed significant associations between age ( $\chi^2 = 1293.333$ ,  $p < .001$ ), gender ( $\chi^2 = 72.157$ ,  $p < .001$ ), and BMI ( $\chi^2 = 1210.000$ ,  $p < .001$ ) with AHI severity. Regression analysis showed that only gender was a statistically significant predictor of AHI ( $p = 0.003$ ), with females exhibiting lower AHI values than males. Age and BMI, while associated, did not independently predict AHI severity.

Conclusion; Gender emerged as the key predictor of OSA severity, with females showing significantly lower AHI values. While age and BMI were associated with AHI, their effects were not statistically significant in the regression model. These findings highlight the importance of targeted, gender-specific therapeutic strategies for managing OSA.  
Keywords; Obstructive Sleep Apnea, Apnea-Hypopnea Index, Gender Differences, Body Mass Index, Sleep Disorders  
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### **RRF-91 Diagnostic Accuracy of Leukocyte Esterase Dipstick Test in Early Detection of Spontaneous Bacterial Peritonitis in Cirrhotic Patients**

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Diagnostic Accuracy of Leukocyte Esterase Dipstick Test in Early Detection of Spontaneous Bacterial Peritonitis in Cirrhotic Patients  
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Introduction: Spontaneous bacterial peritonitis (SBP) is a bacterial infection of the ascitic fluid, without any specific intra-abdominal source of infection. It mainly occurs in patients with liver cirrhosis complicated by ascites. Without timely management, it may lead to raised morbidity and mortality within a few hours. SBP is characterized by an absolute ascitic fluid polymorphonuclear (PMN) count of  $\geq 250$  cells/mm<sup>3</sup>, accounting for 10-30% of bacterial infections in hospitalized patients.

Despite the routine examination and culture of the ascitic fluid being gold-standard diagnostic modalities, their waiting period is questionable. The initiation of empirical therapy for SBP has been a common practice in healthcare facilities. However, due to multi-drug resistance, the choice of antibiotics for treatment is critical. Therefore, to reduce disease complications and ensure an early diagnosis, various bedside reagent strip tests have been used for the initial screening of SBP.

Objective:

This study aims to determine the diagnostic accuracy of the leukocyte esterase dipstick test in the early detection of spontaneous bacterial peritonitis in patients suffering from liver cirrhosis. Being a bedside screening test, it is a very convenient and

quick diagnostic option as compared to other tests available.

**Methods:** It is Cross sectional validation study performed at Holy Family Hospital Rawalpindi. Total 132 hospitalized liver cirrhotic patients of either gender, ages between 18 years to 70 years with ascites suspected to have spontaneous bacterial peritonitis clinically were included. Diagnostic ascitic tap (paracentesis) was performed using strict aseptic measures. 10-20cc of fluid sent for routine examination. 30cc was used for bedside strip test. Bedside test revealed the presence of granulocyte esterase. Levels of leukocytes detected in ascitic fluid sample was assessed using graded color-coded calibrator. Cutoff value of ++ and +++ for dipstick was considered positive. The results were compared with Ascitic Fluid routine examination.

**Results:** Out of 21 total cases of LERS (++) results, 18 cases (85.7%) were later confirmed to be SBP by standard ascetic fluid R/E results, whereas only 03 cases (14.3%) were negative for SBP by standard Ascetic fluid R/E results, as presented in Table-1. Out of 24 total cases of LERS (+++) results, 21 cases (87.5%) were later confirmed to be SBP by standard ascetic fluid R/E results, whereas only 03 cases (12.5%) were negative for SBP by standard Ascetic fluid R/E results, as presented in Table-2.

**Conclusion:** Our study concludes that LERS can be a faster and cheaper diagnostic option for SBP in cirrhotic patients with ascites. Within two minutes, the test results are visible, demonstrating its usefulness and effectiveness. Delay in SBP diagnosis due to limited laboratory facilities in certain hospitals can lead to serious consequences in cirrhotic patients. Thus, cheaper and easy to perform LERS test can be life-saving modality in these settings. Although it cannot replace Standard diagnostic Ascitic Fluid R/E method but it can help remote health care facilities and less affluent hospitals to diagnose SBP and start IV antibiotics timely, thus preventing the drastic outcomes of late diagnosis of SBP.

#### **RRF-92 Overview of RJRMU**

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**Introduction:** The Journal of Rawalpindi Medical University (JRMU) is a peer-reviewed medical journal established in 2020 with the aim of promoting high-quality research and medical writing. It publishes original research articles, review articles, case reports, and editorials in both basic and clinical

sciences. The journal is committed to upholding the highest standards of ethical and scientific integrity, ensuring that all published content is rigorously reviewed by experts in the field.

**Methods:** Collection of data from respective RJRMU editions till now. The collected data includes articles, editorials, case reports, short communications etc. which is compiled and finalised by our Patron in chief ;Professor Muhammad Umer, Patron ; Professor Jahangir Sarwar Khan, Professor Dr Asad Tamiz-Uddin

**Conclusion:** The data was compiled in the form of poster by tables and charts.

**Keywords:** RJRMU, articles, editorials, short communications, data collection, case reports.

#### **RRF-93 Comparison Of Liquid Nitrogen Cryotherapy Vs 40% TCA In The Treatment Of Planter Warts**

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**Introduction:** Plantar warts, caused by human papillomavirus (HPV), are benign growths that often cause discomfort, particularly when located on weight-bearing areas of the feet. Treatment options, including cryotherapy and 40% trichloroacetic acid (TCA), vary in effectiveness and accessibility. Cryotherapy, while effective, requires specialized equipment, whereas TCA is a simpler, more cost-effective alternative. This study compares the efficacy of liquid nitrogen cryotherapy and 40% TCA in the treatment of plantar warts.

**Objective:** To evaluate and compare the efficacy of liquid nitrogen cryotherapy and 40% TCA in treating plantar warts.

**Methods:** In this open-label, randomized controlled trial, 97 patients (aged 12-60) with plantar warts were randomly assigned to receive either cryotherapy (Group A) or 40% TCA (Group B). Cryotherapy was administered in a freeze-thaw cycle with liquid nitrogen, while TCA was applied topically once a week for up to 4 weeks. Treatment efficacy was assessed at 12 weeks, with responses categorized as complete, partial, or no response. Lesion size reduction was measured at baseline and follow-up. **Results:** Of 97 participants, 93 completed the study. Cryotherapy achieved a 72% complete response rate, compared to 60% for TCA. The average reduction in lesion size was 85% for cryotherapy and 78% for TCA. Although cryotherapy had a higher success rate, both treatments showed similar efficacy ( $p = 0.07$ ). Post-treatment side effects, such as erythema and blisters, were more common in the cryotherapy group.

**Conclusion:** Both cryotherapy and 40% TCA are effective in treating plantar warts. Cryotherapy demonstrated slightly higher efficacy, but TCA presents a more accessible and cost-effective alternative, particularly in resource-constrained settings.

**Keywords:** human papillomavirus, Plantar warts, cryotherapy, trichloroacetic acid

### **RRF-94 Empowering residents through application of principles of andragogy**

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**Introduction:** Andragogy, a theory of adult learning developed by Malcolm Knowles, is based on several key principles: adults are self-directed learners who draw on their life experiences to inform new learning, and they are most motivated when the content is relevant to their immediate needs or real-world problems. They prefer practical, problem-solving approaches to learning, and they require a clear understanding of why they need to learn something before they engage with it. Adults are also intrinsically motivated by personal growth and self-improvement, and learning environments should be learner-centered, allowing for flexibility and autonomy. By understanding these principles, educators can create more effective, engaging learning experiences for adult learners. Higher education institutions aim to produce skilled, competent graduates by using appropriate teaching methods that empower learners. According to constructivism, the learner should be the focus of learning, with instructors playing a facilitative role. When learners are empowered through active, student-centered teaching, they gain confidence, competence, and self-esteem, which enables them to tackle real-life challenges. A shift to active learning and student-centered approaches is crucial, as it fosters creativity and competence, helping students become effective problem-solvers and meet future challenges.

#### **Objective:**

To empower residents by applying constructivism theory, fostering active learning, critical thinking, and self-directed growth through learner-centered teaching methodologies and collaborative educational practices.

**Methods:** By applying principles of andragogy, residents are involved in making their own academic roster according to their roles. One consultant was attached to supervise this roster. During one year

period from Oct 2023 to Oct 2024 three residents were chosen for this task who make roster for four four months respectively. First resident was in 2nd year FCPS, Second resident was in 1st year MS, third resident was in 2nd year FCPS. The basic textbook of obstetrics and gynecology were covered in this roster. A monthly academic roster was developed to cover topics in both obstetrics and gynecology. The schedule included various activities such as case presentations, PowerPoint presentations, skills training, and guideline reviews. To ensure active participation, weekly and daily reminders were sent via a WhatsApp group.

**Monday:** Case presentations supervised by Associate Professor.

**Tuesday and Wednesday:** PowerPoint presentations supervised by senior registrar.

**Thursday:** Guideline sessions led by a senior registrar.

**Friday:** Skills training performed on models created by postgraduate residents.

**Monthly activities included:**

**First Saturday:** Monthly tests covering the previous month's topics, prepared by the senior registrar.

**Second Saturday:** Monthly audit.

**Third Saturday:** Journal club.

**Fourth Saturday:** Presentations on perinatal and maternal mortality.

Attendance was recorded in a dedicated academic activity register. Postgraduate residents assigned to OPD or emergency morning stations were exempt from attending the morning classes. To manage clinical responsibilities, two labor room teams were formed to attend the classes on alternate days. This structured approach ensured comprehensive academic and skill development for all postgraduate residents.

**Results:** To see the impact of empowerment strategy of Postgraduate resident. test was taken each month to determine performance of each resident. Mean of total 30 residents was calculated. Mean score of 25 postgraduate residents was around 83.3% and mean score of 4 postgraduate residents was around 13.3%.

#### **SWOT analysis:**

**Strength:** Creativity, Early adaptation, responsibility sharing, consistency, commitment, positive learning environment, provide feedback to learner, use of effective questioning, logistic availability, correction of mistakes.

**Weaknesses:** deficiencies in IT skills, due to work load text books are not followed,

**Opportunities:** learning, improvement of IT Skills and PowerPoint presentation skill improvement, confidence building as speaker/presenter, preparation of exam, opportunity to get tips & tricks from seniors.

Threats: Decline in motivation over the period of time, feeling overburdened, difficulty in time management, forgetfulness, picking up power point presentations from unauthentic sources.

Conclusion: The empowerment strategy implemented through structured academic activities significantly contributed to the professional growth of postgraduate residents. Regular assessments demonstrated an improvement in performance, with most trainees achieving satisfactory mean scores. This approach highlights the importance of learner-centered methodologies in fostering competence, confidence, and critical thinking skills among postgraduate medical residents.

**RRF-95 Audit of Central Venous Catheterization Practices in a Teaching Hospital of Rawalpindi**

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**RRF-96 Validation of a Locally Manufactured Infrared Thermal Gun Against Mercury Thermometer for Clinical Use**

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**RRF-97 Improving Documentation and Abnormal Result Highlighting in Medical Unit-II: An**

**Audit-Based Approach**

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**RRF-98 Evaluating the research conducted at MU-II HFH: a five-year analysis.**

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**RRF-99 Dengue Seromarkers in Healthcare personnel :Insight from Holy Family Hospital**

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Background: Dengue fever, a viral illness, transmitted by *Aedes aegypti* is an endemic in many tropical and subtropical areas of the world where the mosquito *Aedes* primary carrier of the virus thrives. Many dengue Fever outbreak have been reported in recent years which place significant pressure on healthcare systems and pose unique challenges for healthcare workers. The rapid increase in patients can strain resources, lead to burnout and heighten the risk of infection for healthcare workers.

**Objectives:**

To determine the positive dengue status in healthcare works i.e. doctors and paramedical staff.

To assess the status of preventive measures taken against dengue outbreak by healthcare workers.

To identify the sociodemographic factors influencing dengue outbreak.

**Materials and Methods:**

A cross-sectional study design was employed .The blood samples of House officers ,Post -graduate trainees, ,Consultants Staff nurses ,student nurses ,ward boys and sweepers working in the Department of Infection Diseases(DID), Holy Family Hospital were taken and were sent to Department of Pathology to check the positivity rate of dengue fever in healthcare workers through positive dengue serology and

positive NS-1 antigen .Descriptive statistics, independent sample t test and reliability statistics were

applied.

Results: The current study was found to be reliable and after analyzing 110 test results, only 3 healthcare workers

including 2 Doctors and one paramedical staff had positive IgG serology. However, none of the healthcare

worker was found positive for IgM and NS1 antigen.

Conclusion: After assessing and evaluating results of the data, it was found that there were less healthcare workers

which were exposed to secondary mosquito bite.

These findings are also suggestive that the preventive measures taken the Department of Infectious Diseases in Holy Family hospital are satisfactory and therefore less healthcare workers are at risk of

infection.

**Keywords:** Dengue fever , endemic ,Tropical and subtropic areas , Healthcare workers ,Outbreaks , Preventive measures ,Sociodemographic factors , cross sectional study ,Secondary infections , Dengue serology , Reliability statistics .

### **RRF-100 Best Practices In Phlebotomy According To WHO Guidelines: A Clinical Audit To Improve Blood Sampling In SU2 BBH.**

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**Introduction:** Blood sampling is one of the most important aspects of healthcare. Poor sampling technique is a healthcare risk and can also result in sampling error, that can be avoided by following well formulated standard phlebotomy guidelines. This clinical audit aimed to evaluate the current practices of phlebotomy or blood sampling in the Department of General Surgery Unit II, Benazir Bhutto Hospital, Rawalpindi, using the WHO guidelines for phlebotomy as the standard.

**Objective:** To improve sampling/ phlebotomy technique in surgical ward, unit II of Benazir Bhutto Hospital.

**Methods:** Closed loop clinical audit was conducted in surgical ward, unit 2, benazirbhutto hospital in October and November 2024. In the first phase of audit, phlebotomy instances by nursing staff was observed and data regarding adherence to WHO phlebotomy guidelines was collected. Contact sessions were held with nursing staff and pamphlets of phlebotomy guidelines were shared with them in addition to allocation of phlebotomy designated places in ward and provision of phlebotomy trolleys carrying gloves, tourniquets, alcohol swabs, sampling vials, sharps container and butterfly needles. In the phase 2 of the study, post intervention data was collected. Samplings done by doctors and medical students were excluded from the study.

**Results:** In accordance with the WHO guidelines for phlebotomy technique, parameters like assembling of equipments, performing hand hygiene, selecting the preferred site for puncture, prior application of tourniquet, asking the patient to make a fist, putting on well fitted non sterile gloves, disinfecting the site using 70% isopropyl alcohol, anchoring the vein of patient, entering the vein at 30 degree angle, releasing the tourniquet before withdrawing needle, withdrawing of needle, giving the patient a clean gauze, discarding needle, checking the labels and forms for accuracy, discarding the sharps and broken

glass containers, and removing the gloves in the end were observed in 38.6%, 7.7%, 15.3%, 64.5%, 34.5%, 51.0%, 52.9%, 50.4%, 68.4%, 62.7%, 54.9%, 72.5%, 62.7%, 62.7%, 32.7% and 58.8% respectively in the phase of 1 of audit prior to intervention, and was observed to be 79.6%, 81.3%, 64.8%, 79.6%, 80.9%, 75.2%, 85.2%, 76.6%, 77.4%, 73.9%, 73.9%, 80.9%, 82.6%, 73.9%, 77.4% and 65.2% after intervention in the phase 2 of our audit showing significant improvement.

**Conclusion:**

This audit highlighted significant deficiencies in current practices of blood sampling. Implementation of recommendations according to guidelines, in the form of contact sessions were held with nursing staff and pamphlets of phlebotomy guidelines were shared with them in addition to allocation of phlebotomy designated places in ward and provision of phlebotomy trolleys, led to improvements in blood sampling practices. Routine audits are essential to maintain and improve blood sampling practices and avoid associated sampling errors and healthcare risks.

**Key words:** phlebotomy, sampling errors, WHO guidelines

**References:**

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### **RRF-101 Strategies to prevent burnout in residents**

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**Background**

Burnout is a common issue among medical residents. It can lead to emotional exhaustion, feeling detached from work, and a sense of not achieving enough. Tackling burnout is important to protect residents' well-being and ensure they provide the best care for patients.

**Methods**

This approach includes:

Teaching stress management and work-life balance through discussions and role-playing.

Testing solutions like flexible schedules, mentorship programs, and mental health services to see how effective they are.

**Outcomes**

Residents who learn to spot and handle burnout become better at managing stress, build healthier relationships with colleagues, and provide improved

patient care. Regular reviews and feedback help keep these strategies effective.

Conclusion; Preventing burnout in residents needs a complete plan. This includes improving systems, offering supportive leadership, and encouraging personal well-being. Programs that focus on these areas create healthier learning environments for residents and better outcomes for patients.

## **RRF-102 Enhancing patient care:A clinical Audit of Discharge Slips at Holy family hospital Gynae Unit-II**

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**Introduction:**The transition from hospital to home or alternative care settings is a critical phase in patient care that significantly impacts patient outcomes, safety, and satisfaction. A central component of this transition is the discharge process, which includes the preparation of discharge slips or summaries. These documents are essential for ensuring that patients and their caregivers are adequately informed about the patients condition, medications, follow-up care, and any necessary precautions. However, challenges persist in ensuring the efficacy, quality, and completeness of discharge slips, necessitating a structured approach to evaluate and improve their content.

**Problem:** Missing elements in discharge slips often include incomplete patient demographics, unclear diagnosis and treatment information, and absent follow-up instructions. Medication details, allergy information, and physician signatures are sometimes missing or inaccurate. These gaps can compromise patient safety and care continuity.

**Objective:** The primary objective is to appraise the comprehensiveness of different elements within discharge slip and to evaluate the completeness and accuracy of discharge slips in GU-II HFH.

**Methodology:** Audit was done in two cycles. Simple random sampling technique used and sample size is 101 conducted in GU II,HFH in inpatient department.

**Intervention:** Clinical audits was carried out in GU-II and 101 discharge slips were reviewed in first audit cycle.In the light of first Audit cycle analysis a healthcare professional intervention session was scheduled. A briefing provided to healthcare workers about the components of discharge slip that are lacking or inadequate.

**Results:** The Royal College of Physicians' e-discharge summary self-assessment checklist was utilized to evaluate the completeness of discharge summaries in audit cycle. Clinical audit was conducted using the PDSA (plan, do, study, and act) cycle. Upon careful examination of the outcomes of the first audit cycle, a number of noteworthy aspects come to light.In light of the first AC analysis, a healthcare professional intervention session was scheduled. A briefing provided to the healthcare workers about the components of discharge slip that are lacking or inadequate. The results of the first AC disseminated at the morning meeting that was conducted for one day weekly fir three consecutive weeks, which was attended by all the doctors in the department. Doctors and House surgeons were given training to make discharge slip according to standards that include all the components including per operative findings.

Overall completeness Rate 61%

The pre-audit data reveals an overall compliance rate of 56.5%, highlighting significant deficiencies in several areas of discharge documentation. The most critical gaps are found in allergies (3% completeness), diagnosis (47% completeness), and sign and stamp of person completing record(55% completeness). Additionally, follow-up plan(57.4% completeness) indicates inadequate follow-up documentation for a substantial portion of patients. While some categories, like discharge details (72% completeness), show acceptable performance, overall documentation quality requires considerable improvement. Focused efforts are needed to enhance the accuracy and completeness of discharge summaries, particularly in high-priority areas like allergies, diagnosis, and follow-up . For which a training session was conducted for healthcare professionals and reaudit done.

The post-audit data reveals an overall compliance rate of approximately 61.11% indicating notable improvements in the documentation of discharge summaries. Key areas of improvement include medications (95% completeness), and follow-up plan (95% completeness), all of which show strong adherence to documentation standards.

However, allergies remain a significant concern, with only 40% completeness indicating that this area requires further attention.

Overall, while the post-audit results show progress, further efforts are needed to enhance the completeness and accuracy of discharge documentation, particularly in areas such as allergies and certain clinical details.

**Conclusion:** The clinical audit shows a positive improvement in discharge documentation, with the overall compliance rate increasing from 56.5% in the

pre-audit to 61.11% in the postaudit. Significant progress was made in areas such as medications (95% completeness), and follow-up plan (95% completeness). However, allergies still present a major concern, with only 40% completeness.

### **RRF-103 A Comparison of the perception of Postgraduate FCPS trainees Vs MS residents Obstetrics & Gynaecology Training Program**

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**Introduction:** Postgraduate medical training programs aim to equip trainees with the necessary skills and knowledge to practice independently as consultants. In many institutions, such as ours, two distinct postgraduate training programs in Obstetrics & Gynaecology are offered: FCPS and MS. Despite the shared hospital and discipline, differences in training structure, experiences, and satisfaction may exist between the two groups.

**Objectives:** To Compare the perception of Postgraduate FCPS trainees Vs MS residents Obstetrics & Gynaecology Training Program

**Methods:** A cross-sectional survey-based study was conducted among postgraduate trainees enrolled in the FCPS and MS Obstetrics & Gynaecology programs at allied hospitals of Rawalpindi Medical University. Data were collected through a structured questionnaire that assessed trainees' satisfaction with various aspects of their training, including teaching quality, clinical exposure, academic support, and overall program structure. Trainees were also asked to provide feedback on what they felt was better in their own program and in the other program. Statistical analysis was performed using SPSS version 26.

**Results:** A cross-sectional, survey-based study was conducted among 40 postgraduate trainees (20 from the FCPS and 20 from the MS Obstetrics & Gynaecology programs) at allied hospitals of Rawalpindi Medical University. Data was collected through a structured questionnaire assessing trainees' satisfaction with teaching quality, academic support, training structure, and overall program experience. The cohort included trainees from all 4 years of the program. Results indicated that 35% of FCPS trainees rated their training as "Good," with a notable advantage in adult learning experiences. However, a drawback for FCPS trainees was the limited availability of supervisors compared to MS trainees.

In contrast, 55% of MS trainees rated their program as "Very Good," citing stronger academic support, timely workshops, and a more structured research process. However, MS trainees expressed concerns about being more heavily focused on theoretical work, logbook completion, and experiencing a pressurized environment. They noted that the demanding clinical duties, particularly in a hectic field like gynecology, made it challenging to balance academic requirements. Both groups agreed that integrating the academic strengths of the MS program with the adult learning focus of the FCPS program would optimize the training experience. Data analysis was performed using SPSS version 26.

**Conclusion:** This study compared the experiences of trainees enrolled in the 4-year FCPS and MS Obstetrics & Gynaecology programs, highlighting differences in academic support, training structure, and overall satisfaction. Both groups were generally satisfied with their training but identified areas for improvement. FCPS trainees valued their adult learning experiences but expressed a need for more academic support, especially in the later years, and noted limited supervisor availability. MS trainees appreciated the academic mentorship, structured research process, and timely workshops but felt overwhelmed by the theoretical workload, logbook completion, and the pressurized environment.

**Keywords:** FCPS, MS Obstetrics & Gynaecology, postgraduate training, trainee satisfaction, program comparison.

### **RRF-104 Exploring the Perception of Clinical Empathy: A Comparative Study Among Medical Students, House Officers, and Postgraduate Residents**

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**Introduction:** Clinical empathy is a vital component of patient-centered care, fostering trust, effective communication, and better health outcomes.

However, its understanding and practice may vary among medical students, house officers, and postgraduate residents due to differences in clinical exposure, workload, and training.

**Objective:** To explore the Perception of Clinical Empathy among medical students, house officers, and postgraduate residents

**Methodology:**

A cross-sectional study was conducted among medical students, house officers, and postgraduate

residents at Benazir Bhutto Hospital, Rawalpindi. Data was collected using a validated self-administered questionnaire based on the Jefferson Scale of Empathy. Quantitative data was analyzed using descriptive statistics and inferential tests to identify significant differences in empathy scores among the three groups.

Results: The findings revealed that medical students demonstrated a higher theoretical understanding of empathy, with a mean empathy score of  $80.5 \pm 6.2$ . In contrast, house officers exhibited a decline in empathy levels, with a mean score of  $72.8 \pm 7.4$ , possibly due to increased workload and burnout. Postgraduate residents displayed a more balanced but pragmatic approach to empathy, reflected by a mean score of  $76.3 \pm 6.8$ , likely due to their experience in handling complex patient interactions. Statistically significant differences in empathy scores were observed among the three groups ( $p = 0.03$ ), indicating that clinical exposure and role progression impacts empathy level.

Conclusion: The understanding and practice of clinical empathy vary significantly across the continuum of medical training. Medical students possess a theoretical grasp, but empathy declines among house officers, likely due to stress and workload. Postgraduate residents exhibit a more practical approach, shaped by clinical experience.

Recommendations:

Interventions such as empathy training workshops, stress management programs, and mentorship from empathetic role models may bridge these gaps. Strengthening empathy at all stages of medical education can lead to more compassionate and effective healthcare professionals.

Keywords: Clinical empathy, medical education, house officers, postgraduate residents, medical students, patient-centered care.

### **RRF-105 Accuracy Of Modified Bishop Scoring In Predicting Delivery Outcome In Patients Undergoing Induction Of Labour.**

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Introduction: Induction of labor (IOL) is the artificial initiation of labor after age of viability and before the onset of natural labor through pharmacological or mechanical methods to achieve vaginal delivery but without any objective evidence of labor and with intact fetal membranes.

Primigravida are the ones who are more likely to undergo induction of labor (49.8%) and

caesarean section rate is higher in them as compared to multigravida. Some authors have shown that not all

parameters of the Bishop score are important in predicting success of IOL and as such, they do not need to be routinely assessed. Recently, in a study involving 5,600 nulliparous women undergoing induction of labor found that a modified Bishop score, including only cervical dilation, effacement, and station of presenting part, was equally as predictive as the traditional Bishop score in predicting vaginal delivery.

#### **2-Methods:**

##### **Setting:**

Department of Obstetrics and Gynecology,  
Rawalpindi teaching hospital: Rawalpindi  
Duration of study:

Six months, after the approval of synopsis

##### **Sampling Technique**

Non probability consecutive sampling.

##### **Study Design**

Cross sectional (Descriptive)

3-Results: In the regression model, only dilatation, station and effacement were significantly associated with vaginal delivery ( $P < .01$ ). The modified Bishop score was then devised using 3 components (range 0-9) and compared to the original bishop scoring (range 0-13) for prediction of successful induction, resulting in vaginal delivery. compared to the original scoring  $> 8$  the modified bishop score  $> 4$  had a similar or better PPV (87.7%, versus 87.0%), NPV (31.3% versus 29.8%)

,LR+(2.34% versus 2.12) and correct classification rate (51.0% versus 47.3%). Application of the simplified Bishop score in other populations including

indicated induction and spontaneous labor at term and preterm were associated with similar vaginal delivery rates compared to the original Bishop score.

4-Conclusion: The modified Bishop score comprised of

dilatation, station and effacement attains a similarly high predictive ability to successful induction as the original score.

### **RRF-106 Barriers To Contraceptive Uptake Among Women Of Reproductive Age In A Semi “ Urban Community Of Punjab**

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**Introduction:** Contraception plays a pivotal role in family planning and maternal health, particularly in the postnatal period when women are at heightened risk of unintended pregnancies. Despite the availability of various contraceptive methods, utilization rates among postnatal patients remain suboptimal. This review seeks to investigate the complex interplay of factors that influence contraceptive practices in this population, shedding light on areas for targeted interventions and support. **Material and Methods:** This descriptive case series composed of women of reproductive age (15-49 years) after taking consent. The patients who refused were noted and factors were noted for refusal of contraceptive practice. All the data were entered and analyzed in SPSS 20.

**Results:** Average age of the patients was 22.55years+3.41SD with range 15-49 years. Factors for refusal shows that the cultural and religious belief was the leading factor (27.5%) followed by psychological factor 24.4%. Health care system was recorded by 13(8.1%) of patients while 12(7.5%) patients shows socio economic factors regarding PPIUCD.

**Conclusion:** Cultural and religious belief and psychological are the leading factors influencing the contraceptive practice in this part of the world. Social media programe may be initiated to overcome these factors

#### **RRF-107 Survey Assessing Knowledge And Attitude Towards Clinical Research Among Postgraduate Trainees**

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**Introduction:** Postgraduate students often face significant challenges when preparing their thesis or dissertation. When faced with academic obstacles such as drafting a research paper, respondents may rely on their existing beliefs and assumptions due to a lack of a clear understanding of academic culture. Additionally, there is an increasing concern about students' struggles with mental health and well-being. We aimed to evaluate the knowledge and attitudes towards research among Postgraduate Trainees (PGTs), as well as to identify the barriers to conducting research.

**Methods:** Study design- A cross-sectional survey  
Data collection process-  
It will be conducted at RTH in which 80 residents of different departments will participate.

A questionnaire on google form is made comprising of three sub-domains, namely knowledge, attitude and barrier towards research. We used 5 point Likert scale scores to access and analyze their responses.

**Data analysis process-**

All data will be analyzed through SPSS 24. The results will be expressed as frequency, means and percentages.

**Result:** Only 20 responses are received until now. Study is going on and results will be finalized after receiving all 80 responses.

**Conclusion:** Among 20 responses, there were no statistically significant differences between their knowledge and attitude scores. The issue was further confirmed by identifying the lack of research training as the most commonly perceived barrier to conducting research, alongside challenges such as inadequate infrastructure, limited mentorship opportunities, insufficient funding, and the absence of statistical support.

**Keywords:** Postgraduate Trainees, Research

#### **RRF-108**

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**Introduction:** inter-professional learning is important because it prepares students for health workforce by teaching them how to collaborate and communicate effectively. Inter-professional learning can improve patient care, health outcomes and quality of healthcare systems.

**Objective;** To determine the readiness for inter professional learning skills among health care professionals of Rawalpindi medical university.

**Study design-** quantitative survey

**Materials and methods;** A Google questionnaire is designed which comprised of 19 closed ended questions. We used five point Likert rating scale, to get the responses. The questions focuses on two aspects of inter professional learning .Question[ 1-9], focus on their perception of inter professional learning as a strong positive influence on their personal and professional grooming, their ability to work as an efficient team member, improvement in communication skills and problem solving based on mutual shared learning. This would help in improved collaborative practice and better working relationships. While Question [10-19] addresses their readiness to get benefitted from inter professional learning skills. The responses will analyzed by SPSS version 29, and will be expressed as frequency, mean and percentage.

**Results;** We got 50 responses in total. Amongst them 15nurses/paramedical, 22 PGTS and 13 medical

officers/senior registrars responded, 26% males and 74% females.  
 53.1% strongly agreed on fact that their professional and personal development will improve and they can become effective team member. 52% agreed that this inter professional learning will ultimately improve the quality of care provided to the patient.  
 94% agree that it will have an enormous impact on problem solving and promote effective team work in an organization, while only 8.2% were neutral, none disagreed.  
 90% expressed strong readiness and welcome all the opportunities provided to them both within the organization and outside in order to improve their personal, professional and clinical skills .  
 Conclusion; Our health care professionals are strongly motivated to indulge in practices that promote Inter professional learning opportunities  
 Key words- Healthcare professionals, readiness for inter-professional learning skills,

#### **RRF-107 Giant Ovarian mass in adolescent**

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Introduction: Giant Ovarian mass In Adolescents  
 4% Of all the gynaecological admission in hospital are due to ovarian masses .  
 Incidence of overall ovarian masses in young girls is 2.6 cases per 100,000 girls/ year.  
 WHO broadly classified the ovarian tumours into 3 types based on histopathology , immuno-histochemistry and molecular genetic analysis  
 out of all benign epithelial tumours serous are more common and are 40 -50% followed by mucinous tumours which are 20-30% endometrioid, clear and brenner are even more rare  
 Mucinous tumors can be benign ,borderline & malignant.

We included two young girl in study who presented to us with short term history of abdominal distension and lower abdominal pain but not associated with any features of weight loss or pressure symptoms vitally stable and baseline investigations normal one of them had tumor marker Ca125 mildly raise and in other Ca 125 was markedly raised on usg it was heterogenous adnexal mass CT SCAN findings were suggestive of mucinous cystadenoma surgery was done in both cases which was staging laprotomy and on histopathology one was benign mucinous cystadenoma and other was borderline cystadenoma

Conclusion: Mucinous Ovarian Tumours represent a distinct histologic entity.

Fertility preserving surgery is the mainstay of management in young girls.

Although mucinous cyst adenomas are benign but close follow-up is necessary as they are recognized as precursors of ovarian cancer and may slowly transform to borderline tumours and invasive ovarian cancers.

#### **RRF-109 Prelabour Rupture of membranes induction with gelin gel early verses late**

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Introduction: Preterm labor management done either by induction within 24hr or within 6hrs, the purpose of study was to assess effectiveness of early labour induction to decrease the risk of chorio and decrease hospital stay by decreasing time interval between prom and delivery.

Methods; singleton pregnancy, cephalic presentation, 37-41 weeks GA, cervical dilation less than 4cm, over a period of 6 months, 100 patients, half patient induced after 24hrs, and half within 6hrs, chi square test used to compare the frequency and t test used to see the difference between two groups.

Results: PROM delivery interval was greater than 13hrs in early induction group and was greater than 7hrs in late induction group, (p value was 0.001).

Conclusion: Immediate labour induction with prostaglandins in case of term prom, shortens delivery interval and decrease risk of chorio and maternal hospital stay.

Keywords: Premature rupture of membranes, Term PROM, induction Early and late

#### **RRF-111 Psychiatrist - Psychologist Collaboration for Effective Inpatient Mental Health Care**

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Introduction; Psychiatrists and psychologists play a vital role in managing patients admitted to the psychiatry ward. Their collaboration can significantly improve patient's mental health. Leading organizations, such as the Royal College of

Psychiatrists and the American Psychiatric Association, advocate for collaborative care in inpatient settings, with each institution implementing protocols based on these standards. This audit aimed to assess the effectiveness of collaboration between psychiatrists and psychologists and how well progress is documented in the Psychiatry Department of Benazir Bhutto Hospital.

**Methods;** A retrospective audit was conducted involving 25 patients admitted in months of Oct - Nov, 2024. Data collected included patient demographics and an assessment of the notes made by psychiatrists and psychologists. The notes were reviewed to determine the level of collaboration and documentation in patient care.

**Results;** The results indicated effective communication between psychiatrists and psychologists. Most patients were discussed during rounds attended by consultants, psychiatrists, and psychologists. However, a notable gap was identified in collaborative documentation between psychiatrists and psychologists.

**Conclusion;** This audit highlights the importance of proper documentation by both psychiatrists and psychologists. Ensuring that all aspects of patient care, including discussions and decisions made during rounds, are accurately recorded in patient files will strengthen collaborative care and improve overall treatment outcomes. Adherence to guidelines for documentation is essential for continuous improvement in patient management.

#### **Recommendations**

A customized form is developed to align with our system facilitating collaborative documentation to be filled by psychiatrists and psychologists.

**Keywords :** Psychiatrists - Psychologists  
Collaboration, Mental Health Care , Collaborative care , Documentation in healthcare

#### **RRF-112 Comparison of Group antenatal care vs traditional antenatal care in low risk patients visiting RTH,Rwp.**

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**Objective:** To compare the impact of Group Antenatal Care versus Traditional Antenatal Care in low-risk antenatal patients visiting a tertiary care hospital to increase maternal satisfaction

#### **Operational Definitions:**

**Group Antenatal care:** Group antenatal care is a model where pregnant individuals with similar due dates attend prenatal appointments together in a

group setting, led by healthcare providers. It promotes education, support, and community among expectant mothers, aiming to improve outcomes and patient satisfaction.

**Traditional Antenatal care:** Traditional antenatal care refers to the conventional model of prenatal care in which pregnant individuals receive one-on-one medical appointments with healthcare providers such as obstetricians or midwives.

**Hypothesis:** Group Antenatal Care (G-ANC) will result in reduce maternal morbidity compared to Traditional Antenatal Care (T-ANC) in low-risk pregnancies, particularly in low resource settings, by offering enhanced support, education, and early intervention opportunities.

**Materials And Methods;** Study Design: Randomized controlled trial (RCT).

**Setting:** Department of Obstetrics and Gynecology, Rawalpindi teaching hospital, Rawalpindi

**Duration:** Ten months after the approval of the synopsis.

**Sample Size:** The sample size was calculated using the WHO sample size calculator with the following parameters for a two-sample t-test:

- Confidence level: 95%

- Absolute precision: 10%

- Anticipated population mean difference: Proportion I = 11.1%, Proportion II = 19.6%

The total sample size will be 208 pregnant women.

**Sample Technique:** Non-probability consecutive sampling method.

**Sample Selection:**

**Inclusion Criteria:**

Women of reproductive age.(15 to 45)

Pregnant females residing within 6 km of the hospital.

No history of obstetric risk factors such as placenta previa, diabetes in pregnancy, hypertension disorders, history of antepartum hemorrhage (APH), or other obstetric complications.

**Exclusion Criteria:**

Women not of reproductive age.(15 to 45)

Pregnant females residing farther than 6 km from the hospital.

History of significant obstetric risk factors such as placenta previa, diabetes in pregnancy, hypertension disorders, or previous severe obstetric history.

**Data Collection Procedure:**After the approval of Ethical Committee of the Rawalpindi Medical University(RMU), Rawalpindi.

Patients fulfill the inclusion criteria; a written informed consent will be taken from patients or their guardian. A detailed history and complete physical examination of all the patients will be performed. A total of 208 pregnant women will be enrolled. All the

enrolled participants will be divided into two groups by block randomization method. (Group A = Group Antenatal care and Group B = Traditional Antenatal Care). Participants assigned to the Group A will receive Group antenatal care, facilitated by healthcare providers such as obstetricians, midwives, and other relevant professionals. And the Participants assigned to the group B will receive standard individualized antenatal care. In traditional antenatal care group, the pregnant women will attend regular prenatal visits scheduled at specific intervals throughout their pregnancy. And Group antenatal care will involve fewer individual visits and more group sessions. A predesign questionnaire will be used to collect data.

#### Data Analysis Procedure:

Data analysis will be done by using SPSS 22. Mean and standard deviation will be calculated for numerical variables like age, gestational age at delivery, birth weight. Frequencies and percentages will

be used for qualitative variables i.e. maternal and neonatal morbidity and mortality rates. Both the groups

will be compared by using chi square test for maternal and neonatal morbidity and mortality rates.

#### Effect

modifier the maternal and neonatal morbidity and mortality rates will be controlled by Stratification.

#### Post

Stratification t-test will be applied. P-value <0.05 will be taken as significant.

### **RRF-113 To Identify The Needs And Gaps In Leadership Skills Among Obstetrics And Gynaecology Residents: A Mixed-Methods Approach**

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Title: To identify the needs and gaps in leadership skills among obstetrics and gynaecology residents: A mixed-methods approach

Introduction: Leadership is a critical skill for medical professionals, enabling them to manage multidisciplinary teams, make high-stakes decisions, and lead effectively during emergencies. Despite its importance, structured leadership training is often insufficient during residency programs. This study explores the self-perceived leadership competencies of gynecology and obstetrics residents, identifies

gaps in current training, and examines barriers to leadership development to inform curriculum enhancements.

Methods: A mixed-methods approach was employed, including quantitative surveys and qualitative interviews. Residents from Benazir Bhutto Hospital, a tertiary care hospital, were surveyed using a validated leadership competency framework to assess their perceived skills and satisfaction with existing training. Semi-structured interviews provided in-depth insights into personal experiences, perceived gaps, and challenges in acquiring leadership skills. Program directors were also interviewed to understand institutional perspectives on leadership training.

Results: This study assessed leadership competencies, training gaps, and barriers faced by gynecology and obstetrics residents at Benazir Bhutto Hospital. Key findings include: Demographics: 30 residents participated. Most had 1–2 years of clinical experience before residency (50%). Self-Perceived Leadership Competencies: Residents reported low to moderate confidence in leadership skills, with 70% rating their overall abilities as "average." Leadership was considered "very important" by 46.7% of respondents. Current Leadership Training: Satisfaction with existing training was low, with 60% dissatisfied. Only 23.3% had attended leadership-specific programs, and feedback on their effectiveness was mixed. Gaps in Leadership

Training: The most significant gaps were the lack of structured workshops (70%), absence of mentorship programs (63.3%), and limited opportunities for skill practice (56.7%). Barriers to Development: Time constraints (80%) and insufficient resources (63.3%) were the main barriers to developing leadership skills.

Training Recommendations: Residents favored workshops (86.7%), simulation exercises (70%), and mentorship programs (66.7%) as the most beneficial training methods; Two semi-structured interviews were conducted, one with a resident and one with a program director. Key themes emerged: Resident Perspective: The resident highlighted challenges such as "undefined leadership roles in clinical teams" and "minimal feedback from supervisors." They emphasized the need for "structured mentorship programs and simulation-based crisis management training. Program Director Perspective: The program director acknowledged the gaps in formal leadership training, citing "time constraints and limited institutional resources" as barriers.

Conclusion: This study identifies significant gaps in leadership training for obstetrics and gynecology residents, including a lack of structured programs, mentorship, and skill-building exercises. Residents reported low confidence in leadership

skills, citing time constraints and insufficient support as key barriers

Keywords: Leadership training, residency education, gynecology and obstetrics, leadership gaps, curriculum development, medical education.

#### **RRF-114 To identify Factors Influencing Specialty Choice Among House Officers**

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**Background:** The decision to choose a residency specialty is one of the most critical steps in a medical graduates career. House officers nearing the end of their house job face numerous influences, including personal interests, mentorship experiences, and external pressures, all of which shape their career trajectories. This study seeks to explore the factors that influence specialty choice among house officers and provide insights for medical educators and policymakers to support informed decision-making. **Methods:** This cross-sectional mixed-methods study will involve house officers in their final three months of training at Benazir Bhutto Hospital. Quantitative data will be collected through structured surveys capturing intrinsic motivations, mentorship experiences, financial considerations, lifestyle factors, and perceived specialty prestige. Qualitative data will be gathered through semi-structured interviews to explore personal experiences and challenges in greater depth. Quantitative data will be analyzed using statistical methods, while thematic analysis will be applied to qualitative findings. **Results:** The study aimed to explore the key factors influencing the specialty choices of house officers at the end of their house job. A total of 80 participants, mostly recent graduates, completed the questionnaire, providing insights into their decision-making process. **Demographic Overview.** The majority of participants were between 20 and 25 years old (81%), with a slightly higher representation of females (57%) compared to males (43%). Common specialties rotated through during the house job included Obstetrics & Gynecology (25%), Surgery (23%), and Internal Medicine (19%). **Key Influences on Specialty Choice** were Peer and Cultural Influence: 50% of house officers reported that peer influence was a major factor in their specialty selection. This highlights the strong role of friends, colleagues, and social networks in shaping their career choices. 44% indicated that cultural factors, particularly family expectations and societal norms, strongly influenced their decisions, with many feeling pressured to

pursue high-prestige specialties such as surgery and obstetrics. **Work-Life Balance:** The most significant driver for choosing a specialty was work-life balance, cited by 63% of participants. House officers preferred fields with lighter workloads or more predictable hours, indicating a strong desire for manageable work conditions after years of intensive training. **Income Potential:** 50% of house officers acknowledged income potential as an important factor. **Barriers in Specialty Selection** Lack of Information and Guidance: 50% of respondents identified a lack of adequate mentorship and guidance during rotations as a barrier in making an informed choice. Many house officers felt they did not receive enough support to make a well-rounded decision. **Pressure from Family and Peers:** 56% felt that external pressures, particularly from family and peers, influenced their specialty choices, often leading them to select specialties with greater social prestige or perceived financial rewards. **Limited Exposure to Specialties:** 38% of house officers reported limited exposure to certain specialties, which may have hindered their ability to explore a broader range of career options during their house job. **Additional Insights** Many participants expressed a desire for more structured mentorship programs, with clearer guidance on career choices and the pros and cons of various specialties. A significant portion of house officers (31%) indicated that they had an uncertain career goal and were still unsure about their ideal specialty by the end of their house job.

**Conclusion:** House officers' specialty choices are primarily influenced by cultural norms, peer pressure, prestige, and work-life balance. The lack of adequate mentorship was a major barrier. To support informed decisions, improvements in mentorship and reducing societal pressures are needed.

Keywords: Residency choice, house officers, mentorship, specialty selection, medical education, career decision-making.

#### **RRF-115 Optimizing Insulin Administration: Evaluating Errors and the Role of Healthcare Provider Interventions in Enhancing Self-Management Among Diabetic Patients**

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**Introduction;** Proper insulin administration is essential for achieving optimal glycemic control in diabetic patients. The type, dosage, and injection technique significantly influence the success of

insulin therapy. However, no studies have been conducted in Pakistan to evaluate errors in insulin usage. This study aimed to identify insulin administration errors and assess the effectiveness of healthcare providers interventions in improving self-insulin administration techniques among diabetic patients.

**Methods;** This prospective study was conducted at Benazir Bhutto Hospital Rawalpindi using a systematic non-probability consecutive sampling method. A total of 140 adult diabetic patients who self-administer insulin and attended the outpatient department were recruited. Patients relying on others for insulin administration were excluded. Data were collected and analyzed using SPSS software version 22.

**Results;** A total of 140 participants were enrolled in the study, with a final response rate of 81.43% (n=114). Prior to the educational intervention, only 13.2% of participants demonstrated the correct insulin administration technique, which increased significantly to 72% post-intervention.

Key improvements were observed in individual practices after the intervention, including injecting insulin at a 90° angle (from 45.6% to 86%), mixing cloudy insulin properly (from 50.9% to 91.2%), and avoiding air bubbles during preparation (from 57.9% to 92.1%). Participants also showed better adherence to steps such as avoiding massage post-injection (from 62.3% to 93.9%).

Age was identified as a statistically significant factor influencing proper insulin administration techniques ( $p=0.013$ ). The findings emphasize the effectiveness of healthcare providers interventions in significantly reducing errors and improving self-insulin administration practices.

**Conclusion;** The study revealed a substantial gap between recommended insulin administration practices and actual patient behaviors. Counseling and educational interventions by healthcare providers significantly improved patients insulin injection techniques, thereby reducing errors in administration.

**Keywords;** Insulin; Injection technique; Diabetes; Patient education; Health practices

**RRF-116 Ensuring Safe Transitions: A QIP on Discharge and Safety Netting in Emergency Medicine, Holy Family hospital, Rawalpindi, Pakistan.**

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**Introduction:** ED discharge communication gaps increase adverse outcomes, with poor patient understanding linked to higher re-hospitalization rates. Emergency physicians average just 76 seconds on discharge counseling, often insufficient for effective guidance. Studies, including Hoek et al.'s metaanalysis, highlight the value of clear, written instructions in improving recall.

Inadequate assessment, unclear safety netting, and limited follow-up planning, coupled with minimal senior clinician input in complex cases, lead to unsafe discharges and higher readmissions. A structured, comprehensive discharge process is essential to improve patient safety and care continuity.

**Methods:** The audit assessed the documentation of discharge vitals, follow-up plans, referrals, the involvement of senior clinicians in complex discharge decisions and safety netting. Data were analyzed to identify gaps in the discharge process, and recommendations were made to enhance patient safety, reduce readmissions, and improve discharge quality

**Results:** Pre-interventional data revealed several gaps in the discharge process. A

significant 59.6% of patients did not receive any safety netting or danger

sign instructions, while 38.5% were given instructions that were

incomplete and failed to meet essential criteria.

Furthermore, only 32.7%

of discharges included a proper follow-up plan.

Regarding discharge

medications, 43.1% were prescribed medications in accordance with the

protocol, but 49% had unsatisfactory prescriptions. In terms of

documentation, 88.5% of discharge summaries did not include the

number of recent visits to the emergency department, and 98.1% lacked

details on the patient's duration of stay in the medical emergency

department. Additionally, while 71.2% of discharge summaries provided

a clear discharge diagnosis, 78.8% included discharge vitals indicating

physiological stability. However, only 19.2% documented the patient's

functional capacity using GCS/AVPU scores at the

time of discharge.

These findings underscore the need for systematic improvements to enhance patient safety and the quality of discharge practices.

Conclusion: The audit identified significant gaps in discharge processes and safety netting, highlighting the need for standardized documentation, comprehensive instructions, and robust follow-up plans. Introducing a structured discharge template and involving senior clinicians can improve patient safety, reduce readmissions, and enhance post-discharge care quality. Post interventional Audit need to be conducted after interventional teaching and collaboration with administrative authority to further establish any shortcomings and ensuring safe emergency patients discharge.

Keywords; Effective discharge, Safety Netting, Discharge Medications as per Protocol

**RRF-117 Quality Care through Clinical Audit: Blood sampling Practices by Nurses in The Emergency Department of A Tertiary Care University Affiliated Teaching Hospital, Pakistan**

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Introduction: Phlebotomy has the potential to expose health workers and patients to blood from other people, putting them at risk from blood borne pathogens. The aim was to assess the steps of phlebotomy/venipuncture performed by nurses in the ED and whether they were in line with the guidelines laid out by the World Health Organization (WHO).

Methodology: Nurses in the ED were audited prospectively over a 7-day period during July 2021. Medical students, Nursing Students and Doctors were excluded. Subsequently, WHO Phlebotomy Guidelines were consulted and interventions in the form of training sessions, visual cues, better availability of equipment, and the formation of Departmental Health Team were implemented. This was followed by a re audit in Aug 2021

Results: A total of 54 instances of blood sampling were observed during the initial audit; A total of 58 observations were made following interventions.

There was a varying degree of compliance to the steps of phlebotomy, with hand hygiene (missed n=45, 83%) and use of sterile gloves (missed n=54, 100%) being missed frequently. Following interventions, Hand Hygiene (missed n=36, 62%) and use of gloves (missed n=33, 56%) saw an overall significant improvement ( $p<0.05$ ).

Conclusions: While strict adherence to the steps of Phlebotomy cannot be achieved, interventions outlined in the WHO Guidelines lead to significant improvement in overall compliance. As such, regular monitoring and interventions are imperative.

**RRF-118 Quality Care through Clinical Audit: Hand Hygiene Practices Among Healthcare Workers in The Emergency Department of Holy Family Hospital, Rawalpindi**

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Introduction: Hand hygiene is the most important way of preventing health care associated infections. The World Health Organization (WHO) has provided WHO Multimodal Hand Hygiene Improvement Strategy Guidelines, which illustrate the steps of Hand Hygiene (hand washing and hand rubbing). The aim of this audit was to assess whether the hand rubbing and hand washing practices of Emergency Department (ED) Health Care Workers (HCW) were in line with the steps laid out by WHO.

Methods: Prospective observations were made over a 7 day period in July 2021 at The Department of Emergency Medicine, Holy Family Hospital. Nurses, House Officers, Medical Officers and Postgraduate Trainees in the ED were included, and the steps of their hand washing and hand rubbing practices were observed and compared to the steps laid out in the WHO guidelines. Interventions as laid out in the guidelines were implemented. Repeat observations were subsequently made over a similar time period in August 2021.

Results: In the initial audit, 49 instances of hand rubbing and 48 instances of handwashing were observed; Post intervention, 56 instances of hand rubbing and 61 instances of handwashing were observed.

Following interventions, there was an increase in the compliance to the steps of hand rubbing with a decrease in the number of HCWs missing, especially, the steps of rotational thumb rubbing (missed 79% vs

41%;  $p<0.05$ ) and rubbing of back of fingers (missed 61% vs 26%;  $p<0.05$ ). Similarly, there was a decrease in the number of HCW missing the steps of rotational thumb rubbing (missed 68% vs 66%;  $p=0.7$ ) and rubbing of back of fingers (missed 66% vs 44%;  $p=0.05$ ) during handwashing.

**Conclusion:** The use of the WHO Multimodal Hand Hygiene Improvement Strategy Guidelines improved the adherence to the steps of Hand Hygiene. Continuous monitoring and repeated interventions are required to further improve practices.



## Rawalian Student Research Society



**PROF. DR. MUHAMMAD UMAR**  
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"The world is now a global village and it is the time to make research a top priority by the institutions of the country. I believe no institute can progress without research. Research is not only important at the graduate level but at the undergraduate level as well. It gives me pleasure to see the students of Rawalpindi Medical University taking special interest in research and we as office bearers should always provide our full support to the young minds."



**DR. AFIFA KULSOOM**  
Assistant Professor Community  
Medicine and Public Health FACULTY  
INCHARGE RSRS

"The time will come when diligent research over long periods will bring to light things which now lie hidden. A single lifetime, even though entirely devoted to the sky, would not be enough for the investigation of so vast a subject. And so this knowledge will be unfolded only through long successive ages. There will come a time when our descendants will be amazed that we did not know things that are so plain to them. Many discoveries are reserved for ages still to come, when memory of us will have been effaced."

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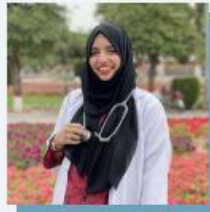
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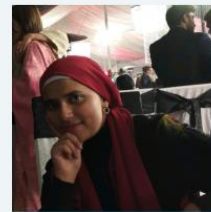
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### **RSRS-01 Engaging our legacy: A strategic approach to alumni outreach**

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Introduction: Alumni are arguably one of the greatest untapped resources of any institution. More importantly, the graduates themselves, who bear institutional memories as well as advancing as emissaries to the public arena have the capacity to generate development, stabilize existing institutions' image, and build networks for the current and future generations. Objectives: The objectives of the study are to find different strategies to form an alumni program and to find the need for it along with the different services offered by alumni. Methodology: A self-structured questionnaire was administered to evaluate the motivation and different approaches which can be employed to strengthen the alumni outreach. Descriptive analysis were done and inferential statistics were employed to see the association if any. Results: For the past 5 years, Executive body of RSRS consisted of 12 people each year who served while in the institution and after they have left they have shown exceptional professional growth in their professional lives as well as they form the chunk of alumni who serve the growth of students as alumni. Notable achievements are Chamber of Innovation and Research Development CIRD by alumni of RSRS, they are working on the capacitation of students and providing them with networking opportunities. They also form foreign alumni as research fellows at Oxford University. A mentorship program is also started by alumni as Scholar's Guide which helps students from topic selection to publication process. 55% of the students engage with their alumni occasionally while 27.3% students engage rarely. Alumni meets, Guest lectures, Mentorship programs, Fundraising events were the activities students were most likely to participate in (40%) while Alumni meets was answered by most (45%). Networking, contributing to student development, Career opportunities motivate majority of students (35%) to engage with their alumni. 100% of participants felt that their need for the formation of structured alumni engagement program. 65 % of participants felt that there is need for more activities like Professional development workshops, Social events, Research collaborations, Volunteering opportunities. 100% students believed that alumni engagement enhances the reputation of an institute. Alumni help students in networking opportunities (50%) and career guidance (40%). Moreover, students believe alumni should focus on Mentorship

(45%), networking (35%) and academic/research collaborations (20%). Conclusion: There is need for structured development of alumni engagement program. Networking and Mentorship are important interest for students to seek from alumni which can strengthen their professional development and serve their alma mater in an effective way. It also reflects on the reputation of the institute.

### **RSRS-02 Shaping tomorrow: Student Research and Innovation for future**

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Medical students, while at the forefront of healthcare innovation, often face significant barriers in conducting research. These challenges include limited access to resources, time constraints due to academic pressure, lack of mentorship, and insufficient knowledge in research methodologies. (5,6) Additionally, financial constraints or institutional limitations can hinder their engagement in research activities. However, addressing these barriers opens avenues for significant progress in medical education and innovation. Objectives: This study aims at identifying the barriers faced by undergraduate medical students and the possible motivational strategies perceived by them. Methodology: It was an observational, cross-sectional study conducted at Rawalpindi medical University with 157 participants from all five years of MBBS. A self structured tripartite questionnaire was implied with initial section consisting of demographic details, second part assessing the perceived barriers and last part focusing on the motivational factors. Results: A total of 157 medical students from all five years of medical studies participated in the study. More than half of the study participants recruited in this study were females (55% n=87). (66.9% n=109) participants had already participated in a research project previously. Lack of knowledge as a barrier was identified by 32.2. % (n = 106) students followed by lack of time due to academic workload (31.6%; n = 104). Among the organizational barriers The most commonly reported barrier was limited access to mentors or supervisors (23.9%, n=85).

### **RSRS-03 Peer Assisted Learning Program- A Collaborative Learning Initiative Enhancing the Research Competence in Medical Students**

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**Background:** The integration of research into medical education is critical for fostering innovative solutions to healthcare challenges. However, barriers such as lack of mentorship, inadequate time, and insufficient research knowledge hinder medical students' engagement in research. Peer-Assisted Learning (PAL) programs present a potential strategy to address these gaps. **Objective:** To evaluate the effectiveness of a PAL program in enhancing research knowledge and perceptions among undergraduate medical students. **Methods:** This randomized controlled trial, conducted from May to October 2024, included 79 mentees divided into 15 groups, each guided by one mentor with prior research experience. Mentees were grouped based on their research focus: original studies (10 groups) and systematic reviews (5 groups). Mentors provided guidance through online discussions, resource sharing, and assignments. Pre- and post-program evaluations were conducted to assess changes in mentees' research knowledge and their perceptions of the program. **Results:** The mean pre-program knowledge scores for original study groups and review groups' were  $13.73 \pm 3.19$  and  $13.64 \pm 4.48$ , with no significant association between scores and the academic year of mentees. Paired T-test showed a significant increase in knowledge of review groups' with the post program mean knowledge score of  $16.06 \pm 3.51$  ( $p = 0.024$ ). Mean knowledge score of original studies' groups post program was  $14.83 \pm 3.35$ , but the increase in score wasn't statistically significant ( $p=0.07$ ). A moderate positive Pearson correlation was observed between post-program knowledge and perception scores of mentees in original study groups ( $r = 0.405$ ,  $p = 0.005$ ). Mentees' perception of the program was neutral to satisfactory ( $M = 3.64$ ,  $SD=1.22$ ). The correlation between post-evaluation scores and perception was insignificant. **Discussion:** The PAL program effectively enhanced research knowledge, particularly in systematic reviews. While perceptions of the program were mixed, the findings underscore the potential of peer-led mentorship in addressing research education gaps. Empowering students to take on mentorship roles can foster a sustainable research culture and alleviate faculty workload. **Conclusion:** Peer-Assisted Learning programs are a promising model for improving research competence among medical students and warrant further exploration.

#### **RSRS-04 Empowering student voices in research ethics: A guide to ethical review board**

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Research ethics are fundamental to academic integrity, shaping the validity and reliability of research publications. Traditionally, ethical review boards (ERBs) have been comprised primarily of faculty and administrative stakeholders. However, empowering student voices in research ethics ensures diverse perspectives, enhances decision-making, and cultivates a culture of ethical awareness. **Hurdles Faced During The Conduct Of Ethical Review Boards (ERBs):** Lack of expertise in research ethics, Limited resources (time, funding, personnel), Inadequate training for ERB members, Conflicts of interest among ERB members, Inefficient communication among stakeholders, Community or participant misconceptions. By empowering student voices in research ethics, we create a more inclusive, equitable, and ethically robust research environment. This study equips educators and students with practical tools to integrate student perspectives into ERBs, fostering a culture of collaboration and ethical excellence.

#### **RSRS-05 Challenges and Innovation: How Student Researchers Navigated the COVID-19 Era**

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The COVID-19 pandemic which began in late 2019 affected every aspect of life including education and research. It disrupted all facets of life, forcing institutions, including research bodies, to adapt quickly. Student researchers, in particular, faced significant hurdles but also leveraged innovative approaches to sustain their work. The challenges posed by the COVID-19 pandemic to student researchers were multifaceted, encompassing infrastructural, psychological, and academic dimensions. Globally, university closures disrupted ongoing research projects, and access to research facilities became nearly impossible. According to research, over 70% of student researchers worldwide reported delays in their research timelines due to the pandemic. In Pakistan, student researchers turned to literature-based studies and secondary data analysis as alternatives to laboratory experiments and fieldwork. Institutions also played a pivotal role in facilitating this transition. Virtual research training programs were introduced in many universities, equipping students with the skills to use data analytics tools, conduct systematic reviews, and

prepare meta-analyses. Moving forward, it is essential to institutionalize the innovations and best practices developed during the pandemic. This includes investing in digital infrastructure, integrating online research methodologies into curriculums, and fostering a culture of adaptability and lifelong learning. By doing so, we can not only address the immediate challenges posed by the pandemic but also build a more inclusive and resilient research ecosystem for the future.

#### **RSRS-06 Building Research Capacity through Mentorship and Training; a Review of RSRS's initiatives**

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Background: The Rawalians Students Research Society (RSRS) aims to promote intellectual discourse and knowledge sharing among academics, researchers, and professionals. This study aims to document and evaluate the initiatives undertaken by RSRS to cultivate a research-oriented environment, and assess their impact on the development and growth of researchers within the community. Methods: The study describes the projects and activities conducted by RSRS from 2021 to 2024, including webinars, Research Tutorial Programs, Peer Assisted Learning Programs, and Systematic Review and Meta Analysis Series. Results: Over the four-year period, RSRS conducted 20+ webinars, 5 Capacity Building Workshops, 3 Research Tutorial Programs, 3 Peer Assisted Learning Programs and several other initiatives, engaging 3000+ students and providing mentorship to 100+ young researchers directly. Among these, 75% students were from Rawalpindi Medical University, and 25% from other medical colleges. There were 30+ online workshops, 4 on campus Research Tutorial Programs comprising of 6 sessions each, 3 Peer Assisted Learning Programs which were hybrid in nature, and 2 online Systematic Review and Meta Analysis Series having a week day long schedule. These sessions were described as comprehensive, practical and possibly the best one attendees have ever attended. All in all, attendees were more than satisfied with the teaching methodology of the speakers and called these sessions very helpful. Discussion: The research culture fostered by RSRS has empowered students to think critically, develop innovative solutions, and become active contributors to the academic community. This exposure has enhanced their research skills, instilled confidence, creativity, and a passion for lifelong learning. Conclusion: RSRS's

initiatives have promoted research culture, created a community of scholars, and contributed to advancing knowledge and making a meaningful impact.

#### **RSRS-07 Students' Supplement of Journal of Rawalpindi Medical University: A Pioneering Perspective**

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Students' Supplement of Journal of Rawalpindi Medical University (SJRCM) provides a platform for promotion of scholarly activities among the medical students. Knowing preference and trend of submission across various specialties is the need to boost participation and impact of this journal. This is the main objective of this study. Materials and Method: A cross-sectional study was conducted at Rawalpindi Medical University. Data was extracted from the SJRCM archives. Analysis of manuscripts submitted between 2017 and 2024 was done. Variables used were total articles published in various issues of SJRCM and distribution across categories like medicine, surgery and public health along with classification based on article types. Results: The study showed consistent submission patterns with a total of 133 articles published across 10 issues. Original articles formed the majority, with more than 80% of submissions. The leading category was public health at 43%, followed by medicine at 34% and surgery at 18%. A notable dip in total articles was observed in 2021, with only 9 publications, compared to peaks in 2019 and 2023 with 16 and 15 articles, respectively. However, there was a remarkable increase in article submissions comprising 36 manuscripts in the 2nd issue of 2024. Conclusion: The findings revealed that RMU students have a liking for original articles and have continuous engagement with SJRCM, especially in public health and medicine. A significant increase in submission reveals growing interest among students for SJRCM. Future efforts will be focusing on broader participation and innovation in medical research paper publishing.

#### **RSRS-08 Comparative Efficacy and Safety of POLARx vs. Arctic Front Advance Pro Cryoballoon Systems for Pulmonary Vein Isolation in Atrial Fibrillation: An Updated Systematic review and Meta-Analysis**

Muhammad Fawad Tahir  
The comparative effectiveness of the POLARx cryoballoon system versus the Arctic Front Advance Pro (AFA-Pro) for pulmonary vein isolation (PVI) in

atrial fibrillation (AF) remains inadequately assessed. This updated meta-analysis aims to evaluate these systems by analyzing key procedural outcomes related to safety and efficacy. A search of Embase, MEDLINE, and Cochrane up to September 2024 identified 19 studies (n = 6,806) comparing POLARx and AFA-Pro during PVI. Primary outcomes included procedure time, ablation time, fluoroscopy time, balloon nadir temperature in the left superior (LSPV), left inferior (LIPV), right superior (RSPV), and right inferior pulmonary veins (RIPV), along with the risk of phrenic nerve palsy. The meta-analysis showed no significant differences in procedure time (MD: 4.15; P = 0.12), ablation time (SMD: 0.12; P = 0.10), or fluoroscopy time (MD: 0.89; P = 0.30) between POLARx and AFA-Pro. POLARx had lower balloon nadir temperatures in all pulmonary veins (LSPV: MD -10.19; P < 0.00001; LIPV: MD -10.25; P < 0.00001; RSPV: MD -7.98; P < 0.00001; RIPV: MD -9.44; P < 0.00001) but a higher incidence of phrenic nerve palsy (P = 0.05). Conclusion: This meta-analysis demonstrates that both the POLARx and AFA-Pro systems are equally effective and safe for PVI in AF patients. Despite POLARx achieving lower balloon nadir temperatures, it was linked to a higher incidence of phrenic nerve palsy, with no significant differences in procedure, ablation, or fluoroscopy times. Clinical Implications: The findings of this meta-analysis suggest that both the POLARx and AFA-Pro cryoballoon systems provide comparable safety and efficacy for pulmonary vein isolation in atrial fibrillation. However, clinicians should weigh the advantage of lower balloon nadir temperatures achieved with POLARx against its higher risk of phrenic nerve palsy when selecting a cryoballoon system for individual patients.

#### **RSRS-09 Comparison of single-coil versus dual-coil implantable cardioverter defibrillator devices: A systematic review and meta-analysis of efficacy and extraction-related outcomes**

Muhammad Fawad Tahir

Implantable cardioverter defibrillators (ICD) are battery-operated devices used to manage irregular heart rhythms and deliver therapeutic shocks to the heart. This updated systematic review and meta-analysis compares the efficacy and extraction-related outcomes of single-coil versus dual-coil ICDs in view of conflicting data. Several databases, including PubMed, Cochrane Library, and Google Scholar were comprehensively explored dating from inception to April 1, 2024. Data was compared using odds ratio (OR), hazard ratio (HR), and mean differences (MD). A value of P < 0.05 indicated statistical significance. Ultimately, 28 studies were

included in this quantitative synthesis. Defibrillation threshold (DFT) indicated statistical superiority in the dual-coil cohort (MD: 0.58; 95% [confidence interval] CI: 0.07-1.09; P = 0.03). All-cause mortality was significantly elevated in the dual-coil cohort (HR: 0.91; 95% CI: 0.87-0.97; P = 0.001), while implant time was significantly lower in the single-coil group (MD: -7.44; 95% CI: -13.44 to -1.43; P = 0.02). Other outcomes, including first-shock efficacy, cardiac mortality, post-extraction major complications, post-extraction procedural success, and post-extraction mortality were not statistically different between the cohorts. In conclusion, although single-coil ICDs have more desirable safety profile, the use of dual-coil ICDs continues to hold merit due to outcome efficacy and advanced sensing capabilities, especially in complex cases. In addition, the elevated risks in dual-coil lead-extraction may be limited as understood from the aggregate results generated within this meta-analysis. Further randomized trials are warranted to further establish the head to head superiority and tolerability these two devices.

#### **RSRS-12 Transforming Stroke Diagnosis: How AI and Tele neurology are Shaping the Future of Diagnosis and Treatment**

Muhammad Fawad Tahir

Stroke is a major global health issue causing significant mortality and disability due to obstructed blood flow to the brain. Effective treatments require timely intervention, and the rise of teleneurology and artificial intelligence (AI) offers new avenues for improving stroke diagnosis and management. AI, through machine learning (ML) and deep learning (DL), can enhance precision in medical imaging and support rapid, accurate decision-making in stroke care. A retrospective study was conducted on stroke patients at RIC Emergency Department from July to November 2023. Inclusion criteria focused on patients with activated stroke codes who underwent CTA scans analyzed by AI software, with findings confirmed by neuro-radiologists. Data included patient demographics and ASPECT scores, assessing stroke severity based on CT scans. The study involved 20 patients (14 males, 6 females, average age 43.11 years). The AI system showed high accuracy in detecting intracranial hemorrhage (100% sensitivity, 86.7% specificity) and large vessel occlusion (100% sensitivity, 88.2% specificity). For ASPECT scores, AI was reliable in extreme score categories but varied in intermediate scores, highlighting the need for radiologist confirmation. AI technology holds significant potential for transforming stroke diagnosis and treatment, especially in rapid decision-making and supporting

non-expert medical staff. While AI cannot yet replace experienced radiologists, ongoing advancements may soon enable it to perform at comparable levels, enhancing overall stroke care

#### **RSRS-14 Exploring the quality of life of elderly population with Type 2 diabetes mellitus (T2DM) in Mayo Hospital, Lahore, Pakistan: A cross-sectional study**

Warda Rasool

The number of people suffering from Type-2 diabetes mellitus (T2DM) are continuously rising. Living with such chronic diseases, especially for the elderly population, has an immense impact on quality of life (QoL). Even though ample amount of data is present on QoL of T2DM patients, the research on exclusively the elderly age group (>60 years) is scarce. The study serves to bridge the gap and minimize the impact of bias due to age in existing literature. Objectives: To evaluate the QoL of elderly T2DM patients and identify the associations between demographic factors and QoL domains. Methods and Materials: A descriptive cross-sectional study was conducted from March 2024 to July 2024 at Mayo Hospital Lahore, involving 94 OPD patients aged 60 or above. Using WHOQOL-BREF questionnaire, data collection involved self-administration or one-on-one interviews. Data analysis was performed using SPSS v25. Results: The findings show that 38% of elderly diabetic patients expressed satisfaction with their health and 40% reported a good QoL, an almost equal number expressed dissatisfaction (39%), with 29% of people denoting their life quality as poor. Significant positive correlations ( $p$  values <0.001) existed among all QoL domains. Physical and environmental domains displayed lower average scores ( $47.32 \pm 19.58$  and  $48.38 \pm 17.83$  respectively) compared to the psychological and social domains ( $53.24 \pm 20.15$  and  $53.37 \pm 16.73$ ). Considerable associations were found between QoL domains and demographic factors, with older age, lower income, unemployment, loss of spouse, and duration of diabetes (>10 years) being negatively associated QoL. Hypertension and CVDs, as well as gender, had no considerable impact on overall life quality of elderly T2DM patients. Conclusions: Lower mean scores of environmental and physical domains highlights the need for developing targeted approach such as physiotherapy sessions and grassy walking patches. Demographic factors such as improvement in income, employment status, and marital status can help elevate QoL scores in this population.

#### **RSRS-15 Safety and efficacy of olezarsen in reducing the TG levels; a systematic review and meta-analysis**

Warda Rasool

Elevated fasting serum triglyceride (TG) levels are linked to an increased risk of cardiovascular disease. Olezarsen is an inhibitor of apolipoprotein C3 (apo-C3) production with a potential to decrease TG levels and thereby, reduce the risk of cardiovascular disease. Objectives: This meta-analysis aims to evaluate the efficacy and safety of olezarsen in patients with hypertriglyceridemia. Methods: A literature search was carried out on Medline, Embase, Google Scholar, Cochrane CENTRAL, Scopus, and clinicaltrials.gov. Only randomized controlled trials (RCTs), including adult patients with hypertriglyceridemia and treated with olezarsen, were included. The primary outcome assessed was the mean change in the level of TG, whereas the secondary outcomes were changes in the apo-C3, apo-B48, and non-HDL cholesterol levels at the end of the 6-month follow-up period. Various adverse events were also assessed. RevMan 5.4 was used to calculate standardized mean differences (SMD) with 95% confidence intervals (95% CIs) using a random effects model. Results: Three RCTs involving 334 patients in total, with 248 receiving olezarsen and 86 receiving placebo, were included. The analysis revealed that at the end of the follow up period, there was a significant change in the levels of TG (SMD -52.04, 95%CI: -64.55 to -39.52;  $p < 0.00001$ ;  $I^2 = 72\%$ ), apo-C3 (SMD -69.84, 95%CI: -76.82 to -62.86;  $p < 0.00001$ ;  $I^2 = 33\%$ ), apo-B48 (SMD -14.50, 95%CI: -21.29 to -7.71;  $p < 0.00001$ ;  $I^2 = 8\%$ ) and non-HDL cholesterol (SMD -21.54, 95%CI: -27.96 to -15.12;  $p < 0.00001$ ;  $I^2 = 0\%$ ). Olezarsen was not associated with any adverse event as demonstrated by the pooled analysis of adverse events. Meta-regression showed that no outcomes were significantly associated with age and BMI as covariates. Conclusion: A significant reduction was noted in TG, apoC-III, apo-B48, and non-HDLC levels, indicating a significant effect of olezarsen on these parameters. Additionally, olezarsen exhibited no significant side effects, making this medication comparatively safe. More research may be warranted to validate these findings and explore the drug's impact on cardiovascular outcomes.

#### **RSRS-18 Artificial Intelligence in The Healthcare System; A Cross-Sectional Study Involving Medical Students**

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**Introduction:** Artificial Intelligence has brought revolutionary changes in the medical field in terms of diagnosis, surgeries, and rehabilitation. **Objectives:** This study aims to assess the knowledge and perceptions of medical students regarding Artificial Intelligence. **Methods:** This is a cross-sectional study having a sample size of  $n=210$ . The study was conducted in a medical university of Rawalpindi, among all the years of medicine. A pre-made questionnaire to assess the knowledge and perceptions of the students. The data was collected from September to December 2022. SPSS version 26 and Microsoft Excel were used for data analysis. The data were deposited in a repository of Zenodo with the persistent identifier. **Results:** Only 13% of students understood what is meant by neural networks. With 5.4% believing that AI will be able to help to establish a prognosis, 60.1% expressed their confidence in AI to replace humans in performing surgery, and 40.3% found it a threat to physicians' jobs being replaced by AI. The majority (73.9%) of students thought that health equity will face quite a lot of new challenges if AI steps into medicine but they also agreed that AI skills should be ingrained in medical training. **Conclusion:** Medical students lack an understanding of AI but are quite optimistic that it has the potential to transform existing healthcare practices. Students believe that training in AI competencies should be added to their curriculum so that they can be well equipped with upcoming challenges. **Keywords:** Artificial Intelligence, Healthcare, Medical Students.

### **RSRS-21 Bailout Surgery for Difficult Gallbladders: Surgical Approach and Outcomes**

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**Introduction:** Inflammation in acute cholecystitis may cause a cholecystectomy to be more challenging. To overcome complications, conversion to subtotal cholecystectomy via laparoscopic or open procedure may be required to avoid the risk of bile duct injury and hemorrhage. We sought to describe the incidence and risk factors, safety, morbidity, and outcomes associated with bailout procedures. **Methods:** A retrospective review of laparoscopic cholecystectomies that resulted in bailout procedures performed between January 2015 and December 2020 at the University of New Mexico Medical School, in Albuquerque, New Mexico. Data collected from the chart review included demographics, comorbidities, length of presenting symptoms, vital signs, laboratory and imaging, intraoperative findings, length of surgery, and outcome. **Inclusion criteria** were adult ( $\geq 18$  years) patients undergoing laparoscopic cholecystectomy operation who

required a bailout procedure for any reason. **Exclusion criteria** were patients younger than 18 years and those undergoing elective cholecystectomy. Analyses were performed using SPSS (IBM, version 25.0). Descriptive analysis was performed reporting categorical variables as frequencies and percentages and numeric variables as means and standard deviations (SDs) and median and interquartile range (IQR), after normality assessment. Comparisons were made using Chi-squared tests or Fisher's exact tests for categorical variables and using independent sample t-tests or Mann-Whitney U tests for numeric variables. Correlations were assessed using Spearman's correlations. **Results:** A total of 1892 cholecystectomies were performed with 147 bailout procedures. For bailout 92 (63.4%) were converted to open, with 66% resulting in complete cholecystectomy. Hypertension and diabetes were the most common comorbidities. The median duration of symptoms was 4 days. Difficult anatomy in the hepatocystic triangle (66%) and dense adhesions (31%) were the most common reasons for bailout. The mean duration of surgery was 145.76 (SD 102.94) minutes. There were 2 bile duct injuries, both in open total cholecystectomy subgroup. Bile leak occurred in 23.8% with majority in subtotal cholecystectomy group. There was no difference in hospital length of stay, surgical site infection, or mortality among different bailout procedures. **Conclusions:** Subtotal cholecystectomy represents a safe alternative to total cholecystectomy during challenging cases to avoid damaging surrounding structures. The choice of laparoscopic or open subtotal approach is dependent on the surgeons' expertise.

### **RSRS-24 Unveiling post-COVID-19 Rasmussen's encephalitis: a case report of rare neurological complication**

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Rasmussen encephalitis (RE) is a rare autoimmune disorder that causes unilateral inflammation of the cerebral cortex and can lead to drug-resistant epilepsy and progressive neurological decline. Although the emergence of RE following COVID-19 has not been well documented, it emphasizes the need to understand the impact of COVID-19 on neurological health. This case emphasizes the importance of early recognition and intervention to prevent adverse outcomes related to post-COVID-19 neurological complications. **Case presentation:** A 30-year-old woman, recently diagnosed with COVID-19, experienced recurrent seizures that primarily affected the left side of her body. Despite medical management, signs of progressive weakness and

altered consciousness were observed. Neurological examination, imaging, and electroencephalography confirmed a diagnosis of post-COVID-19 RE. Despite conservative management, the patient's condition continued to deteriorate, ultimately resulting in fatal outcomes. Clinical discussion: The relationship between COVID-19 and autoimmune responses, which can lead to neurological complications, such as RE, is a matter of concern. Accurate diagnosis of RE depends on imaging and EEG studies; however, a definitive diagnosis often requires histopathological examination. The management of RE involves the use of anti-seizure medications and surgical interventions to control symptoms and improve outcomes. However, the unusual presentation of this case, along with challenges in diagnosis and treatment, underscores the need for increased awareness and extensive research on the neurological consequences of COVID-19. This case underscores the severe neurological consequences that can emerge after COVID-19, emphasizing the need for prompt identification and intervention. Additional research is essential to improve the comprehension and management of the neurological aftermath of COVID-19 with the ultimate goal of enhancing patient outcomes.

### **RSRS-39 Ticagrelor monotherapy after short duration of dual antiplatelet therapy compared to continued dual antiplatelet therapy in patients with acute coronary syndromes undergoing percutaneous coronary interventions: an updated meta-analysis**

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**Introduction:** The optimum duration of dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) in patients with acute coronary syndromes (ACS) remains controversial. Ticagrelor monotherapy after short duration of DAPT (1-3 months) is a subject of research. **Objectives:** We conducted an updated systematic review and meta-analysis comparing the ticagrelor monotherapy with continued DAPT after short duration of DAPT in patients with ACS undergoing PCI. **Methods:** PubMed, Embase, and Cochrane databases were searched for studies comparing ticagrelor monotherapy to DAPT after PCI and reported the outcomes of major adverse cardiovascular and cerebrovascular events (MACCE); net adverse clinical events (NACE); myocardial infarction (MI); major bleeding; death from any cause; definite or probable stent thrombosis; and target vessel revascularization (TVR). Data were extracted from published reports and quality assessment was

performed per Cochrane recommendations. Statistical analysis was performed using Review Manager (Cochrane collaboration). Heterogeneity was examined with I<sup>2</sup> test. Results: Of 3,208 results, five studies with 21,407 patients were included of which 50% received ticagrelor monotherapy. Studies had reported follow up of 12 months. Major bleeding [hazard ratio 0.47; 95% confidence interval (CI), 0.37-0.61; P < 0.001], NACE (hazard ratio 0.71; 95% CI, 0.56-0.90; P = 0.005), and all-cause death (hazard ratio 0.76; 95% CI, 0.59-0.98; P = 0.04) were significantly less with ticagrelor monotherapy. Other outcomes were comparable in both groups. **Conclusion:** In patients with ACS undergoing PCI, ticagrelor monotherapy reduces major bleeding, NACE and all-cause death as compared to continued DAPT for 12 months. Major ischemic outcomes were similar. Ticagrelor monotherapy is the way forward after short duration of DAPT after PCI in ACS.

### **RSRS-44 Bridging the gap: Assessing the effectiveness of pre and post awareness session on orthotic interventions for Duchene Muscular dystrophy in community settings**

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Duchenne muscular dystrophy is a severe, progressive, muscle-wasting disease that leads to difficulties with movement and, eventually, to the need for assisted ventilation and premature death. Preserved hand function is of uttermost importance for performance of activities in the late stages of Duchenne muscular dystrophy. Contractures of long finger flexors affect hand function and limit performance of daily activities. Hand orthoses can delay development of contractures and preserve hand function and give prerequisites for independence. Children with DMD require AFOs as resting or walking splint, mostly in first or early second decade of life. Prolongation of walking through KAFOs prevent the development of scoliosis, joint contractures and deformities and also benefit the patient psychologically. However, perception and awareness regarding orthotic intervention in DMD is insufficient among community. **OBJECTIVES:** 1) To assess awareness among community regarding Duchenne muscular dystrophy's occurrence, cause and prognosis. 2) To evaluate knowledge regarding orthotic interventions and their benefits in improving quality of life in Duchenne muscular dystrophy among community. **MATERIALS AND METHODS:** Study design: Comparative cross-sectional study Study setting: Allied hospitals of Rawalpindi Medical University Sample size: 200 Tools: Customized Pre and Post evaluation questionnaire to assess awareness in community before and after awareness session.

Inclusion criterion: All the patients and attendants in allied hospitals. Exclusion criteria: People not willing to participate in this study. Statistical analysis: SPSS version 25.0 RESULTS: There was a significant increase in awareness regarding orthotic braces for Duchenne muscular dystrophy after the awareness session ( $p < 0.001$ ). Illiteracy, low socioeconomic status and certain tribal barriers were playing major role in inadequate awareness. CONCLUSION: The study highlights the importance of awareness in community regarding conservative interventions in DMD patients in order to improve their quality of life as well as to change social narrative that if its incurable then it doesn't require attention and treatment.

### **RSRS-86 Disaster Preparedness And Its Associated Factors Among Healthcare Workers In A Tertiary Care Hospital In Rawalpindi**

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Disasters pose significant challenges globally, affecting public health and infrastructure. Pakistan, a country prone to natural disasters like floods and earthquakes, faces recurring challenges in disaster management. Healthcare workers (HCWs) play a crucial role in disaster response, necessitating their preparedness and skills to mitigate the impact on affected populations. This study aims to assess current level of disaster preparedness among HCWs in a tertiary care hospital to strengthen healthcare system that mitigates adverse effects of recurrent disasters safeguarding lives, property and infrastructure. Objectives: To assess the knowledge of disaster preparedness among healthcare workers of a tertiary care hospital. To identify factors affecting disaster preparedness among healthcare workers of a tertiary care hospital. Materials and Methods: A Cross-Sectional Analytical Study was conducted at a Tertiary care hospital of Rawalpindi for 7 months from January 2024 to July 2024. Questionnaires were distributed to healthcare workers through nonprobability convenience sampling to collect a sample size of 218 participants. The questionnaire comprised of demographics and a validated questionnaire on disaster preparedness; Disaster Preparedness Evaluation Tool – Mainland China (DPET-CM). the participants fulfilling the inclusion and exclusion criteria were analyzed using SPSS v 27 to apply descriptive statistics for percentage and frequencies and inferential statistics to find differences and associations between demographics and disaster preparedness. Results: The study found moderate(less) disaster preparedness among HCWs, with significant variations across different domains. Factors such as educational level, type of healthcare

worker and years of work experience were found to influence preparedness significantly ( $p < 0.05$ ). Conclusion: In conclusion, this study highlights gaps between awareness and practical disaster management skills among healthcare workers in tertiary care hospitals. Enhanced training tailored to roles and experience levels is crucial for improving preparedness. Future efforts should focus on integrating simulation-based training and improving coordination to strengthen hospital readiness and community resilience.

### **RSRS-124 Impact of Retinoscopy Findings on Refractive Error Diagnosis in Pediatric Patients Across Different Age Groups**

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Refractive errors, such as myopia, hyperopia, and astigmatism, are leading causes of visual impairment globally. Accurate diagnosis and timely management of these errors are essential for maintaining proper visual development and preventing long-term complications. Retinoscopy, an objective technique used to evaluate refractive errors by analyzing the retinal light reflex, is particularly valuable in pediatric populations where subjective refraction may be unreliable due to limited cooperation or communication challenges. Purpose: To analyze the importance of retinoscopy in assessing refractive errors in children who cannot reliably participate in subjective testing. Methodology: Retinoscopy was performed using cycloplegic drops to neutralize accommodation. Data were systematically collected using a self-structured proforma, allowing for standardized evaluation and documentation of findings. Findings: In pediatric patients, retinoscopy findings revealed hyperopia in 20-30% of cases, myopia in 5-10%, and astigmatism in 15-25%. Anisometropia, a major risk factor for amblyopia, was noted in 2 4% of cases. Additionally, media opacities or retinal abnormalities were identified in less than 1% of cases. These results underscore the value of retinoscopy in diagnosing and managing a wide range of visual conditions early in life. Conclusion: Retinoscopy is a reliable, objective method for diagnosing refractive errors and assessing ocular health in children. By enabling the early detection of myopia, hyperopia, astigmatism, and anisometropia, it aids in preventing amblyopia and ensuring normal visual development. Its role in guiding the prescription of corrective lenses and identifying ocular pathologies underscores its critical contribution to pediatric eye care. Implications: Routine retinoscopy in pediatric patients is crucial for early identification of visual issues. This practice supports normal academic and social development,

improves visual outcomes, and promotes long-term eye health by facilitating timely corrective and therapeutic interventions.

### **RSRS-33 A Rare Occurrence of SMA Dissection Complicated by Aneurysm, Hematoma, and Bowel Ischemia in a Patient with Abdominal Pain: A Case Image Report**

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Rawalpindi Medical University

Superior mesenteric artery (SMA) dissection is an uncommon but critical vascular emergency that can present as acute abdominal pain and is often misdiagnosed. Early recognition via contrast-enhanced CT imaging is crucial to identifying complications like thrombosis, aneurysm, and bowel ischemia to prevent catastrophic outcomes.

**Objectives:** To describe the clinical presentation, imaging findings, and management of a rare case of SMA dissection complicated by thrombosis, aneurysm, hematoma, and bowel ischemia, emphasizing the role of imaging in timely diagnosis.

**Material and Methods. Study Design:** Case report.

**Study Setting:** Emergency Department of a tertiary care hospital. **Study Duration:** Patient presentation and follow-up spanning 3 day. **Study Population:** A single case of a 58-year-old male with abdominal pain. **Inclusion Criteria:** Presentation with vascular abdominal pain and confirmed SMA Dissection.

**Exclusion Criteria:** None applicable **Data Collection**

**Tool:** Clinical examination, laboratory tests, and

contrast-enhanced CT Imaging. **Data Collection**

**Technique:** Review of patient records, imaging reports, and clinical Progression. **Statistical Analysis:**

Descriptive analysis of clinical findings and outcomes **Results** A 58-year-old male presented with persistent abdominal pain, vomiting, and hypoactive bowel sounds. Initial laboratory findings suggested pancreatitis, but contrast-enhanced CT imaging revealed a segmental SMA dissection with a thrombosed false lumen, aneurysm, and a significant intraperitoneal hematoma. Bowel wall thickening in the jejunum and ileum indicated ischemia.

Conservative management, including blood pressure control and anticoagulation, stabilized the patient, with subsequent improvement in symptoms and imaging findings. **Conclusion** This case highlights the critical need for early imaging in acute abdominal pain to diagnose vascular emergencies like SMA dissection. Conservative management proved effective in this hemodynamically stable patient, preventing progression to severe complications such as bowel necrosis.

### **RSRS-41 Knowledge, Attitude, and Practices Toward Skin Cancer Prevention and Detection**

### **among Students of Rawalpindi Medical University: A Cross-Sectional Study**

Meerab Babar

Rawalpindi Medical University

Skin cancer, a leading global public health issue, is characterized by rising incidence rates attributed to factors such as ultraviolet (UV) radiation exposure, fair skin, and genetics. In Pakistan, the increasing prevalence of skin cancer is coupled with limited national data and low awareness levels. Medical students, as future healthcare professionals, play a vital role in addressing this issue. This study aims to evaluate the knowledge, attitudes, and practices (KAP) of Rawalpindi Medical University students concerning skin cancer prevention and detection.

**Objectives:** Assess the current knowledge, attitudes, and practices related to skin cancer prevention and detection among medical students. Identify

misconceptions and gaps in awareness to guide

targeted educational interventions. **Material and**

**Methods:** A cross-sectional study was conducted at Rawalpindi Medical University, targeting medical students aged 18-25 across all academic years.

Exclusion criteria included foreign students and those with personal histories of skin cancer. Data collection involved a structured, electronic questionnaire assessing KAP regarding skin cancer prevention and detection, including demographic details. Statistical analysis was performed using SPSS version 27.

Ethical approval was obtained, ensuring participant confidentiality and voluntary participation. **Results:**

Preliminary findings revealed a disparity between students knowledge and practices regarding skin cancer prevention. While 85% of participants demonstrated satisfactory awareness of melanoma risk factors, only 35% practiced regular sun

protection. Notably, 60% reported experiencing sunburns in the past year, indicating a need for behavioral modification. Students' attitudes toward self-skin examination were positive, with 75%

recognizing its role in early detection, yet only 40% practiced it regularly. **Conclusion:** The study

highlights significant gaps between knowledge and practical application among medical students

regarding skin cancer prevention. Tailored

educational programs emphasizing practical skills

and preventive measures are essential to equip future healthcare providers with the competence to reduce the burden of skin cancer in Pakistan.

### **RSRS-42 The Risk of Suicidal Ideation Associated with Glucagon-Like Peptide-1 Receptor Agonists: A Systematic Review and Meta-Analysis**

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Rawalpindi Medical University

Glucagon-Like Peptide-1 Receptor Agonists (GLP-1 RAs) are widely used for managing type 2 diabetes mellitus (T2DM) due to their efficacy in glycemic control and weight management. However, concerns regarding potential neuropsychiatric side effects, especially suicidal ideation, have raised questions about their long-term safety. Objectives: To assess whether GLP-1 RAs are associated with an increased risk of suicidal ideation in diabetic patients compared to other anti-diabetic medications. Material and Methods: Study Design: Systematic review and meta-analysis. Study Settings: Analysis of five retrospective cohorts. Study Duration: Mean follow-up of 3 years. Study Population: 15,000 patients with T2DM and no prior history of suicidal ideation. Sample Size: 6,500 in the GLP-1 RA group and 8,500 in the non-GLP-1 RA group. Inclusion/Exclusion Criteria: Adults with T2DM; no prior suicidal ideation; studies in English involving human subjects. Data Collection Tools: Standardized data extraction forms. Data Collection Technique: Systematic search in MEDLINE, Embase, CENTRAL, ClinicalTrials.gov, and PsycINFO. Statistical Analysis: Pooled hazard ratios (HR) with 95% confidence intervals (CI) were calculated. Heterogeneity was assessed using the  $I^2$  statistic, and a  $p$ -value  $< 0.05$  was considered statistically significant. Results: The meta-analysis demonstrated that long-term use of GLP-1 RAs did not significantly increase the risk of suicidal ideation compared to non-GLP-1 RA anti-diabetic medications. The pooled HR was 0.43 (95% CI: 0.30–0.97,  $p = 0.045$ ), indicating a potentially protective effect. There was significant heterogeneity among studies ( $I^2 = 72\%$ ,  $p = 0.01$ ), suggesting variability in patient populations and study designs. One cohort study reported a lower risk in the semaglutide group compared to controls (0.13% vs. 0.36%, HR = 0.36, 95% CI = 0.25–0.53,  $p < 0.001$ ). Conclusion: Our findings suggest that GLP-1 RAs are not significantly associated with an increased risk of suicidal ideation in T2DM patients. The observed HR of 0.43 indicates no elevated risk and possibly a protective trend, although heterogeneity across studies warrants caution. Larger, prospective studies are needed to confirm these findings and explore the underlying mechanisms further.

### **RSRS-50 Sub-trochanteric Femoral Fracture and its Management in a Young Hemophilia A Patient: A Case Report**

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Introduction: Hemophilia is a bleeding disorder in which there is a deficiency of clotting factors. It is of

two types depending upon deficiency of specific clotting factors; hemophilia A due to factor VIII and hemophilia B due to factor IX. These patients experience heavy episodes of bleeding even from minor cuts. Hemophilia is a condition of great interest for orthopedic surgeons due to its clinical manifestations.

Objectives: Our aim is to present a case of Hemophilia A with proximal femoral fracture and its management.

Case Presentation: An eighteen year old boy with Hemophilia A, who presented after a road accident at a hospital, where he was managed by fresh frozen plasma and blood transfusion. His treatment was delayed due to unavailability of factor VIII at the hospital and his family arranged it on their own. Internal fixation by cephalomedullary nailing was done to reduce his fracture.

Discussion: Hemophilia diagnosis involves a combination of factor VIII level assays and abnormal bleeding episodes in the patient. The treatment involves prophylactic administration of factor VIII. In case of femoral fractures in these patients, intramedullary nailing is preferred while maintaining the levels of factor VIII simultaneously.

Conclusion: Management of fracture in this hemophilia patient was a difficult task. Early presentation at the hospital had a positive while unavailability of recombinant factor VIII on time had a negative impact on the outcome.

Keywords

Hemophilia, Subtrochanteric fractures, Intramedullary nailing, Factor VIII, Blood clotting

### **RSRS-51 Turnaround Time of laboratory tests at Pathology Laboratory of Holy Family Hospital, Rawalpindi: A Cross-sectional Study**

Introduction: Efficient laboratory services play a pivotal role in healthcare delivery, aiding in accurate diagnosis and treatment planning. However, prolonged turnaround time (TAT) can impede timely interventions and increase patient disappointment.

Objectives

To determine the turnaround time of laboratory tests and its association with demographics of patients, type of sample, shift of day and day of week.

Materials and Methods: It was Cross-sectional conducted at Holy Family Hospital, Rawalpindi from (April to June, 2024)

All patients coming to pathology laboratory of stated hospital were included in this study.

Sample size was calculated to be 290 using WHO calculator, based on 95% confidence interval. All samples given at stated laboratory were included except those which were improperly handled or included multiple tests. Questionnaire included questions about patients demographics (age, gender, education level, residence, marital status and occupation), type of sample, visit type (first visit or follow up), day of week, shift of day and turnaround time (time from sample collection to report generation). Non-random consecutive sampling was implied. Sociodemographics were described using descriptive statistics. Independent sample t-tests and ANOVA were used for comparisons of TAT with patients demographics, type of sample, visit type, shift of day.

Results: Histopathological tests showed highest TAT ( $152 \pm 25.6$  min) followed by microbiology ( $146.6 \pm 30.3$  min), special chemistry ( $131 \pm 17$  min), biochemistry ( $105.2 \pm 23$  min) and baseline tests ( $95.5 \pm 37$  min). Turnaround time has a significant association with shift of day and residence, with evening tests ( $p$  value = 0.03) and rural patients ( $p$  value = 0.047) having high TAT.

Conclusion: To further improve efficiency of laboratory, human resources and apparatus should be increased appropriately. Training session for workers should be arranged. Reports should be decentralized and sent directly to ward to avoid congestion in laboratory.

Keywords: Turnaround time, pathology, laboratory tests

### **RsrS-52 Rare Presentation of Cervical Choriocarcinoma with Metastasis: A Case Report**

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Introduction: Choriocarcinoma of the cervix is a sporadic disease with an incidence of 0.76 to 4%. This malignant form of gestational trophoblastic disease typically originates in the uterus but can occasionally arise in the vagina, fallopian tubes, vulva, cervix, or pelvic region.

Case Presentation: Our patient presented with heavy menstrual bleeding and elevated B-HCG levels. She underwent total hysterectomy with bilateral salpingo-oophorectomy (TAH+BSO). Histopathological diagnosis confirmed choriocarcinoma and a post-treatment CT scan revealed lung metastasis.

Treatment usually involves combination chemotherapy, which is highly effective, with cure rates reaching 100% in low-risk patients and 80-90% in high-risk patients.

Conclusion: This report highlights the importance of a meticulous, multidisciplinary approach to managing this rare cancer at advance stages.

Keywords: Choriocarcinoma, systemic chemotherapy,

### **RSRS-53 Trends and disparities in age, gender, ethnoracial background, and urbanization status in adult mortality due to thoracic aortic aneurysm: a retrospective nationwide study in the United States**

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Introduction: Thoracic aortic aneurysms (TAA) are a significant health concern, with the true prevalence likely underestimated due to undiagnosed cases.

Outcomes in TAA are influenced by factors like age, gender, and comorbidities such as hypertension. This study examines mortality trends and disparities associated with TAA in US adults.

Methodology: This study analyzed death certificates from 1999 to 2020 using the CDC WONDER Database to identify TAA-related deaths in individuals aged 25 and older using ICD-10 codes I71.1 and I71.2. Age-adjusted mortality rates (AAMRs) per 1,000,000 and annual percent changes (APCs) were calculated and stratified by year, gender, age group, race/ethnicity, region, and urbanization status.

Results: Between 1999 and 2020, 47,136 TAA-related deaths were reported among US adults. The AAMR decreased from 16.2 to 8.2 per 1,000,000, with a significant decline from 1999 to 2013 (APC:  $-5.00$ ; 95% CI:  $-5.54$  to  $-4.54$ ;  $P < 0.001$ ). Older adults had the highest AAMRs at 44.6 per 1,000,000. Men had higher AAMRs than women (11.2 vs. 9). AAMRs were highest among non-Hispanic (NH) Black (11), followed by NH White (10.3), NH Asian or Pacific Islander (9.5), NH American Indian or Alaska Native (7.8), and Hispanic (5.2) populations. Non-metropolitan areas had higher AAMRs than metropolitan areas (11 vs. 9.8).

Conclusions: The analysis showed a significant decline in TAA mortality since 1999, with recent stabilization. However, disparities persist, with higher AAMRs among men, older adults, NH Black adults and non-metropolitan residents, highlighting the need for targeted and equitable interventions.

### **RSRS-54 Mortality trends, gender, and racial disparities in older adults due to abdominal aortic aneurysm: A nationwide cross-sectional analysis**

Humza Saeed

Rawalpindi Medical University

**Introduction:** Abdominal aortic aneurysms (AAAs) are a significant vascular pathology in older adults, often asymptomatic but with high mortality upon rupture. Despite advancements in diagnostic imaging and surgical interventions, AAAs remain a public health concern.

**Methodology:** This research letter analyzed CDC WONDER data on AAA-related deaths (ICD-10 I71.3 and I71.4) among US adults aged 65+ from 1999 to 2020. Age-adjusted mortality rates (AAMRs) and annual percent change (APC) were calculated by year, gender, age group, race/ethnicity, geography, and urbanization status.

**Results:** Between 1999 and 2020, there were 180,037 reported deaths in older adults due to AAA.

The overall AAMR decreased from 32.6 to 13.2 per 100,000, with a significant decline from 2014 to 2020 (APC:  $-1.66$ ; 95% CI:  $-2.48$  to  $-0.48$ ). Older men had a significantly higher AAMR than older women (31.2 vs. 12). Among racial and ethnic groups, Non-Hispanic (NH) Whites had the highest AAMR at 21.7, followed by NH American Indian or Alaska Native (14.5), NH Black (12.6), NH Asian or Pacific Islander (10.1), and Hispanic populations (8.4). Additionally, non-metropolitan areas exhibited higher AAMRs compared to metropolitan areas (23.9 vs. 18.7).

**Conclusion:** While mortality rates have declined, disparities remain, with higher rates among older men, NH Whites, and non-metropolitan residents, highlighting the need for targeted and equitable interventions.

### **RSRS-55 Breast Cancer's Hidden Partner: Meningoencephalitis As A Paraneoplastic Revelation: A Rare Presentation Of Invasive Ductal Carcinoma Of Breast: A Case Report**

Shamaem Tariq

Rawalpindi Medical University

**Introduction :** Paraneoplastic neurologic syndromes encompass a group of neurologic disorders arising from

pathological processes unrelated to metastasis, metabolic disturbances, infections, coagulopathy, or treatment-related side effects. These syndromes can affect various regions of the nervous system, resulting in diverse clinical manifestations

**Case presentation:** The authors present a rare case of anti-amphiphysin-associated meningoencephalitis in a South

Asian Pakistani woman. Initially, the patient was managed for suspected infectious meningitis,

but empirical treatment failed to yield improvement.

Subsequent investigations unveiled a paraneoplastic syndrome secondary to breast cancer.

**Discussion:** Diagnosing these clinical entities is challenging due to their multifaceted presentations, often leading to delayed identification, increased patient suffering, economic burdens, and preventable complications.

**Conclusion :** Anti-amphiphysin-associated meningoencephalitis is a rare manifestation of paraneoplastic

syndromes. It is crucial to raise awareness among healthcare professionals about the diverse presentations of paraneoplastic syndromes.

**Key words:** anti amphiphysin, autoimmune meningoencephalitis, breast carcinoma, invasive ductal carcinoma, paraneoplastic neurological syndrome

### **RSRS-56 Comparative Efficacy and Safety of Tissue Plasminogen Activators (tPA) in Acute Ischemic**

### **Stroke: A Systematic Review and Network Meta-analysis of Randomized Controlled Trials**

Humza Saeed

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**Introduction:** Intravenous alteplase (ALT) is the standard treatment for acute ischemic stroke (AIS). However, recent trials comparing other tissue plasminogen activators (tPAs) like tenecteplase (TNK) and reteplase with ALT have yielded conflicting results, thus necessitating a systematic compilation of all available data on the topic.

**Objective:** We conducted a systematic review and network meta-analysis to compare the efficacy and safety of various tPAs in patients with acute ischemic stroke.

**Methods:** A systematic literature search was conducted using MEDLINE (via PubMed), Embase and the Cochrane Controlled Register of Trials (CENTRAL) (via the Cochrane Library) until September 15, 2024. We included randomized controlled trials (RCTs) comparing TNK or reteplase at any dose to ALT (0.9 mg/kg) in patients with AIS. We performed a frequentist network meta-analysis using risk ratio and 95% CI for each comparison. P-scores provided the ranking of treatments. Statistical analyses were performed using R Software 4.2.3.

**Results:** Sixteen randomized controlled trials with a total of 9259 patients (62.1% males) were included. In this network meta-analysis, 18+18 mg reteplase demonstrated statistically significant improvement in excellent functional recovery (mRS 0-1) (RR: 1.13; 95% CI: 1.06 to 1.20;  $p < 0.01$ ) and independent ambulation (mRS 0-2) at 3 months (RR:

1.07; 95% CI: 1.02 to 1.12;  $p < 0.01$ ) compared to ALT. The 0.25 mg/kg TNK group also showed statistically significant benefits in functional recovery (mRS 0-1) compared to ALT (RR: 1.06; 95% CI: 1.02 to 1.11;  $p < 0.01$ ). For safety, 0.1 mg/kg TNK was associated with a higher incidence of symptomatic intracranial hemorrhage (s-ICH) compared to ALT (RR: 7.27; 95% CI: 2.77 to 19.06;  $p < 0.01$ ). No significant differences were observed between ALT and other interventions for any ICH or all-cause mortality. Among the six interventions, 18+18 mg reteplase was ranked as the best for excellent functional recovery (P-score=0.9638) and independent ambulation (P-score=0.9749), while ALT ranked highest for s-ICH (P-score=0.8060). The comparisons between reteplase and TNK at all doses gave non-significant results for all outcomes. Conclusion: Reteplase 18+18 mg and TNK 0.25 mg/kg showed higher efficacy and comparable safety profiles to ALT in this network meta-analysis. However, larger trials are warranted to further investigate these agents as potential alternatives to ALT.

Keywords: Ischemic stroke; tissue plasminogen activator; alteplase; tenecteplase; reteplase.

#### **RSRS-57 Crigler-Najjar Syndrome Type 2: A Rare Case Report Highlighting Potential Maternal Viral Influence**

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Introduction: Crigler-Najjar syndrome type 2 (CNS-II) is a rare autosomal recessive inherited disorder characterized by unconjugated hyperbilirubinemia as the result of partial deficiency in bilirubin uridine diphosphate-glucuronosyltransferase 1A1. Case presentation: This case presents a unique instance, raising questions about potential maternal viral influence during gestation. Here, we report a case of a three-day-old newborn who presented with jaundice abdominal pain and elevated unconjugated bilirubin levels. The mother 39 weeks pregnancy was complicated by dengue fever and pneumonia, but the delivery was normal. After 5 days of phototherapy, the bilirubin levels normalized. At 11 months, following seizures and worsening jaundice, total serum bilirubin was 22.9 mg/dL with unconjugated bilirubin levels of 20.8 mg/dL, a diagnosis of Crigler Najjar Syndrome type 2 was made. The patient was put on phenobarbital which showed a significant decrease in total serum bilirubin levels. The key takeaway from this case is the

importance of early diagnosis, a potential viral influence during gestation, and treatment with phenobarbital to prevent complications.

Keywords: Crigler Najjar syndrome; Case report; Hyperbilirubinemia; Phenobarbital

#### **RSRS-58 \*Title: Association between inflammatory bowel disease and atrial fibrillation: A systematic review and meta-analysis\***

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Introduction: Inflammatory bowel disease (IBD), including Crohn's disease (CD) and ulcerative colitis (UC), is a prevalent condition associated with chronic noninfectious inflammation of the gastrointestinal tract. It has been hypothesized that chronic inflammation can predispose patients to atrial fibrillation (AF), however, no clear evidence exists to support this.

Methods: A systematic literature search was conducted using major databases aimed at studies focusing on AF development in patients with IBD. Further subgroup analyses were performed for ulcerative colitis (UC) and Crohn's disease (CD). Risk ratios (RR) with their corresponding 95 % confidence intervals (CI) were pooled using a random-effects model in the Review Manager Software. Statistical significance was set at  $p < 0.05$ .

Results: Seven studies with 88,893,407 patients were included (1,002,719 and 87,890,688 patients in the IBD and non-IBD groups, respectively). IBD patients were at an increased risk of developing AF [RR: 1.52; 95 % CI: 1.19–1.95;  $p = 0.0009$ ] compared to the non-IBD group. In subgroup analyses, patients with UC were at an increased risk of developing AF [RR: 1.29; 95 % CI: 1.08–1.53;  $p = 0.004$ ], as were CD patients [RR: 1.30; 95 % CI: 1.07–1.58;  $p = 0.008$ ] compared to the non-UC and non-CD groups, respectively.

Conclusion: Patients with IBD are at nearly 1.5 times the risk of developing AF compared to the non-IBD population. Our meta-analysis was limited by heterogeneity among the studies, highlighting the importance of further large-scale prospective studies to establish more robust evidence.

Keywords: Atrial fibrillation Inflammatory bowel disease Risk Meta-analysis

#### **RSRS-59 Donatio Organorum- Reluctance To Organ Donation Medical Students; A Cross-Sectional Descriptive Study**

Mehak asim

Rawalpindi Medical University

**Introduction:** Organ donation is the act of removing an organ or tissue from a donor and transplanting the said organ/tissue to a recipient. Despite being the only definitive treatment for end-organ failure, there is a lot of hesitation surrounding the practice of organ donation. Even among medical students, who are more aware of the benefits of organ donation than the general public, this reluctance is widespread. Therefore, we conducted this research to determine the basis of this skepticism, so that the root causes can be identified and eradicated.

**Objective:**

1. to ascertain the overall attitudes of Rawalpindi Medical University's students towards organ donation.
2. to determine the associated factors that influences this attitude.

**Methodology:** This study is a cross-sectional descriptive study that was conducted at Rawalpindi Medical University, Pakistan (a public sector medical university) during the year 2022 with a duration of 9 months. The study population included students of first year to final year. Sample size was calculated using the OpenEpi software as follows; Population size (for finite population correction factor or  $fpc$ )(N): 1200. Hypothesized % frequency of outcome factor in the population (p):  $50\% \pm 5$ . Confidence limits as % of 100 (absolute  $\pm$  %)(d): 5% Design effect (for cluster surveys-DEFF): 1. The sample size was calculated to be 292 and A self-structured questionnaire that was developed after substantial research was used to collect the data using a non-random convenience sample technique. Chi Square test was used to determine significance after data analysis using SPSS-22.

**Inclusion criteria:** The students who were enrolled in Rawalpindi Medical University in first, second, third, fourth, or final year of MBBS during the academic year 2021–2022 met the inclusion criteria

**Exclusion criteria:** Participants who were unwilling to engage in the study and openly declare their religious convictions were excluded from it as an exclusion criterion.

**Results:** A total of 290 students participated in the study, 58 from each year. All of the participants were Muslim. A very strong correlation was found between high devoutness and willingness towards organ donation ( $p = 7.4252E-13$ ). Only 9/290

(3%) of people in Pakistan have joined The Transplantation Society of Pakistan; the main cause of this low ratio is that very few people were aware that such a group even existed (according to 62% of the responders). The mistrust of doctors and the belief that appropriate efforts would not be done to resuscitate patients who have signed up for organ

donation is a significant factor in the anxiety surrounding organ donation.

**Conclusions:** There are several reasons why people are reluctant to donate their organs, including a lack of understanding of religious perspectives on the subject, mistrust of medical professionals and medical administration, and general public ignorance. We can make a significant progress toward closing the gap between the demand for and supply of organ donations if these problems are remedied. The most effective strategy to stop organ trafficking is through organ donation. Through seminars, conversations, and workshops, we need to raise awareness about organ donation.

**Keywords:** Awareness (D001364); Knowledge (D019359); Medical students (D013337); Organ donation; Organ transplantation;

### **RSRS-60 Short term BAROS Score Outcomes for Roux-en-Y Gastric Bypass, One Anastomosis Gastric Bypass, and Laparoscopic Sleeve Gastrectomy: a Single Centre Comparison**

Muhammad Hassan Sohail

Shifa International Hospital

**Introduction:**

Bariatric Analysis and Reporting Outcome System (BAROS) is one of the most widely used scoring systems to analyse procedures and their outcomes. Three surgeries; Roux-en-Y Gastric Bypass (RYGB), Laparoscopic Sleeve gastrectomy (LSG) and One-anastomosis-gastric-bypass (OAGB), their impact on quality of life from each surgery compared.

**Objective:** Comparison of outcomes amongst RYGB, LSG and OAGB observed over a shorter duration.

**Materials and methods:** a retrospective research was conducted in a hospital setting with questionnaires filled via a telephonic interview. Population of 300 patients taken out of which 200 patients selected using the following criterias; inclusion; surgery greater than 12 months ago, Undergone either RYGB, LSG, OAGB; above 18 years of age; exclusion; incomplete data, unable to be contacted directly or deceased. Data analysed with SPSS version 23.

**Results:** Most common obesity-related medical problems experienced were exertional dyspnoea (61.1%) and hypertension (42.4%). Roux-en-Y Gastric Bypass (RYGB) being the most common procedure with 61.8% as compared to Laparoscopic sleeve gastrectomy (LSG) 31.9% and one-anastomosis gastric bypass (OAGB) 6.3%.

Improvements seen in postoperative mean BMI ( $32.9 \pm 6.2$ ) and obesity-related medical problems across all procedures, with one person reporting postoperative

exertional dyspnoea. Using the BAROS score, RYGB had the majority of patients falling into the very good ; (38.2%) or excellent; (24.7%) categories. Patients who underwent LSG reported a better quality of life than with OAGB or RYGB.

Conclusion: While all surgeries show better outcomes over a short duration of time in terms of obesity-associated medical condition, One Anastomosis Gastric Bypass (OAGB) had relatively well-distributed outcomes, with the highest proportion of excellent; ratings as compared to other procedures.

Keywords: Bariatric surgery, BAROS scoring

### **RSRS-61 Efficacy and Safety of Etanercept for Treating Plaque Psoriasis in Children: A Systematic Review and Meta-analysis of Randomized Controlled Trials**

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Introduction: Nearly 3.5% of the population is diagnosed with plaque psoriasis, and about 0.5-2.0% of the cases are seen to be reported in the Pediatric population. Multiple treatment options are available for treating plaque psoriasis in children, including a recently approved TNF- $\alpha$  inhibitor, etanercept. However, etanercept's efficacy in treating plaque psoriasis in children is not fully understood yet. Therefore, in this meta-analysis, we assess the safety and efficacy of etanercept in treating children with plaque psoriasis.

Methodology: We searched multiple databases, including PubMed, Cochrane Central, and Clinicaltrials.gov, from the earliest records available till February 2024. We only included randomized control trials (RCTs) in our study. The final analysis included 3 RCTs and a total of 378 patients. Risk

ratios (RR), including a 95% confidence interval (CI), were combined using the randomized effects model.

Results: Our pooled analysis showed that children in etanercept groups are 4.5 times at risk of showing PASI 75 scores improvement at 12 weeks (RR 4.56, 95% CI 3.03-6.87,  $p < 0.00001$ ,  $I^2 = 0\%$ ) and having improved sPGAs scores/IGA Mod 2011 (RR 4.58, 95% CI 2.80-7.48,  $p < 0.00001$ ,  $I^2 = 0\%$ ) compared to the placebo group. However, no significant difference was found in the adverse events compared to the children in the etanercept group vs. the placebo group (RR 1.21, 95% CI 0.92-1.60,  $p = 0.18$ ,  $I^2 = 37\%$ ).

Conclusion: Our meta-analysis suggests that etanercept may serve as a safe and effective treatment option for children with plaque psoriasis.

Keywords: plaque psoriasis; etanercept; TNF- $\alpha$

### **RSRS-62 Title: Hepatic Angiosarcoma: A Rare and Aggressive Primary Liver Malignancy – A Case Report and Review of the Literature**

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Introduction: Hepatic angiosarcoma (HA) is a rare and aggressive malignancy originating from the endothelial cells of the blood vessels in the liver. It accounts for approximately 2% of all primary liver cancers and is characterized by a poor prognosis. The disease often presents with non-specific symptoms, and its diagnosis is typically delayed. While there are associations with certain toxins like vinyl chloride and anabolic steroids, many cases have no clear etiology.

Objectives: This case report aims to present a detailed description of a 56-year-old male diagnosed with hepatic angiosarcoma. It also reviews the clinical features, diagnostic methods, and treatment options for this rare malignancy.

Material and Methods: This case report was conducted at a tertiary care hospital. The patient, a 56-year-old male, presented with upper abdominal pain, low hemoglobin, and mild ascites. Radiological imaging and histopathology confirmed the diagnosis of hepatic angiosarcoma. Immunohistochemical analysis with CD31 and CD34 was performed to establish endothelial differentiation.

Results: The patient's clinical presentation included nonspecific symptoms, and imaging revealed a lesion in the left lateral segment of the liver.

Histopathological findings, confirmed by CD31 and CD34 staining, established the diagnosis. Surgical resection was performed, but the prognosis remained poor.

Conclusion: Hepatic angiosarcoma is a rare and aggressive liver malignancy with a poor prognosis.

Diagnosis relies on imaging and histopathological confirmation. Despite surgical intervention, the overall survival rate is low, underscoring the need for early detection and better treatment options.

**Keywords:** Hepatic angiosarcoma, hepatic vascular lesions, left lateral segmentectomy, liver malignancy, endothelial cell cancer.

### **RSRS-63 Unveiling post-COVID-19 Rasmussen's encephalitis: a case report of rare neurological complication**

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**Introduction and importance:** Rasmussen encephalitis (RE) is a rare autoimmune disorder that causes unilateral inflammation of the cerebral cortex and can lead to drug-resistant epilepsy and progressive neurological decline. Although the emergence of RE following COVID-19 has not been well documented, it emphasizes the need to understand the impact of COVID-19 on neurological health. This case emphasizes the importance of early recognition and intervention to prevent adverse outcomes related to post-COVID-19 neurological complications.

**Case presentation:** A 30-year-old woman, recently diagnosed with COVID-19, experienced recurrent seizures that primarily affected the left side of her body. Despite medical management, signs of progressive weakness and altered consciousness were observed. Neurological examination, imaging, and electroencephalography confirmed a diagnosis of post-COVID-19 RE. Despite conservative management, the patient's condition continued to deteriorate, ultimately resulting in fatal outcomes.

### **RSRS-64 Knowledge, Attitude and Vaccination Status of Hepatitis B among Pre Clinical Medical Students of Rawalpindi Medical University**

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**Introduction:** Hepatitis refers to viral liver inflammation leading to acute and chronic illness. In Pakistan its prevalence is 4.9% for hepatitis C and 2.5% for hepatitis B. Reuse of contaminated needles, syringes, or sharp objects in healthcare settings causes the spread of this virus. Vaccination is an effective tool for its prevention but unfortunately a low vaccination rate is observed in developing countries. Healthcare workers, because of negligence and non-vaccination are severely exposed to it. In

medical practice, medical students are more prone to hepatitis because of lack of awareness, vaccination and high prevalence of needle stick injuries. Thus, proper knowledge and outlook is important for safety. Working on medical students' apprehension is significant for hepatitis control in future as they can raise consciousness regarding disease in themselves and their patients.

**Objectives:** The aim of this research is to assess the status of vaccination against hepatitis B among medical students of preclinical years in Rawalpindi Medical University through self-structured questionnaires. It would also determine the knowledge and attitude of students regarding hepatitis B vaccination and explore the reasons of non-compliance if any.

**Methodology:** We conducted a cross-sectional study using an online questionnaire-based survey recording the demographic details, knowledge, attitude, practice and vaccination status of non-clinical year medical students. Total data of 249 students was collected through convenience sampling.

Statistical analysis was performed.

**Results:** Out of 266 participants, ranging from age 17 to 27, the majority were females 202 (75.9%).

Among these, 66.5% strongly agreed that hepatitis was caused by a virus whereas, hepatitis causes liver inflammation was also supported by majority (43.2% strongly agree, 41% agree). Regarding attitude, only 38% considered healthcare workers to be at an increased risk for hepatitis B but 52.6% believed in the efficacy of Hepatitis B vaccination. Assessment of vaccination status showed 92 (34.6%) people not being vaccinated while 174 (65.4%) were vaccinated.

**Conclusion:** A mixed response was achieved from pre-clinical year students about their knowledge in regards to Hepatitis B. Majority students were found vaccinated, showing a positive attitude towards vaccination.

**Mesh Words:** Hepatitis B, Vaccination, Vaccination Hesitancy, Medical students

### **RSRS-65 Prevalence of Attention-Deficit Hyperactivity Disorder (Adhd) And Its Associated Factors Among Medical Students Of Pakistan, A Cross-Sectional Study**

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An inability to concentrate, impulsivity, and hyperactivity are the hallmarks of attention deficit hyperactivity disorder (ADHD), a neurobehavioral condition that can significantly impair academic performance and overall well-being. **Objectives:** This study aims to determine the prevalence and

associated factors of ADHD among medical students in Pakistan, a population where the disorder may be underdiagnosed. **Methods:** This Cross-sectional study involved 276 medical students from different years of their medical education in Pakistan medical colleges over a period of 3 months. Students who were having exams were excluded. The screening for ADHD symptoms was done using a self-report screening questionnaire developed by the ASRS. We collected and analyzed the data using SPSSv27, a statistical analysis software, to test the relationship between ADHD and other variables. **Results** The prevalence of suspected ADHD among the respondents was 43.84%. However, we found a significant relationship between ADHD and the year of study ( $p=0.009$ ), with the fifth year revealing high rates of ADHD. We also found a correlation between ADHD suspicion rates and academic performance ( $p=0.002$ ) and attendance ( $p=0.007$ ), indicating that students with lower academic achievement and a lower attendance percentage had higher suspicion rates. Moreover, the students with suspected ADHD also indicated an elevated prevalence of disrupted breathing ( $p=0.002$ ), daytime drowsiness ( $p<0.001$ ), abdomen pain ( $p=0.002$ ), and digestive complications ( $p=0.016$ ). **Conclusions:** The findings of this study show that the percentage of medical students diagnosed with ADHD in Pakistan is significantly higher than in other countries. High rates of this disorder, linked to academic and health issues, affect adolescents and young adults. Overall, the study underscores the necessity of a higher level of recognition, timely diagnosis, and adequate intervention for students with DHD to enhance academic achievement and quality of life in medical school.

### **RSRS-66 Glossophobia In Undergraduate Medical Students In**

#### **Pakistan: A Cross-Sectional Study**

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**Introduction:** Glossophobia, or speech anxiety, is the fear of public speaking, a common and often debilitating condition. Studies have previously examined the prevalence and symptoms of glossophobia.

**Objectives:** This study aimed to compare the prevalence of glossophobia between students in government and private medical institutions in Pakistan, assess its impact on academic and clinical

skills, and examine the role of extracurricular activities.

**Methodology:** It's a Cross-sectional conducted in July-September 2024 on medical students from FMU, AFMDC, CMH, and RMU. All Medical students enrolled in government and private medical colleges of Pakistan were included while Non-medical students were excluded. A self-administered questionnaire assessing academic performance, extracurricular activities, and integrating the Personal Report of Public Speaking Anxiety (PRPSA) was implied. Chi-square tests, frequencies, and percentages were applied using IBM SPSS Version 27.

**Results:** Of the 384 participants, 228 were from public institutions and 156 from private. The prevalence of glossophobia in public sector institutions (12.7%) was significantly higher than in private sector institutions (5.1%) ( $p=0.029$ ). A majority (67.2%,  $p<0.01$ ) believed that public speaking anxiety affected their academic performance, while 65.1% ( $p<0.01$ ) reported an impact on clinical performance. Additionally, 86.5% agreed that extracurricular activities improved their public speaking confidence ( $p<0.01$ ).

**Conclusion:** Based on the results, there is a statistically significant difference in the levels of glossophobia among medical students of government and private medical institutions in Pakistan and it impacts their clinical performances, academic performances, and class participation.

**Keywords:** Fear of speaking in public, Fear of public speaking, phobia, social phobia, glossophobia

### **Rsrs-67 A Descriptive Study on The Assessment of Level of Care Practice Of Transtibial Prosthesis Users in Maintaining Stump Health**

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Rawalpindi Medical University

**Introduction:** Prosthesis is an artificial substitute or replacement of a part of the body. Problems that often

occur in the use of prostheses such as redness and damage to the skin or because of the skin that emits excessive sweat causing itching or redness on the skin. In addition, the use of prostheses also affects the effectiveness of the prosthesis itself to improve the quality of amputee's life

**Objectives:** To determine and analyze the level of knowledge and practice of stump care among transtibial

prosthesis users.

**Materials and Methods:** Descriptive Cross-Sectional study was conducted on 50 transtibial prosthesis

users selected through random consecutive sampling technique, presenting in the Orthotics and Prosthetics department of Chal Foundation. Amputees with age of  $\geq 20$ , both males and females and those using transtibial prosthesis for more than a year were included in this study. Exclusion Criteria included patients who were not able to provide the information during data collection such as with cognitive problems, patients who were covid-19 positive and patients who had undergone any recent surgery. Self-designed questionnaire with questions related to knowledge, self-care and practice of stump was used to collect data. The software used for data entry and analysis of this research was SPSS version 21.0. Results: The study found that 28.9% users had poor, 31.1% users had intermediate/enough and 40% users had good/high level of care practice and knowledge regarding their stump health. Conclusion: It is found that most patients are well-informed on stump health education and follow appropriate practices. Patients' quality of life can be improved and potential consequences can be prevented by reducing their lack of knowledge. For these patients, proper guidance during consultation sessions should be provided. Keywords: Stump, Amputation, Residual limb

#### **RSRS-68 Management of Choroid Plexus Carcinoma in a Young Adult: A Case Report and Review of Treatment Strategies**

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Introduction: Choroid plexus carcinoma (CPC) is an extremely rare disease in adults, with an incidence ranging from 0.76% to 4%. It is more commonly observed in children, accounting for 2-5% of all pediatric brain tumors. There are no established guidelines for the optimal management of CPC in adults.

Case Presentation: This case report details a 20-year-old male diagnosed with CPC, who presented with positive CSF cytology and an isolated spinal deposit. His treatment included surgery followed by adjuvant radiation and concurrent chemotherapy.

Keywords: Choroid plexus carcinoma, CSI (cranio-spinal irradiation) GTR (Gross total resection).

#### **RSRS-69 Mechanisms, challenges, and future prospects of the oncolytic virotherapy: a comprehensive review**

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Introduction: Oncolytic viruses (OVs) are a promising cancer-fighting agent that has gained

widespread attention due to recent advances in virology and molecular biology. These viruses selectively infect and multiply inside tumor cells, causing them to rupture and release newly synthesized viruses that stimulate the body's immune system to target the tumor cells.

Methodology: Clinical investigations have shown that OVs can effectively eliminate cancer cells that are resistant to traditional treatments, which is why over 100 clinical trials are currently exploring the possibility of combining them with other therapies for better efficacy.

Results: Although OVs have demonstrated enormous potential, their effectiveness in treating solid tumors is still limited. Therefore, researchers are continuously developing new viral families that can exclusively replicate in tumor cells. Currently, T-VEC is the only FDA-approved oncolytic virus, but with ongoing phase I-III clinical studies, more promising treatments are on the horizon. Furthermore, this review article provides a comprehensive overview of OVs, including their mechanism of action delivery routes, challenges in oncolytic virotherapy, current developments, the efficacy of OVs when combined with other cancer treatments, and prospects for future research.

Keywords: Cancer, Cancer therapy, Clinical trials, Oncolytic viruses, Virotherapy

#### **RSRS-70 Title: Safety and Outcomes with Direct Oral Anticoagulants Versus Vitamin-K Antagonists in Chronic Thromboembolic Pulmonary Hypertension A Systematic Review, Meta-Analysis, and Meta-Regression**

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Rawalpindi Medical University

Introduction: Chronic thromboembolic pulmonary hypertension (CTEPH) is a form of pulmonary hypertension (PH) that is characterized by organized and unresolved thrombi inside the pulmonary vessel, which leads to remodeling of the pulmonary vasculature and an increase in pulmonary artery pressure (PAP). In the pulmonary pressure classification, CTEPH is placed as the fourth category in which the mean PAP  $\geq 20$  mm Hg. The increase in PAP leads

to right ven-tricular overload, which progresses to right heart failure and is often associated with worse outcomes. Apart from surgical intervention, lifelong anticoagulation is the mainstay of CTEPH management. Traditionally, CTEPH is managed with vitamin-K antagonists (VKA); however, direct oral anticoagulants (DOACs) are recently gaining popularity.

**Objective:** This current systematic review and meta-analysis aimed to compare outcomes in DOAC versus VKA use in CTEPH patients.

**Materials and Methods:** An electronic search of the major bibliographic databases was performed to retrieve studies comparing DOACs versus VKAs in CTEPH patients. For dichotomous outcomes, the odds ratio (ORs) with 95% confidence intervals (CI) were pooled using the DerSimonian and Laird random-effects model to generate forest plots. Statistical significance was considered at  $P < 0.05$ .

**Results:** Ten studies were included with 3936 patients (1269 in the DOAC group and 2667 in the VKA group). Treatment with DOAC was associated with no statistically significant difference in the risk of all-cause mortality (OR, 0.78; 95% CI, 0.35–1.71;  $P < 0.53$ ), venous thromboembolism (OR, 1.19; 95% CI, 0.59–2.40;  $P = 0.63$ ), major bleeding (OR, 0.68; 95% CI, 0.38–1.22;  $P = 0.20$ ), and clinically relevant non-major bleeding (OR, 1.22; 95% CI, 0.80–1.86;  $P = 0.37$ ).

**Conclusion:** DOACs are comparable to VKAs in terms of their safety and outcomes profile in CTEPH patients, including risk of all-cause mortality, venous thromboembolism, major bleeding, and clinically relevant non-major bleeding. The current literature on this topic is rather inconsistent, and majorly only observational studies have been conducted.

### **RSRS-71 Mental Health and Quality of Life in Kidney Donors: A Single-Center Retrospective Study**

Muhammad Junaid Tahir, Zoha Aftab  
Rawalpindi Medical University

**Introduction:** Kidney transplantation significantly enhances the quality of life for recipients, restoring their health and independence. However, kidney donors may face physical and psychological challenges post-donation. In resource-limited countries like Pakistan, donors encounter additional cultural and social pressures, which may impact their well-being. Despite the increasing number of kidney transplants, data on mental health and quality of life of donors in

Pakistan remains limited.

**Objective:** This study aimed to evaluate mental health and quality of life of kidney donors after nephrectomy, focusing on identifying factors that negatively affect their psychological well-being and life satisfaction.

**Materials and Methods:** A retrospective cross-sectional study was conducted between August and December 2023 at a

single center, involving 100 kidney donors. Eligibility criteria included a minimum of three months post-donation, with all participants aged over 18. Donors with a prior history of depression were excluded. The Beck Depression Inventory and Satisfaction with Life Scale were utilized to assess mental health and quality of life through interviews. Data was analyzed using SPSS-27.

**Results:** Of the 100 participants, 70% were female, and 30% were male. Mental health disturbances were reported by 9% of donors, while 8% expressed dissatisfaction with life. No significant associations were found between mental health or life satisfaction and demographic factors such as age, marital status, education, or time since donation ( $p > 0.05$ ). However, the status of the graft in the recipient significantly influenced donor mental health ( $p < 0.05$ ).

**Conclusion:** The findings indicate that kidney donation has no significant impact on donors' mental health or quality of life, aside from the influence of graft status. These results underscore the safety and reliability of kidney donation for donors, with minimal psychological impact.

**Keywords:** Kidney Donors, Mental Health, Quality of Life

### **RSRS-72 Beyond the Norm; A Rare Presentation of Dengue Fever Resulting in Combined Rhabdomyolysis And TMA Induced AKI; A Case Report**

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Rawalpindi Medical University

**Introduction:** Dengue fever, a globally prevalent mosquito-borne infection, can lead to complications like

acute kidney injury (AKI) via various mechanisms. This case report describes an extremely rare presentation of AKI due to concurrent thrombotic microangiopathy (TMA) and rhabdomyolysis in a dengue patient, an association not previously documented.

**Case Presentation:** A healthy young male presented with fever, oliguria, and elevated renal function markers following a dengue diagnosis at a primary care hospital. Diagnostic workup revealed raised levels of CPK at 7211 U/L, LDH levels were elevated to 5206 U/L. The peripheral blood film showed schistocytes at 3.4%. Urinalysis revealed dark brown urine, proteinuria (+++), and microscopic hematuria (6-8 RBCs). Urea and creatinine levels were 229 mg/dL and 15.0 mg/d respectively. Further workup confirmed urinary myoglobinuria, a negative Coombs test, and an elevated reticulocyte count at

5.4% Autoimmune and complement studies were negative. A kidney biopsy revealed picture of both pigmented cast nephropathy and TMA, hence confirming the dual pathology. Management included IV hydration, hemodialysis, and plasmapheresis. However, plasmapheresis was stopped due to sepsis after the first session, and the patient was managed conservatively with dialysis and supportive care thereafter. Remarkably, he recovered fully within one month, regaining normal RFTs and urinary output.

**Conclusion:** This case highlights a novel presentation of AKI in dengue fever due to combined TMA and rhabdomyolysis. Previously, these conditions were only reported in isolation. Early recognition of such complex pathologies and tailored interventions are critical for optimal outcomes. Despite the serious presentation, vigilant management ensured the patient's full recovery. This underscores the importance of thorough evaluation and multidisciplinary care in atypical AKI cases linked to dengue fever.

**Keywords:** Dengue Fever, Acute Kidney Injury, Rhabdomyolysis, Thrombotic Microangiopathy

### **RSRS-73 Optimizing Outcomes: Advancing Dialysis Quality Standards in a Resource-Limited Country**

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Rawalpindi Medical University

**Introduction:** Despite technological advances, hemodialysis patients continue to experience significant morbidity and mortality. Studies have linked inadequate dialysis, anemia, hypoalbuminemia, and suboptimal vascular access to increased mortality and hospitalization risks. However, in economically challenged countries like Pakistan, meeting these standards is difficult, with anemia prevalence in dialysis patients as high as 57%.

**Aims:** This quality improvement program aimed to optimize dialysis outcomes by improving hemoglobin and albumin levels. Target thresholds were hemoglobin  $\geq 10$  g/dl and albumin  $\geq 3.5$  g/dl, ultimately improving patients' quality of life.

**Materials and Methods:** A Plan-Do-Study-Act (PDSA) approach was employed from August 2023 to February 2024, enrolling 70 patients across three cycles. Interventions included dietary education, iron supplementation, and infection management.

**Results:**

PDSA Cycle 1: Initial analysis revealed that 50% of patients had hemoglobin  $\geq 10$  g/dl, and 70% had

albumin  $\geq 3.5$  g/dl. Personalized diet plans, iron level corrections, and regular monitoring were implemented. PDSA Cycle 2: Iron deficiency anemia was addressed in 15 patients, raising hemoglobin levels to  $\geq 10$  g/dl in 61% of patients, while 83% achieved albumin  $\geq 3.5$  g/dl. Additional steps targeted chronic infections and improved dietary compliance. PDSA Cycle 3: Five patients received treatment for chronic infections, enhancing their erythropoietin response. After six months, 71.7% of patients had hemoglobin  $\geq 10$  g/dl, and 93.3% reached albumin  $\geq 3.5$  g/dl. Subjectively, 83% reported improved quality of life, up from 60%.

**Conclusion:** Dietary planning and education significantly enhanced dialysis outcomes in a resource-limited setting. Hemoglobin levels improved by 71.7% over six months, while 93.3% of patients achieved optimal albumin levels. Moreover, 83% of patients experienced a marked improvement in quality of life, underscoring the effectiveness of targeted interventions in improving care quality.

### **RSRS-74 Title: The Promise And Impediments Of Teleneurosurgery In Low And Middle Income Countries (Lmics): A Scoping Review**

Amna Idrees, Minahil Iman Janjua

Rawalpindi Medical University

**Introduction:** Telemedicine refers to the use of telecommunications and digital technologies to provide healthcare services remotely. In telemedicine, teleneurosurgery specifically focuses on

the delivery of neurosurgical care through information and communication technologies.

It facilitates vital neurosurgical services like emergency stroke evaluation, postoperative monitoring, and outpatient consultations without requiring the patient to travel long distances.

**Objectives:** Identifying challenges of implementing teleneurosurgery in Pakistan and recognizing the limitations of teleneurosurgery in Pakistan, particularly being a low- and middle-income country (LMIC)

**Inclusion criteria:** Studies investigating adoption of telemedicine/teleneurosurgery in Pakistan and other LMICs in English language, from 2013-2023

**Exclusion:** Studies focused only on policy recommendations without investigating challenges/limitations, in high income countries, or not in English.

**Search strategy:**

Search databases used were PubMed, Google Scholar and Search domains being telemedicine, telehealth,

tele neurosurgery, Pakistan, LMIC. Manual search was also made.

**Results:** Study results show that challenges faced by tele neurosurgery include bandwidth issues, incompatibility with equipment, training and skill underdevelopment and lack of inter-organizational communication. Tele neurosurgery also presented with some limitations; including inadequate access to healthcare facilities, need of repeated monitoring to check the efficacy of implemented systems, and ethical issues which may present owing to the sensitive nature of the field. However, through advancements in emerging technology and neurosurgery, adequate training facilities for taskforce, and interdisciplinary research and collaboration, many opportunities for healthcare improvement may also present.

**Discussion:** Tele neurosurgery offers a promising approach to enhancing access to specialized neurosurgical care, especially in remote or underserved areas. Technological and skilled workforce inadequacy serves as significant hurdles in its implementation, however effective cooperation between medicine and technology stakeholders, rigorous evaluation techniques, and training programs can help in its improved effects on overall healthcare.

**Keywords:** (and related terms such as telemedicine, telehealth) Pakistan (Low- and Middle-Income Country)

### **RSRS-75 Anxiety Disorders and Nicotine Use Among Medical Students A Study at Rawalpindi Medical University**

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Rawalpindi Medical University

**Introduction:** Anxiety disorders affect many people and have serious negative effects. Multiple studies have shown that rates of smoking and nicotine practices are increased in individuals with anxiety disorders.

**Objectives:** The objectives of our study are to evaluate the prevalence of nicotine use, anxiety levels, anxiety disorders, and the relationship between anxiety disorders and nicotine use among medical students at Rawalpindi Medical University.

**Materials and Methods:** A descriptive cross-sectional study involved 232 participants. Participants were selected through a non-probability convenient sampling technique and data was collected through a printed self-administered questionnaire and Hamilton, K10, DAAS scales. The responses were recorded, and data was analyzed.

**Results:** Of the 232 participants, 43 (29.1%) of males reported nicotine use, while no female was involved

in nicotine practices. Nicotine consumption was not substantially correlated with age.

Compared to non-users, who reported 2.1% and 28.6% of the anxiety, nicotine users reported higher levels of anxiety, with 65.5% reporting moderate anxiety and 9.3% reporting severe anxiety. Anxiety disorders like fears, insomnia, intellectual difficulties, and depression were significantly associated with nicotine use. Other anxiety disorders showed no significant association.

**Conclusion:** The study identifies a significant association between nicotine practices and anxiety levels as well as various anxiety disorders, including fears, insomnia, intellectual issues, and depressed mood.

**Keywords:** Anxiety, nicotine, disorders, health, students, smoking.

### **RSRS-76 Role of Artificial Intelligence in Improving Quality Of Life In Heart Failure Patients**

Muhammad Ibrahim  
Rawalpindi Medical University

**Introduction:** Heart failure (HF) is a prevalent global health concern, impacting millions and contributing to high morbidity, mortality, and healthcare costs. The management of HF involves complex strategies, and traditional approaches often fall short in addressing the escalating burden of hospital readmissions and deteriorating patient quality of life. Artificial intelligence (AI) has emerged as a promising tool for enhancing diagnostic accuracy, personalizing treatment plans, and improving patient outcomes in HF care.

**Objective:** This narrative review aims to explore how AI technologies can improve the quality of life (QoL) in patients suffering from HF by enhancing diagnostics, risk prediction, and patient self-management.

**Methods:** A comprehensive review of literature was conducted focusing on AI applications in HF diagnosis, management, and patient education. Key studies were selected to highlight the role of AI in improving clinical outcomes and reducing hospital readmissions.

**Results:** AI-driven tools have demonstrated high accuracy in early detection of HF using neural networks and deep learning algorithms. Personalized digital health applications, such as avatar-based self-management programs, have shown significant improvements in QoL and reduced rehospitalization rates. Moreover, AI's integration into cardiac imaging, remote monitoring, and risk prediction has revolutionized HF management by enhancing early intervention and optimizing therapeutic strategies.

Conclusion: AI holds substantial potential in transforming HF care by improving diagnostic precision, patient engagement, and personalized treatment plans. While challenges like cost and ethical considerations exist, AI's evolving role in HF management promises significant improvements in QoL for HF patients.

Keywords: Heart failure, artificial intelligence, quality of life, diagnosis, risk prediction, patient self-management.

**RSRS-77 Title of study: Safety and efficacy of desmopressin (DDAVP) in preventing hematoma expansion in intracranial hemorrhage associated with antiplatelet drugs use: A systematic review and meta-analysis**

Tameem Bin Nasir

Rawalpindi Medical University

Introduction: One of the most serious complications associated with antiplatelet agents is antiplatelet-associated intracranial hemorrhage (AA-ICH). Desmopressin is a synthetic antidiuretic hormone (ADH) analog. It has been linked to improving patient outcomes in antiplatelet-induced intracranial hemorrhage. The secondary outcomes included the incidence of thrombotic complications and neurological outcomes.

Objective: To evaluate the safety, efficacy, and outcomes of desmopressin (DDAVP) in patients with antiplatelet-associated intracranial hemorrhage (AA-ICH) by systematically analyzing the existing literature, focusing on hematoma expansion, thrombotic complications, and neurological outcomes.

Methods: A systematic search was conducted on three databases (PubMed, Cochrane, and ClinicalTrials.gov) to find eligible literature that compares desmopressin (DDAVP) versus controls in patients with AA-ICH. The Mantel-Haenszel statistic was used to determine an overall effect estimate for each outcome by calculating the risk ratios and 95% confidence intervals (CI). Heterogeneity was measured using the I<sup>2</sup> test. The risk of bias in studies was calculated using the New Castle Ottawa Scale.

Results: Five studies were included in the analysis with a total of 598 patients. DDAVP was associated with a nonsignificant decrease in the risk of hematoma expansion (RR = .8, 95% CI, .51–1.24;  $p = .31$ ,  $I^2 = 44\%$ ). It was also associated with a nonsignificant decrease in the risk of thrombotic events (RR, .83; 95% CI, .25–2.76;  $p = .76$ ,  $I^2 = 30\%$ ). However, patients in the DDAVP group demonstrated a significant increase in the risk of poor neurological outcomes (RR, 1.31; 95% CI, 1.07–1.61;  $p = .01$ ,  $I^2 = 0\%$ ). The risk of bias assessment showed a moderate to low level of risk.

Conclusion: DDAVP was associated with a nonsignificant decrease in hematoma expansion and thrombotic events. However, it was also associated with a significantly poor neurological outcome in the patients. Thus, until more robust clinical trials are conducted, the use of DDAVP should be considered on a case-to-case basis

Keywords: desmopressin, hematoma expansion, intracerebral hemorrhage, neurocritical care

**RSRS-78 Title of study: The Effect of Dexamethasone on Postoperative Pain Management in Patients Undergoing Total Knee Arthroplasty: A Randomized Controlled Trial**

Tameem Bin Nasir

Rawalpindi Medical University

Objective: The objective of this study was to evaluate the effectiveness of dexamethasone in treating postoperative pain in patients undergoing total knee arthroplasty (TKA).

Methodology: This randomized controlled trial (RCT) was completed over the course of two years (September 7, 2015, to September 6, 2017). In the course of their treatment for osteoarthritis of the knee, all of the patients who had primary unilateral total knee replacement (TKR) participated in the research. Under spinal anesthesia, each patient had medial para-patellar approach medial orthopedic surgery. Patients were assigned to group A or group B based on a random selection. Each of the groups consisted of 79 individuals. Group A was given dexamethasone through intravenous administration at a dose of 0.1 mg/kg before the operation. During the subsequent period of 24 hours, no more treatment was administered (control group). On a predesigned questionnaire, postoperative pain was measured using the visual analog scale (VAS) for pain. Functional results, duration of hospital stay, and complications were all recorded on the questionnaire (VAS). Analysis was carried out using the Statistical Package for the Social Sciences (SPSS) version 23 (IBM SPSS Statistics, Armonk, NY, USA).

Results: There were 158 patients in total in the study, out of which 98 were females and 60 were males in the group. The patients' average body mass index (BMI) was  $26.94 \pm 3.14$  kg/m<sup>2</sup>. Patients in group A had lower postoperative analgesic and antiemetic needs and higher VAS scores and spent less time in the hospital than patients in group B. There were no postoperative problems in either group.

Conclusion: In patients undergoing TKA, the use of dexamethasone during and after surgery decreases pain, the need for analgesics, and the duration of hospital stay.

Categories: Pain Management, Orthopedics, Osteopathic Medicine

Keywords: dexamethasone, total knee arthroplasty (TKA), total knee replacement (TKR), pain management, visual analog pain scale

### **RSRS-79 Safety and Efficacy of Mirikizumab in Achieving Clinical and Endoscopic Remission in Ulcerative Colitis - A Systematic Review and Meta-analysis**

Anshahrah Riaz Memon  
Ziauddin Medical College

Introduction: Effective management of ulcerative colitis (UC) remains challenging, with clinical and endoscopic remission vital for symptom control and improved prognosis.

Mirikizumab, a humanized monoclonal antibody targeting the p19 subunit of interleukin-23, is the first FDA-approved agent of its class for moderate-to-severe UC in patients unresponsive to conventional or biologic treatments.

Objectives: This meta-analysis evaluates mirikizumab's safety and efficacy in inducing and maintaining clinical and endoscopic remission in UC patients.

Materials and methods: We comprehensively searched PubMed, Scopus, Web of Science, and Cochrane CENTRAL databases from their inception to October 2024 using a predefined search strategy. Key outcomes of interest were clinical and endoscopic remission rates during the treatment's induction and maintenance phases. 824 articles were screened to include 3 randomized controlled trials that fulfilled our inclusion criteria. Odds ratios with 95% confidence intervals were calculated using a random-effects model. Sensitivity and statistical analyses were performed on Review Manager version 5.4.

Results: During the induction phase, mirikizumab showed over twice the likelihood of achieving clinical (OR 2.22, 95% CI 1.58 to 3.13,  $p < 0.00001$ ) and endoscopic remission (OR 2.12, 95% CI 1.56 to 2.89,  $p < 0.00001$ ) compared to placebo. It continued to show notable effectiveness in the maintenance phase, demonstrating three times greater efficacy than placebo in sustaining clinical and endoscopic remission of UC (OR 3.17, 95% CI 2.14 to 4.68,  $p < 0.00001$ , OR 3.42, 95% CI 2.34 to 4.99,  $p < 0.00001$ ,  $I^2 = 0\%$ , respectively) through 52 weeks of therapy.

Mirikizumab also showed a favorable safety profile with overall adverse events being numerically higher for placebo, except for hepatic enzyme elevations.

Conclusion: This is the first meta-analysis consolidating mirikizumab's role in offering strong

therapeutic benefits for patients with moderate-to-severe UC.

Keywords: Mirikizumab, Ulcerative Colitis, Interleukin-23.

### **RSRS-80 Ischemic Stroke Incidence in Intermediate or High-Risk Patients Undergoing Transcatheter Aortic Valve Replacement Versus Surgical Aortic Valve Replacement: A Comparative Systematic Review and Meta-analysis**

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Background and Purpose: This comparative systematic review and meta-analysis investigated the incidence of ischemic stroke in intermediate-to-high-risk patients undergoing transcatheter aortic valve replacement versus surgical aortic valve replacement.

Methods: We conducted a systematic review and meta-analysis following the PRISMA guidelines, searching PubMed, Google Scholar, Embase, Web of Science, and Cochrane CENTRAL databases from their inception to December 2023. The evaluated outcomes were primarily incidence of stroke and transient ischemic attack (TIA), along with other secondary safety end-points at 30 days and 1 year post-procedure. Odds ratios (ORs) with 95% confidence intervals (CIs) were utilized for each study, employing a random-effects model for data synthesis irrespective of heterogeneity. Statistical heterogeneity was assessed using  $I^2$  statistics. All statistical analyses were conducted using Review Manager.

Results: We screened 8028 articles and included 8 studies consisting of 5 randomized controlled trials and 3 observational studies. The studies examining 30-day and 1-year stroke incidence found no significant difference between TAVR and SAVR patients (OR 0.83, 95% CI 0.59 to 1.17,  $p=0.30$ , OR 0.92, 95% CI 0.64 to 1.33,  $p=0.67$ , respectively). Both TAVR and SAVR also had a comparable risk of having a transient ischemic attack within 30 days (OR 0.93, 95% CI 0.24 to 3.63,  $p=0.92$ ,  $I^2 = 52\%$ ) and 1 year (OR 1.15, 95% CI 0.72 to 1.82,  $p=0.56$ ,  $I^2 = 0\%$ ) following the procedure. Regarding safety endpoints, TAVR had lower rates of all-cause mortality and acute kidney injury at 1 year post-procedure, but a higher incidence of major vascular complications at both 30 days and 1 year compared with SAVR.

Conclusion: The results suggest that TAVR and SAVR have comparable outcomes for both TIA

and stroke incidence at 30 days and 1 year post-procedure, but display varying safety profiles in intermediate-to-high surgical risk patients.

Keywords: Aortic valve, Ischemic Stroke, Transient ischemic attack, Valve replacement.

### **RSRS-81 The Safety and Efficacy of Monoclonal Antibody Therapy in the treatment of Alzheimer's disease: A Systematic Review and Meta-Analysis**

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Objectives: This study systematically assessed the safety and efficacy of monoclonal antibody therapy for Alzheimer disease through a meta-analysis, providing insights for clinical and regulatory decisions.

Introduction: For the past three decades, the amyloid cascade hypothesis has guided therapeutic strategies aimed at mitigating amyloid pathology in Alzheimer's disease.

Methodology: We systematically searched PubMed, Cochrane, and Clinicaltrials.gov databases for randomized controlled trials examining monoclonal antibody safety and efficacy in Alzheimers After rigorous screening, eight trials were included for analysis. The primary outcome measure was Clinical Dementia Rating Scale-Sum of Boxes (CDR-SB), supplemented by Alzheimer's Disease Assessment Scale-Cognitive Subscale 13 (ADAS-Cog13) and Mini-Mental State Examination (MMSE).

Results: The included trials encompassed 5910 patients: 2864 in the treatment group 3046 in the placebo group. We identified a significant advantage of monoclonal antibody therapy for both CDR-SB: WMD: -0.43; 95% CI: -0.59, -0.28;  $P < 0.00001$ . Data pooled from eight studies. For ADAS-Cog 13, data was pooled from four studies: WMD: -1.14; 95% CI: -1.66, -0.62;  $p < 0.00001$ . No significant heterogeneity was noted ( $I^2 = 0\%$ ). Adverse events, including cerebral edema, effusion, and hemorrhage, were Reported. Notably, Donanemab and Lecanemab were linked to brain atrophy, with one study reporting three deaths linked to Donanemab.

Conclusion: This meta-analysis underscores a statistically significant improvement in CDR-SB for monoclonal antibody therapy compared to placebo, but acknowledges associated adverse events, including accelerated brain atrophy and three deaths related to Donanemab treatment.

With expedited FDA approval for Alzheimer's monoclonal antibodies on the horizon, a comprehensive evaluation of safety and efficacy is crucial.

Keywords: Alzheimers Disease, Monoclonal Antibody Treatment

### **RSRS-82 Efficacy of Amitriptyline in Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis**

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Introduction: Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder with no definitive treatment. Amitriptyline is prescribed off-label for IBS, but its efficacy remains unclear.

Objectives: This meta-analysis evaluates the effectiveness and safety of amitriptyline compared to placebo in managing IBS.

Materials and Methods: A systematic review was conducted up to November 10, 2023, using MEDLINE, Embase, Cochrane Library, and Web of Science. Randomized controlled trials comparing amitriptyline to placebo in IBS patients were included. Quality was assessed using the revised Cochrane risk-of-bias tool. Data was analyzed using a bivariate random-effects model with heterogeneity assessed using  $I^2$  statistics. Statistical analysis was performed using R Software 4.2.3.

Results: Seven trials comprising 796 patients (61% female) were analyzed. Amitriptyline significantly improved treatment response (OR 5.30; 95% CI 2.47 to 11.39;  $p < 0.001$ ), reduced IBS symptoms severity scores (MD -50.72; 95% CI -94.23 to -7.20;  $p = 0.02$ ), and alleviated diarrhea (OR 10.55; 95% CI 2.90 to 38.41;  $p < 0.001$ ). No significant differences in adverse effects were found between groups. Three trials had a low risk of bias, while two had high risk and two had moderate concerns due to missing data and randomization issues.

Conclusion: Amitriptyline demonstrates efficacy in managing IBS symptoms, particularly diarrhea, and is well-tolerated compared to placebo. These findings support its role in IBS management, especially in the diarrhea-predominant subtype. Further research should explore dose-dependent effects to guide tailored treatment strategies.

### **RSRS-83 Title: AI-Based System for Optimizing Radiology Workflows: A Quality Improvement Initiative**

Muhammad Ali Hasaan

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Introduction: Radiology workflows are essential for timely and accurate patient care. However, inefficiencies such as suboptimal imaging protocols, delays in triaging, inconsistent image quality, and excessive radiation exposure compromise outcomes. This study proposes a theoretical AI-based system to enhance radiology practices, focusing on

patient safety, workflow optimization, and adherence to imaging standards. It addresses Pakistan's unique challenges, where most diagnostic centers lack expertise and standardized protocols.

**Objectives:** Evaluating current radiology practices against international standards. Proposing an AI-based system for optimizing imaging protocols and prioritizing emergency cases and assessing potential benefits in reducing radiation exposure and improving image quality.

**Material and Methods:** The proposed system integrates patient-specific data (e.g., age, weight, clinical history) with imaging parameters using machine learning algorithms. Image quality is assessed through Convolutional Neural Networks (CNNs), focusing on field of view and exposure parameters. Emergency case prioritization uses Natural Language Processing (NLP) to analyze urgency from clinical notes. The AI provides real-time feedback to radiographers and ensures protocol adherence. Development will utilize Python, TensorFlow, and machine learning techniques.

Implementation involves integrating the system into PACS/RIS using dedicated workstations. This AI is designed to assist—not replace—radiology staff.

**Results:** While no simulation has been conducted yet, theoretical analysis suggests the AI system could optimize imaging protocols, prioritize emergency cases, enhance image quality, and reduce radiation risks.

**Conclusion:** This AI-based system offers a promising theoretical approach to improving radiology workflows, aligning with quality enhancement programs and NHS audit standards. It supports radiology teams by addressing inefficiencies, ensuring adherence to safety protocols, and promoting diagnostic accuracy.

**Keywords:** AI in radiology, quality improvement, imaging protocols, patient safety, image quality, workflow optimization

### **RSRS-84 Title: Virtual Reality and Augmented Reality in Radiology Education: A New era of immersive learning**

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**Introduction:**

Radiology plays a crucial role in modern medicine, requiring continuous education and skill development. Traditional training methods, though effective, lack the immersive, interactive components essential for optimal learning. Virtual Reality (VR) and Augmented Reality (AR), technologies once confined to entertainment, are now transforming medical education, particularly in radiology. This paper explores the application, benefits, and

challenges of integrating VR and AR into radiology education, with a focus on implementation strategies in Pakistan.

**Objectives:** The primary goals of integrating VR and AR into radiology education are to improve the visualization and navigation of medical images, enhance procedural training, and support diagnostic accuracy. These technologies enable students to learn 3D image examination and procedural skills, helping radiologists improve knowledge and disease awareness. Additionally, AR can assist in pre-surgical planning by creating 3D models of patient anatomy.

**How to Implement VR and AR in Pakistan:** To implement VR and AR in Pakistan, strategies should include: 1. Educational Initiatives: Introducing AR/VR concepts in curricula and hosting workshops for skill development. 2. Industry Collaboration: Partnering with tech companies to provide expertise and mentorship. 3. Government Support: Offering incentives for AR/VR startups and improving infrastructure. 4. Content Creation:

Developing localized content to cater to local needs and cultures. 5. Public Awareness: Media campaigns and demonstration centers to increase public understanding and acceptance. 6. Healthcare & Education Applications: Introducing VR for medical training and interactive learning in schools.

**Methods:** A literature search was conducted using PubMed and Google Scholar, focusing on studies from 2015 to 2023. Keywords included "VR," "AR," "radiology," "medical education," and "simulation" to identify relevant research on the application of VR and AR in radiology.

**Results:** Studies show that VR and AR significantly enhance radiology education. Immersive 3D anatomical models and virtual dissections improve spatial understanding. VR simulations of procedures reduce the risk of complications, while AR aids in diagnostic and procedural accuracy.

**Conclusion:** VR and AR are poised to revolutionize radiology education by offering immersive learning experiences that improve knowledge and skill acquisition. Despite challenges such as cost and technical limitations, continued advancements in these technologies will make them integral to the radiology field.

**Keywords:** Virtual Reality, Augmented Reality, Radiology, Medical Education, Simulation, Educational Technology.

### **RSRS-109 Going The Extra Mile Along With Lady Health Workers Effectiveness Of Community Outreach Program And Its Associated Factors, Among Residents Of Rural Areas Of Punjab**

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According to the Pakistan maternal nutrition survey 2022-27, Maternal nutrition disparities are linked to approximately 177,000 deaths annually in Pakistan, particularly affecting women residing in marginalized and vulnerable communities. This picture of maternal health has serious implications for the health and productivity of future generations. The IRMNCH & NP was launched in July 2013, with a goal to improve maternal, newborn, and child health of the population, particularly among its poor, marginalized, and disadvantaged segments. Under this program preventive services are being provided through LHWs which include, provision of Iron, folic acid, advise on early initiation of breastfeeding, exclusive breastfeeding, and infant & young child feeding (IYCF) practices. Interpersonal relationships and cultural sensitivity of LHWs establishes rapport and trust with the audience which ultimately enhances the effectiveness of their intervention. The health houses i.e. "Sehat ghars" situated at the interface of community and health system are envisioned as "houses of change" to improve the health status of the country over and above. Objectives: To assess the effectiveness of community outreach program among residents of rural areas of Punjab. To determine the associated factors of effectiveness of community outreach program. Materials and Methods: This is a pre/post design, cross sectional descriptive study conducted over a period of 6 months, at Union council Bhirri Kalan, with a sample size of 450. Data was collected through random sampling from women of UC #138 who were married with at least one child and were willing to participate. The data collection tool was a questionnaire comprising of 61 questions, divided into 4 domains i.e. folic acid, iron, breastfeeding and weaning. Data was collected as a pretest survey before the start of the educational campaign and a posttest survey 1 month after the campaign. Results: Statistically significant improvement in knowledge and awareness with respect to each domain i.e. folic acid, iron, breastfeeding and weaning was seen separately along with a cumulative increase in sufficient knowledge from pretest 3(0.7%) to posttest 297(66%) for all domains. Statistically significant ( $p < 0.001$ ) improvement was observed in correct consumption of Folic acid and iron supplementation. Even though no statistically significant association was found between improvement of knowledge and sociodemographic factors i.e. age ( $p = 4.747$ ), number of children ( $p = 0.744$ ), participants education ( $p = 4.221$ ) and family system ( $p = 5.797$ ), 0 frequency and percentages depict a uniform improvement of knowledge in all the participants of different sociodemographic groups. A similar lack of

statistically significant improvements in the practices of participants in all domains was observed.

Conclusions: The evidence-based success of the outreach program underscores the crucial role of lady health workers in bridging sociocultural gaps and effectively connecting the remotest populations to the most essential primary healthcare services. The program led to a marked improvement in awareness among all participants, regardless of their diverse backgrounds. While knowledge has significantly improved, there's still a need to further align their practices with the information they receive.

### **RSRS-90 Efficacy of Statins in Vitiligo Patients: A Systematic Review and Meta-Analysis**

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Vitiligo is a chronic dermatopathy exhibiting evident skin depigmentation due to the destruction of functional melanocytes, with its treatment being a formidable challenge. This meta-analysis aims to evaluate the efficacy of statins for vitiligo.

EVIDENCE ACQUISITION: We searched PubMed, Scopus, Google Scholar, and Cochrane Library from inception to 18 August 2024 focusing on studies that compared statins against various controls. This study was carried out under PRISMA guidelines for systematic review and meta-analysis. The data was processed using RevMan software (version 5.4.1) and Comprehensive Meta-Analysis Software Fernand Lamont. Risk ratios with 95% clearance and mean difference with 95% clearance were calculated.

Heterogeneity was tested using  $I^2$  and a random-effects model was used for statistical calculations. Our outcome of interest was the VASI score.

EVIDENCE SYNTHESIS: We analyzed five randomized controlled trials with 177 patients and found no significant difference in the VASI score (RR: 0.2, 95%CI: -0.40, 1;  $P = 0.51$ ) and the VASI parameters (poor, moderate, and good). Meta-regression indicated that age was not a significant covariate, while gender showed a significant association with VASI improvement.

**CONCLUSIONS:** Statins provide no significant long-term therapeutic benefit in vitiligo patients despite their immunomodulatory effects.

### **RSRS-113 Factors Contributing to the Nicotine Pouches Addiction**

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Watim Medical College

Nicotine pouches, like Velo, are modern, smokeless, and spitless alternatives to traditional tobacco, making them less noticeable and perceived as safer. Launched on December 20, 2019, in Karachi, Pakistan, they are particularly popular among young generations and women who prefer discreet nicotine consumption. Objectives: To Determine the factors that contribute towards the Nicotine Pouches addiction. Data Analysis: Statistical Software: Data was entered and analysed using SPSS version 29, or a similar updated version appropriate for analysis needs. Descriptive Statistics:

Descriptive statistics such as mean values and percentages were calculated to summarize the data. Chi-Square Test: The Chi-square test was used to examine the association between categorical variables, such as differences between groups or responses. Our research found that the main motivations for using nicotine pouches were the desire to quit smoking (34.1%) and Stress Relief (29.4%). These findings provide essential insights into why individuals in our study population are turning to nicotine pouches. Our study has significantly contributed to understanding the motivations behind nicotine pouch use among youth, primarily driven by perceived cessation benefits and curiosity. The findings highlight the urgent need for comprehensive public health strategies that encompass educational campaigns and stringent regulations to correct widespread misconceptions about the safety and health impacts of nicotine pouches. This approach is essential for preventing the initiation and encouraging cessation among potential users, ensuring a well-informed public and healthier communities.

### **RSRS-68 Texture and color enhancement imaging versus white light imaging for the detection of colorectal adenomas: a systematic review and meta-analysis**

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Texture and color enhancement imaging (TXI) is a novel optical technology designed to improve visibility during endoscopy by highlighting subtle differences in morphology and color. This systematic review and meta-analysis aimed to determine whether TXI, compared to conventional white light

imaging (WLI), can improve important colonoscopy quality indicators, specifically the adenoma detection rate (ADR) and adenomas per colonoscopy (APC). Methods: We searched PubMed, EMBASE, and the Cochrane Central for studies comparing TXI to WLI in patients undergoing colonoscopy for any indication. Risk ratios (RR) and mean differences (MD) were computed using a random-effects model. We included 1541 patients from 3 studies, of which 2 were randomized controlled trials (RCTs). TXI was used in 775 (50.3%) patients. The indications for colonoscopy varied, including positive fecal immunochemical test (FIT), surveillance, and diagnostic workup for abdominal symptoms. In the pooled data, TXI significantly increased both ADR (57.8% versus 43.6%; RR 1.32 [95% CI, 1.20–1.46];  $p < 0.001$ ;  $I^2 = 0\%$ ) and APC (MD 0.50 [95% CI, 0.37–0.64];  $p < 0.001$ ;  $I^2 = 0\%$ ), compared to WLI. Further-more, TXI was more effective at detecting nonpolypoid/flat adenomas, proximal/right-sided adenomas, and adenomas  $\geq 10$  mm in size. Colonoscopies with TXI had shorter withdrawal times. Our meta-analysis demonstrates that TXI significantly improves the detection of colorectal adenomas in patients undergoing colonoscopy for various indications. TXI has the potential to improve the overall quality of colonoscopy and contribute to colorectal cancer prevention.

### **RSRS-71 Mental Health and Quality of Life in Kidney Donors: A Single-Center Retrospective Study**

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Rawalpindi Medical University

Kidney transplantation significantly enhances the quality of life for recipients, restoring their health and independence. However, kidney donors may face physical and psychological challenges post-donation. In resource-limited countries like Pakistan, donors encounter additional cultural and social pressures, which may impact their well-being. Despite the increasing number of kidney transplants, data on mental health and quality of life of donors in Pakistan remains limited. This study aimed to evaluate mental health and quality of life of kidney donors after nephrectomy, focusing on identifying factors that negatively affect their psychological well-being and life satisfaction. A retrospective cross-sectional study was conducted between August and December 2023 at a single center, involving 100 kidney donors. Eligibility criteria included a minimum of three months post-donation, with all participants aged over 18. Donors with a prior history of depression were excluded. The Beck Depression Inventory and Satisfaction with Life Scale were utilized to assess mental health and quality of life through interviews.

Data was analyzed using SPSS-27. Of the 100 participants, 70% were female, and 30% were male. Mental health disturbances were reported by 9% of donors, while 8% expressed dissatisfaction with life. No significant associations were found between mental health or life satisfaction and demographic factors such as age, marital status, education, or time since donation ( $p > 0.05$ ). However, the status of the graft in the recipient significantly influenced donor mental health ( $p < 0.05$ ). The findings indicate that kidney donation has no significant impact on donors' mental health or quality of life, aside from the influence of graft status. These results underscore the safety and reliability of kidney donation for donors, with minimal psychological impact.

### **RSRS-72 Beyond the norm; A rare presentation of dengue fever resulting in combined Rhabdomyolysis and TMA induced AKI; a case report**

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Stroke is a major global health issue causing significant mortality and disability due to obstructed blood flow to the brain. Effective treatments require timely intervention, and the rise of teleneurology and artificial intelligence (AI) offers new avenues for improving stroke diagnosis and management. AI, through machine learning (ML) and deep learning (DL), can enhance precision in medical imaging and support rapid, accurate decision-making in stroke care. **Materials and Methods:** A retrospective study was conducted on stroke patients at RIC Emergency Department from July to November 2023. Inclusion criteria focused on patients with activated stroke codes who underwent CTA scans analyzed by AI software, with findings confirmed by neuro-radiologists. Data included patient demographics and ASPECT scores, assessing stroke severity based on CT scans. The study involved 20 patients (14 males, 6 females, average age 43.11 years). The AI system showed high accuracy in detecting intracranial hemorrhage (100% sensitivity, 86.7% specificity) and large vessel occlusion (100% sensitivity, 88.2% specificity). For ASPECT scores, AI was reliable in extreme score categories but varied in intermediate scores, highlighting the need for radiologist confirmation. AI technology holds significant potential for transforming stroke diagnosis and treatment, especially in rapid decision-making and supporting non-expert medical staff. While AI cannot yet replace experienced radiologists, ongoing advancements may soon enable it to perform at comparable levels, enhancing overall stroke care.

### **RSRS-120 Association of Blood Clotting Time with Gender and Blood Group among Young Healthy Individuals**

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The blood clotting time is a surrogate marker for indicating the efficiency of blood coagulation pathways. Clotting time is mainly affected by pathological and dietary disorders like hemophilia, von Willebrand disease and vitamin K deficiency. Besides these, physiological parameters like blood type and gender also affect clotting time, but the evidence is inconclusive.. To determine the association of clotting time with gender, ABO and Rh blood groups. Gender and blood groups were self-reported by participants while blood clotting time was measured by the capillary tube method. Statistical tests like independent sample t-test and one way ANOVA were implied to check association of clotting time with gender and blood group. Clotting time was highest in the O blood group and lowest in AB ( $p$  value=0.001). Among Rh blood groups, Rh negative had higher clotting time than Rh positive, but this relation was not significant ( $p$  value=0.564). Females had higher clotting time than males ( $p$  value=0.00). So, individuals with O blood type and females may experience a higher risk of abnormal bleeding during trauma or surgery.

### **RSRS-105 The Influence of Postpartum Stay on Maternal Nutrition, Relationships, and the Overall Experience of Childbirth in Rawalpindi, Pakistan**

Nehma Aloom  
Rawalpindi Medical University

The postpartum period is critically important for women, involving complex adjustments. Understanding their diverse experiences is essential for optimal postpartum care. This qualitative study aimed to explore postpartum experiences among women attending primary care facilities in Rawalpindi/Islamabad, Pakistan. **Objectives :** To determine the Influence of Postpartum Stay on Maternal Nutrition, Relationships, and the Overall Experience of Childbirth in Rawalpindi, Pakistan **Results:** Six themes emerged, revealing complex interactions between cultural norms, familial dynamics, and modern expectations. Maternal nutrition unveiled cultural influences on dietary choices. Rest highlighted tensions between tradition and responsibilities. Bonding emphasized familial support, while newborn care showcased family-guided practices. Healthcare access underlined the need for personalized services, and cultural traditions illuminated the balancing act between tradition and well-being. **Conclusion:** This study offers a

comprehensive insight into postpartum experiences in Pakistan's context. Cultural sensitivity in postpartum care is crucial, integrating tradition with evidence-based practices. Postpartum period is crucial for mothers, neonates, families and society as a whole as it can have long-term effects on all the lives involved.

### **RSRS-91 Association of Academic Performance and Emotional Intelligence of Second and Final Year Medical Students with Gender, Year of Study, Socioeconomic Class, and Ethnicity: A Cross-Sectional Study at Rawalpindi Medical University**

Nida Nisar

Rawalpindi Medical University

**Introduction:** Previous studies suggest are ambiguous in giving a clear relationship between EI and AP and the factors influencing them. There is limited data on Pakistani students in these regards, thus, the need to conduct more such studies. EQ is believed to be a better determinant of success than IQ, nowadays. Conclusive data on EI and the factors influencing it, can help authorities develop a better plan to enhance academic success of the students. **Objectives:** This study was conducted to assess Emotional Intelligence and Academic Performance of the students and determine their association with various factors such as gender, age, socioeconomic status, year of study and cultural background/ethnicity. **Materials and Methods:** Students of 2nd year and Final Year from Rawalpindi Medical University were included in the study. Participants with psychological illness and history of psychotropic drugs were excluded from the study. EI score were calculated using SSEIT, a 33-item, 5-point Likert Scale based questionnaire. AP was determined from last year's annual professional exam results of the students. Demographic data was collected online whereas questionnaire was filled both personally and on telephones. The study was completed in a period of 3 months. The results were analysed using SPSS version 27. T-test and chi square tests were applied to analyse various variables. **Results:** A total of 196 students participated in our study. The mean age was 21.7. Mean Academic performance score was 69 % and mean EI score was 120. Majority of them were Punjabi in ethnicity. Socioeconomically most of the participants belonged to Upper middle class. One factor that had a strong association with EI was ethnicity. Academic performance, however, was related to year of study, socioeconomic class and gender. Age, Gender, Family Socioeconomic Status, Cultural background, Residential Location, Year of Study at the university all play part in determining EI and Academic achievement of a Student.

### **RSRS-92 Comparative Meta-Analysis of Fosfomycin versus Ciprofloxacin in Urinary Tract Infections: Bacterial Eradication and Clinical Outcomes**

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Urinary tract infections (UTIs) are common in young children and women and even more so in pregnant women. Ciprofloxacin has been a long-used regime to treat UTIs, although recently the paradigm has shifted towards Fosfomycin. This systematic review and meta-analysis assess the effectiveness and safety of Fosfomycin compared to Ciprofloxacin for treating urinary tract infections in adults. Systematic searches were performed using PubMed, EMBASE, Cochrane, and Scopus. Covidence was used as a screening tool. Duplicates were removed, and four studies were included after primary and secondary screening. All the studies were randomized controlled trials. The program review manager (RevMan) was used for analysis. The analysis was performed using a forest plot. When there was significant heterogeneity, the random effect technique was applied. Three out of four studies were used to evaluate clinical remission, bacterial eradication, and adverse effects of these two drugs. As this review analyzed only published data with no direct human involvement, IRB approval was not required. **Results:** For bacterial eradication, the total number of patients was 334 patients, bacterial eradication during 10 days was achieved in 143 participants in the Fosfomycin group and 110 participants in the Ciprofloxacin group. Bacterial eradication was significantly higher in the Fosfomycin group compared to the Ciprofloxacin group (OR 2.03, 95% CI 1.22-3.36,  $p=0.006$ ). For clinical remission, no significant difference was found in clinical remission in 3 studies in a total of 278 patients (OR 1.26, 95% CI 0.72-2.21,  $p=0.42$ ). Out of a total of 356 patients, 74 experienced adverse effects in the Fosfomycin group and 46 in the Ciprofloxacin group. The appearance of adverse effects was significantly higher in the Fosfomycin group (OR 2.66, CI 1.53-4.62,  $p=0.0005$ ). **Conclusion:** The results of our meta-analysis show that bacterial eradication was significantly higher in the Fosfomycin group compared to the Ciprofloxacin group. There was no difference between the two drugs in terms of clinical remission. The appearance of adverse effects was significantly higher in the Fosfomycin group. Hence it was deduced that Fosfomycin is more effective than Ciprofloxacin for bacterial eradication in the treatment of urinary tract infection.

### **RSRS-98 Association between hydronephrosis and Urolithiasis using CT KUB**

Rida Fatima

Rawalpindi Medical University

Urolithiasis is characterized by the formation of urinary tract stones and could be classified into nephrolithiasis, ureterolithiasis, vesicolithiasis and urethrolithiasis. Hydronephrosis, dilatation of pelvicalyceal system is often associated with urolithiasis. Computed Tomography is considered a gold standard imaging modality for detection of urolithiasis. Objectives: To investigate the association between hydronephrosis and urolithiasis using CT KUB. Materials and Methods: A cross-sectional study was conducted on 124 patients at Benazir Bhutto Hospital over period of four months using Philips 16 Slicer CT scan machine. The study population consisted of patients aged  $\geq 5$  years, with infants and pediatric patients excluded from study. Patients who have undergone treatment for urolithiasis were also excluded from study. Patients having either hydronephrosis or urolithiasis or both were included in study. Data was collected using non-random convenient sampling technique and was analysed by SPSS. Results: Out of 124 patients, 79(63.7%) were males and 45(36.3%) were females. Most common location of stones was found to be kidneys (52.1%) followed by ureters (30.3%), vesicoureteric junction (11.3%), urinary bladder (5.6%) and urethra (0.7%). Out of 124 patients, 98(79%) patients were having hydronephrosis while urolithiasis was found in 111(89.5%) patients. Of 98 hydronephrosis patients, 84(85.7%) patients have unilateral and 14(14.28%) patients have bilateral hydronephrosis. Severity of hydronephrosis was found to mild in 44(44.8%) patients, moderate in 40(40.8%) patients and severe in 14(14.28%) patients. 85(68.54%) patients had both hydronephrosis and urolithiasis. 26(20.96%) patients with urolithiasis did not have associated hydronephrosis while 13(10.48%) patients with hydronephrosis did not have urolithiasis. Conclusions: Urinary tract calculi are most commonly seen in kidneys. Urolithiasis accounted for 86.7%(85) patients of hydronephrosis. Hydronephrosis was found to be associated with urolithiasis.

### **RSRS-104 Snorkel stenting versus Bioprosthetic Aortic Scallop Intentional Laceration to Prevent Iatrogenic Coronary Artery Obstruction (BASILICA) in aortic stenosis patients undergoing Transcatheter Aortic Valve Replacement (TAVR)**

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Introduction: Coronary obstruction (CO) is a potentially life-threatening complication of transcatheter aortic valve replacement (TAVR). Snorkel stenting and Bioprosthetic Aortic Scallop Intentional Laceration to Prevent Iatrogenic Coronary Artery Obstruction (BASILICA) are 2 techniques to prevent coronary obstruction. Objectives: Our meta-analysis aims to evaluate the potential role of these two techniques in reducing mortality, stroke and major vascular complications in patients who have undergone TAVR for aortic stenosis. Methods: A comprehensive search was conducted on PubMed, the Cochrane Library and Embase to find studies that examined the effectiveness and safety of chimney stenting versus Bio prosthetic Aortic Scallop Intentional Laceration to Prevent Iatrogenic Coronary Artery Obstruction (BASILICA) in patients who underwent TAVR for aortic stenosis. Statistical analysis was performed on Revman 5.4 using the random effects model. Heterogeneity across all studies was assessed using the Higgins  $I^2$ . A p-value of  $<0.05$  was considered significant. Results: 3 studies were included (n = 307 patients) in our meta-analysis. The evaluation of pool results shows that and chimney stenting and BASILICA had comparable rates of mortality (OR 3.32, 95% CI 0.90-12.24,  $I^2 = 0\%$ , p = 0.07), stroke (OR 0.82, 95% CI 0.18-3.67,  $I^2 = 0\%$ , p = 0.79) and major vascular complications (OR 2.18, 95% CI 0.19-25.65,  $I^2 = 69\%$ , p = 0.53). Conclusion: Chimney stenting and BASILICA offer comparable protection against coronary obstruction in patients undergoing TAVR. Further evidence is required to validate our findings.

### **RSRS-102 Socio-Developmental outcomes in relation with children's activities: Evidence from Pakistan**

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Background: Due to easy and prolong access to electronic gadgets, children's sociolect-developmental skills, need to be studied to evaluate their potential outcomes. Objective: To assess the behavior and social development outcomes of children in relation to their physical activities and screen time. Place and Duration of the Study: Study was conducted at an organization in a period of nine months from January 1st, 2023 to September 5, 2023. Methodology: Data was collected from general public via Google Forms parents of children under 7 were requested to fill out the google form, containing informed consent and using self-constructed questionnaire having a total of 27 questions. Statistical analysis was done using SPSS 22 software. Results: A total of 249 responses met the inclusion criteria. Mean age of the children was 4.55 years with

equal ratio of male to female participants. 90.3% of the children were involved in daily physical activities whereas 12.8% children had a high screen time. We found a significant association between the high use of electronic devices and child aggressive behavior when not using electronic devices ( $p = 0.007$ ), the child preferring his or her own company ( $p = 0.001$ ), and the ability to speak in a clear way ( $p = 0.02$ ). Physical activities was found associated with difficulty getting proper sleep ( $p = 0.035$ ) and clear speech ( $p = 0.035$ ) were significantly associated. Conclusion: Child behavior and socio-development was observed to be related to the daily use of electronic devices and physical activities.

### **RSRS-34 A Descriptive Study To Assess The Risk Of Fall Among Prosthetic Users By Using Clinical Balance Tests**

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Lower limb amputation is the major contributor of immobility and LLA is also associated with a greater risk of fall. [1] Fall is not cost effective for a prosthetic user. Currently there is no standard set of tests or criteria available for clinician to assess risk of fall in future. [2] OBJECTIVES: This study aims to assess risk different factors associated with the risk of fall and To devise some standard and universal tests and compare their efficacy for the assessment of risk of fall. RESULTS: The BBS has high inter reliability (correlation coefficient =.945) and internal consistency ( $\alpha=.827$ ). Relations between the BBS scores and those of other outcome measures were all statistically significant ( $P \leq .001$ ). Significant group differences in BBS scores were observed for fear of falling ( $P=.008$ ) and mobility aid use ( $P<.001$ ), but not for multiple ( $\geq 2$ ) falls in the previous 12 months ( $P=.381$ ). BBS items involving reaching forward, turning 360°, tandem standing, and standing on 1 leg had relatively greater frequencies of lower scores across participants. CONCLUSION: The BBS appears to be a valid and reliable but it may not be able to discriminate between individuals with greater or lesser fall risk.

### **RSRS-35 Association Between Orthorexia Nervosa Tendency, Eating Attitudes And Anxiety Studied Among Medical Students Of Rawalpindi Medical University: A Cross-Sectional Study**

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INTRODUCTION: Orthorexia nervosa portrays a pathological fixation with proper nutrition that's characterized by a restrictive diet, ritualized designs of eating, and inflexible avoidance of foods that are accepted to be unhealthy. Orthorexic people regularly

avoid food that has been treated with herbicides, pesticides, or manufactured substances, and they stress unreasonably about the strategies and materials utilized in food planning. ON analysts have watched that the arranging and completion of day-by-day meals can take unreasonable amounts of time and comprise of careful considering of what will be eaten, vigilant procurement of each ingredient, arrangement of the fixings, ingestion of the food, and inevitably either a sense of satisfaction or blame depending on the individual's adherence to biased "healthy" ideas and rules around these ideas. This cautious eating style leads to the exclusion of food groups and inevitably to dietary insufficiencies; the intense obsession with diet comes about in a misfortune of social connections and a devastated quality of life. OBJECTIVES: The objectives of this study are to evaluate the frequency of orthorexia nervosa among students of Rawalpindi Medical University and to determine the relationship between orthorexia nervosa, eating attitudes, and anxiety. METHODS: This cross-sectional descriptive study was conducted on 283 medical students of Rawalpindi Medical University between April to October 2023. The research population was students from all 5 years of Rawalpindi Medical University. The minimal sample size was calculated to be 278 with a 95% confidence interval and 5% of the type 1 error and 283 medical students were included in the study. Open Epi software version 3.01 was used to calculate the sample size. Sample selection was made by Random Sampling Method by using a Random Number Generator among 1000 students currently enrolled in the Rawalpindi Medical University. The sampled members were requested to fill out the questionnaire containing information about the respective study and only those students who were willing to participate were included in the study. All the participants gave informed consent before filling up the questionnaire. All the procedures performed in this study were by the ethical standards of the institutional and national research committees and with the 1964 Helsinki Declaration and its later amendments. The study was approved by the Institutional Review Board of Rawalpindi Medical University. RESULTS: There were 283 participants out of which 177 (57.7%) were females and 106 (34.5%) were males. The mean age was  $20.12 \pm 1.5$  years. According to the research statistics, 193 (62.9%) had scores below 40 which means they have the ON tendency. On comparing the mean scores, it was observed that anxiety scores were slightly higher in the group with higher ON scores (lower orthorexic tendencies) while the eating attitudes scores were lower in that group. On the other hand, the differences in the scores were not statistically significant ( $p>0.05$ ). CONCLUSION:

According to our study, there was no critical relationship observed between the ON tendencies and the presence of anxiety and eating attitudes. Thus, these two were not concluded as risk factors. Nevertheless, further research and clinical investigations on people belonging to diverse races, ages, professions, etc. ought to be carried out on a larger scale to determine all the possible risk variables related to ON.

### **RSRS-133 Demographic trends and disparities in mortality related to coexisting heart failure and diabetes mellitus among older adults in the United States between 1999 and 2020: A retrospective population-based cohort study from the CDC WONDER database**

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**Background:** Heart Failure (HF) and Diabetes Mellitus (DM) often coexist, and each condition independently increases the likelihood of developing the other. While there has been concern regarding the increasing burden of disease for both conditions individually over the last decade, a comprehensive examination of mortality trends and demographic and regional disparities needs to be thoroughly explored in the United States (US). **Methods:** This study analyzed death certificates from the CDC WONDER database, focusing on mortality caused by the co-occurrence of HF and DM in adults aged 75 and older from 1999 to 2020. Age-adjusted mortality rates (AAMRs) and annual percent changes (APCs) were computed and categorized by year, gender, race, census region, state, and metropolitan status.

**Results:** A total of 663,016 deaths were reported in patients with coexisting HF and DM. Overall, AAMR increased from 154.1 to 186.1 per 100,000 population between 1999 and 2020, with a notable significant increase from 2018 to 2020 (APC: 11.30). Older men had consistently higher AAMRs than older women (185 vs. 135.4). Furthermore, we found that AAMRs were highest among non-Hispanic (NH) American Indian or Alaskan natives and lowest in NH Asian or Pacific Islanders (214.4 vs. 104.1). Similarly, AAMRs were highest in the Midwestern region and among those dwelling in non-metropolitan areas.

**Conclusions:** Mortality from HF and DM has risen significantly in recent years, especially among older men, NH American Indian or Alaska Natives, and those in non-metropolitan areas. Urgent policies need to be developed to address these disparities and promote equitable healthcare access.

### **RSRS-36 Pericardial Synovial Sarcoma in a Young Adult: Case Report of a Rare Malignancy**

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Synovial sarcoma is a rare malignant mesenchymal tumor predominantly affecting adolescents and young adults, characterized by the SS18:SSX fusion protein resulting from a translocation between chromosomes X and 18. While it typically arises in the lower extremities, primary pericardial synovial sarcoma is exceptionally rare, with limited cases reported globally and very few from Pakistan. **Objective:** The purpose of this report is to present our experience of diagnosis and management of this patient, with the aim to further aid in the understanding of presentation and management of this disease. **Case Presentation:** We report the case of a 33-year-old male who presented with chest pain and shortness of breath. Imaging revealed a primary pericardial synovial sarcoma. The case was reviewed in a multi-disciplinary tumor board (MDT), and surgery was deemed high-risk and was declined by both the surgeons and the patient. The patient was initially managed with systemic chemotherapy, demonstrating a positive response. Maintenance therapy with Pazopanib, a tyrosine kinase inhibitor, was subsequently initiated. While the patient initially showed stabilization, progressive worsening of symptoms and an increase in tumor size were observed during follow-up. **Discussion:** This case underscores the challenges in managing pericardial synovial sarcoma, particularly when surgical intervention is not feasible. Although systemic chemotherapy and targeted therapies like Pazopanib can provide temporary disease control, treatment resistance remains a significant challenge. **Conclusion:** Pericardial synovial sarcoma is an exceedingly rare malignancy with complex management needs. This case highlights the importance of individualized, multidisciplinary approaches and the need for further research into optimizing treatment strategies for this rare and aggressive disease.

### **RSRS-125 Comparative Impact of Various Nail Colors on Oxygen Saturation Levels as Measured by Pulse Oximetry**

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**Introduction:** Sometimes called the “fifth vital sign”, pulse oximetry is a rapid, non-invasive monitoring method detecting blood oxygen saturation by passing light through tissue, most frequently the nail bed, at a certain wavelength. However, there are many factors that affect the accuracy of pulse oximeter readings. These include Physiological limitations, Limitation in the signal processing, Interferences from substances & finally the lack of technical expertise. **Objectives:** To Study The

Effect Of Different Nail Paint Colors On Oxygen Saturation Readings by Pulse Oximetry.. Materials and Methods: This is a cross-sectional experimental study where 218 healthy individuals were assessed and asked to sign an informed consent. Data was analyzed through SPSS version 2023. Adults aged 18 and above, healthy with no known comorbidities, respiratory illnesses, or regular medication usage were included in the study. Inclusion criteria involves adults aged 18 and above excluding individuals unable to provide informed consent. Results: ANOVA was conducted which revealed variations in the mean sum of squares and within-group sums, indicating differences in readings across conditions, aligning with the hypothesis that nail paints and modifications can affect pulse oximetry accuracy. Specifically, materials with darker hues, particularly blue and black, demonstrated a propensity for longer measurement durations alongside a noticeable variability in readings. Red 1 to Fake Nail 1 (variables related to cosmetic usage): The ANOVA results indicate that there are no significant differences between groups for most colours (Red, Black, Blue, Purple, Henna, Fake Nail) based on their respective variables (e.g., F values ranging from 0.152 to 1.564 and all p-values above 0.05). Brown 1: A significant result ( $p = 0.001$ ) suggests that there is a significant difference between groups for this variable. Henna 1: No significant difference ( $p = 0.172$ ). Fake Nail 1: No significant difference ( $p = 0.369$ ). Conclusion: The study shows that the hypothesis, nail paints and other modifications can affect pulse oximetry accuracy, is accurate as depicted by the ANOVA results. It signifies the need to consider nail modifications when using pulse oximeters, as it may interfere with the measurement reliability.

### **RSRS-95 The Role of REM Sleep in Consolidating Executive Function: A Prefrontal Cortex Perspective**

Zain Ali

Rawalpindi Medical University

REM sleep plays a crucial role in cognitive processes such as executive function, primarily mediated by the prefrontal cortex (PFC). This study explores the relationship between REM sleep and the consolidation of executive functions, including working memory, inhibitory control, and cognitive flexibility, from a PFC perspective. To investigate how REM sleep consolidates executive functions and how disruptions in sleep impact these cognitive processes. A cross-sectional study was conducted with 145 Pakistani adults aged 18-70, recruited via convenience sampling. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI),

while executive function was measured through the Frontal Assessment Battery (FAB). Pearson correlations analyzed the relationship between REM sleep quality, executive function, and stress levels. The findings show a strong positive correlation between REM sleep quality and executive function performance ( $r = 0.452$ ,  $p < 0.01$ ). Participants with better REM sleep quality scored higher on cognitive flexibility (mean =  $11.03 \pm 1.98$ ) and working memory tasks compared to those with poor sleep quality (mean =  $9.18 \pm 3.46$ ). REM sleep deprivation led to increased cognitive failures (mean =  $57.00 \pm 23.59$ ) and higher stress levels (mean =  $7.18 \pm 3.19$ ). Gender differences were noted, with females reporting more cognitive failures and stress than males. Age differences indicated slightly lower prefrontal cortex function in older adults compared to younger ones. REM sleep significantly consolidates executive functions by promoting synaptic plasticity in the PFC. Disrupted REM sleep impairs cognitive flexibility, working memory, and emotional regulation, emphasizing the need for interventions targeting sleep improvement to enhance cognitive resilience.

### **RSRS-96 Successful Delivery of High-Risk Sextuplets at 34 Weeks: A Case Report from Rawalpindi, Pakistan**

Zain Ali

Rawalpindi Medical University

Sextuplet births, occurring in about one in every 4.7 billion births, are extremely rare and present unique challenges due to increased risks of complications. Despite advances in fertility treatments, such pregnancies remain uncommon. Accurate diagnosis and meticulous prenatal care are crucial for managing these high-risk pregnancies effectively. Case Presentation: A 22-year-old female, gravida 2 para 1, presented to DHQ Hospital, Rawalpindi, at 34 weeks gestation with a one-hour history of per vaginal (PV) leak. Initially diagnosed as a triplet pregnancy during antenatal scans, the patient was now identified with premature rupture of membranes and preterm labor. The patient had a history of managed uterine fibroids and positive Hepatitis B status. She underwent an emergency cesarean section under spinal anesthesia. Intraoperatively, a Pfannenstiel incision revealed three breech and three vertex presentations among the sextuplets. Prophylactic B-Lynch sutures and an intraoperative drain were utilized to manage the high-risk delivery. Tranexamic acid, Syntocinon, and pain management protocols were implemented in the postoperative care. The patient and her infants were discharged in good health, with follow-up and breastfeeding support. This case underscores the critical importance of accurate and timely diagnosis

in managing multiple gestations. The successful management of this high-risk pregnancy in a resource-limited setting emphasizes the dedication and skill of the healthcare providers involved. The successful delivery and management of sextuplets in a resource-limited setting like DHQ Hospital, Rawalpindi, signify a noteworthy achievement in the medical field. This case highlights the importance of accurate diagnosis, comprehensive prenatal care, and interdisciplinary teamwork in managing high-order multiple pregnancies.

#### **RSRS-94 The Impact of Nurse-Led Care in Chronic Kidney Disease Management: A Systematic Review and Meta-Analysis**

Zaira Nasir

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Chronic Kidney Disease (CKD) is a significant global health issue affecting over 10% of the population, with rising prevalence and mortality rates. The disease often progresses to advanced stages before diagnosis, necessitating Renal Replacement Therapy (RRT). A multidisciplinary approach is recommended for CKD management, but resource constraints in developing countries make nurse-led care a practical alternative. Objective: This systematic review and meta-analysis aims to compare the effects of nurse-led care with routine care in CKD management to determine its efficacy across diverse cultural backgrounds. Methods: Following PRISMA guidelines, a comprehensive search was conducted on PubMed, EMBASE, Scopus, and Cochrane databases, supplemented by manual searches and clinical trial registries. Inclusion criteria were randomized controlled trials (RCTs) involving nurse-led care for CKD patients aged 18 or older. Data extraction focused on study and baseline characteristics, and outcomes related to quality of life, sleep, patient satisfaction, physical functioning, emotional well-being, energy/fatigue, eGFR, and blood pressure. Statistical analysis used RevMan and STATA software, with results reported as odds ratios and confidence intervals. Results: The analysis included 10 RCTs with a total of 916 participants. Nurse-led care significantly improved symptoms and problems associated with kidney disease, sleep quality, energy/fatigue, patient satisfaction, and overall health. However, it did not significantly impact the burden of kidney disease, physical functioning, role-physical, or emotional well-being. Depression scores were significantly reduced in the nurse-led care group. No improvements were noted in blood pressure or eGFR. Discussion: Nurse-led care demonstrated notable benefits in managing symptoms, sleep disturbances, energy levels, and overall health, but its impact on physical and

emotional well-being was limited. The variability in depression outcomes suggests potential biases that need further exploration. While some studies indicated improvements in hospitalization rates and treatment adherence, others highlighted the need for more rigorous, long-term studies. Conclusion: Although nurse-led intervention proves to be effective for certain aspects of CKD management, its effect on renal function and other clinical outcomes remains inconclusive. Further research is required to establish comprehensive nurse-led care models and explore their long-term impact on CKD patients.



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