

Clinical Engagement Program



The
Fleming Fund
Country Grants



Tauqeer Mustafa

Background



The Clinical Engagement (CE) program started in 2021 and has aimed to improve and evaluate the use of antimicrobials at six tertiary care public hospitals across Pakistan. These include:

- Jinnah Postgraduate Medical Center (JPMC) Karachi
- Dr. Ruth K. M. Pfau Civil Hospital (CHK) Karachi
- Sheikh Zayed Hospital (SZH) Lahore
- Nishtar Medical University Hospital (NMUH) Multan
- Hayatabad Medical Complex (HMC) Peshawar
- Provincial Headquarters Hospital in Gilgit, Baltistan (PHQ-GB).

Framework

- The basic framework of the program focuses on three areas:
 - Antimicrobial Stewardship,
 - Infection Prevention and Control (IPC) and
 - Diagnostic Stewardship

Setting the stage



Baseline survey based on WHO PPS methodology on antibiotic utilization in target hospitals to measure Antimicrobial Use (AMU) in healthcare facilities.



Advocacy meetings with provincial departments for approvals and notifications.



Advocacy meetings with higher management for introduction of the initiative and formal agreements.

Activities

- Teaching and Training Sessions
- Supportive and Supervisory Visits
- Performance review and Advocacy Meetings
- Communication Material



Teaching and training sessions

To engage the health care professionals, small group teaching sessions, seminars and workshops were conducted on an ongoing basis for the nominated teams.



Sessions focused on;

the mechanism of action and resistance, spectrum of action and therapeutic principles of antibiotic use along with antibiotic timeout	importance of Global Antimicrobial Resistance Surveillance System (GLASS) pathogens	surveillance of antimicrobial resistance,	interpretation of antibiogram and WHONET data entry	infection prevention and control (IPC) practices	WHO AWaRe Classification of antibiotics	revision of basic concepts of IPC including prevention and management of needle stick injuries and IPC surveillance	antibiotic prophylaxis and treatment guidelines
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Supportive and Supervisory Visits

Clinical ward rounds to facilitate prescription practices.

Discussions with the senior faculty, residents, junior doctors and nursing staff about the appropriate selection of antimicrobials according to the site of infection, organism isolated, susceptibility pattern and patient comorbidities were held.

Antibacterial spectra of commonly used antibiotics were discussed. It was emphasized that culture reports from the laboratory should be used to initiate targeted therapy.

Basic concepts and the role of IPC in controlling rising AMR were discussed.

Details of transmission-based precautions, appropriate use of personal protective equipment and patient placement were highlighted.

The significance of functional Infection prevention & control (IPC) and Antimicrobial Stewardship (ASC) was highlighted.

Performance review and Advocacy Meetings



Meetings were held with decision-makers (Medical Director, Chancellor and others) to discuss the activities, challenges and way forward.



The observations and the current antibiotic prescription practices and infection prevention and control (IPC) practices observed during the ward rounds were highlighted.



After advocacy with senior management, members of the IPC and Antimicrobial Stewardship Committee (ASC) were nominated, and an ASC was formulated at the six sites.



Regular meetings of ASC were ensured.



Advocacy for strengthening of IPC committee and training sessions on IPC Basics for master trainers



Trickle-down training sessions for all healthcare professionals.

Communication Material

Job aids were developed in the form of posters and booklets and disseminated among the clinical teams and higher administration.

These posters and booklets display information regarding:

- appropriate techniques of sample collection for microbiological culture and sensitivity testing
- basic concepts of infection prevention and control
- basic concepts of antibiotics
- a guide for initiation of the antimicrobial stewardship program.

Achievements

AMR Industry Alliance Award

ISO 15189 certification of JPMC and CHK

ASCs established at all sites

IPCs established at 4 sites

Endline survey conducted

Lessons learnt

Institutionalization
????????????

Scale-up and
sustainability

Revised strategy

Scale-up and sustainability

Residency certificate program

Based on experiential learning

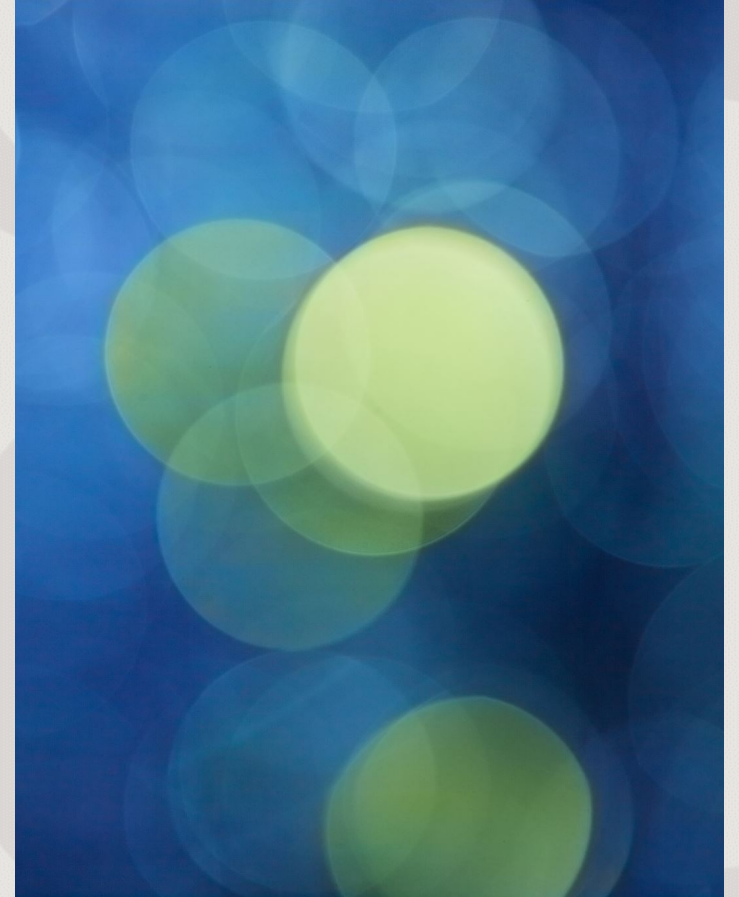
Development of a Centre of Excellence on AMS

On-site training for residency certification

Didactic learning as well as hands-on training

Multidisciplinary team rounds/ASP rounds

clinical decision support system



Course structure



Two weeks/10 days



First week focuses on building foundation for establishing an AMS program at the hospital



Second week focuses on advanced training on running and maintaining AMS program



Parallel advocacy with administration of the site



Pre and post evaluation of the residents

Target Healthcare professionals



Frequency and execution

One cohort of upto 10 HCPs

One course every other month

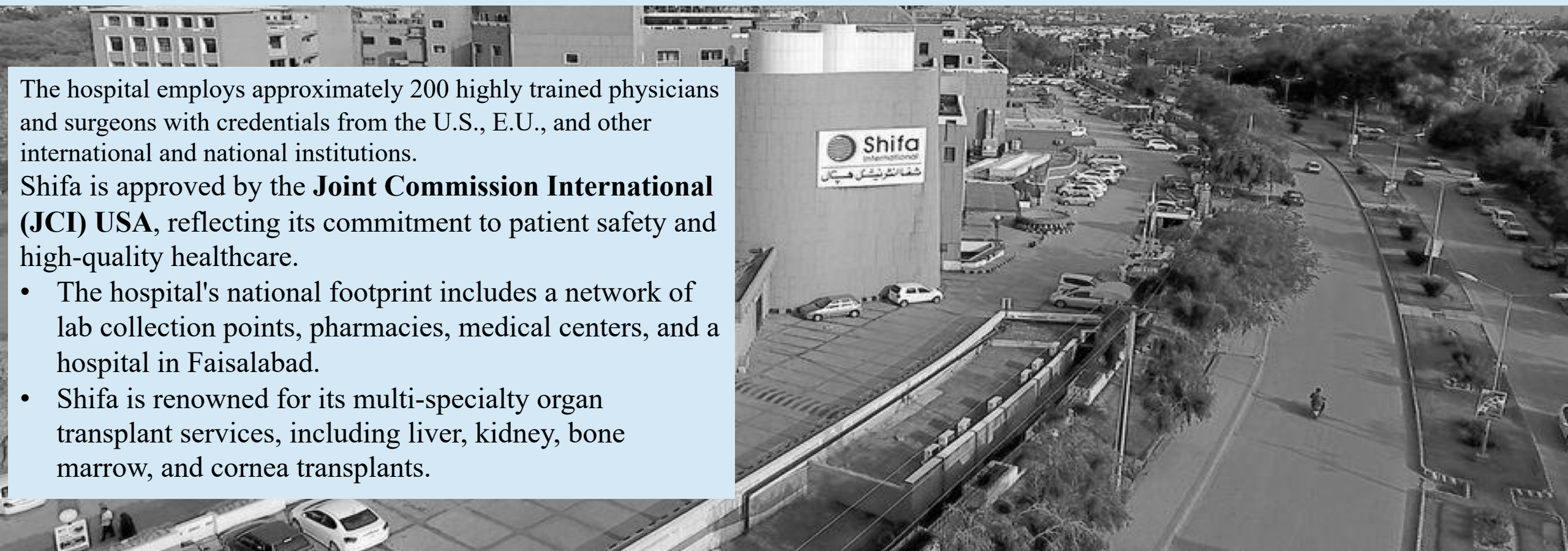
Includes all potential members of the AMS system

Can explore the possibility of separate short training for administrators

Tentative topics

- Introduction and Mechanisms of AMR
- Role of surveillance and antibiograms
- Evidence based prescription
- Appropriate selection of antimicrobials
- Antimicrobial stewardship strategies
- Components and implementation of AMS
- Infection Prevention and Control
- Diagnostic stewardship

- Shifa International Hospital proudly stands as a symbol of quality healthcare.
- Quaternary care facility in Islamabad
- Offers comprehensive diagnostic services, outpatient clinics, and inpatient care across more than 30 medical and surgical specialties.
- Since its establishment in 1994, it remains the only corporate sector tertiary care hospital listed on the Pakistan Stock Exchange (PSX)



The hospital employs approximately 200 highly trained physicians and surgeons with credentials from the U.S., E.U., and other international and national institutions.

Shifa is approved by the **Joint Commission International (JCI) USA**, reflecting its commitment to patient safety and high-quality healthcare.

- The hospital's national footprint includes a network of lab collection points, pharmacies, medical centers, and a hospital in Faisalabad.
- Shifa is renowned for its multi-specialty organ transplant services, including liver, kidney, bone marrow, and cornea transplants.

Antibiotic Stewardship Program at SIH

- Is a Subcommittee of Pharmacy & Therapeutics Committee (P&TC).
- A well developed program - already employing the **core** as well as **supplemental strategies** of antibiotic stewardship program (ASP).
- Salient features
 1. Regular ID rounds
 2. Antibiotic authorization – restricted antibiotic
 3. Prospective and retrospective feedback to doctors
 4. Antibiotic Utilization Reviews
 5. DDDs, DOT review
 6. Antibiotic & vaccines Formulary management
 7. Developing antibiotic guidelines and protocols
 8. Antibiogram and C/S reporting SOPs
 9. ADR tracking and management
 10. ASP newsletter
 11. Educational activities within hospital, in local community and other hospitals.
 12. Annual world antibiotics awareness week (WAAW) to raise awareness

Facilitators

A multidisciplinary team comprising of:

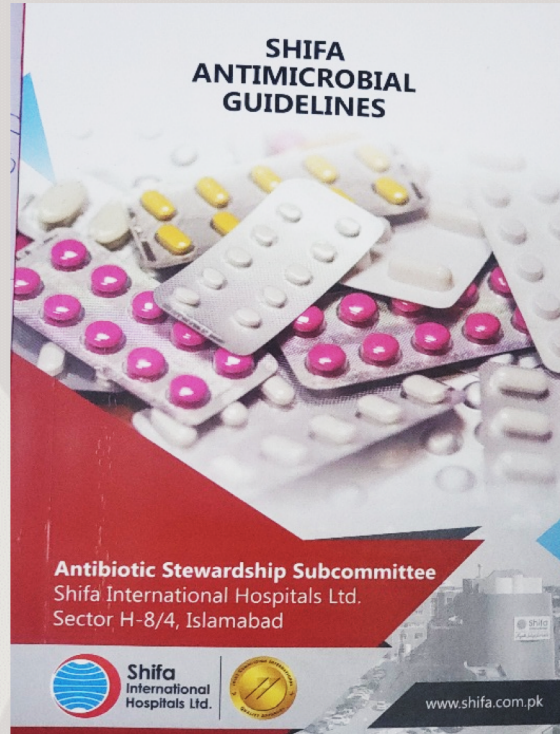
ID specialists, microbiologists, ID pharmacists,
and infection preventionists

All active members of the

- Antibiotic Stewardship Subcommittee
- Prevention & Control of Infection (PCI) committee

Specialists

Bring extensive experience in AMS & IPC
activities.



Antibiotic Guideline



Shifa International Hospitals Ltd.
شفا انٹرنیشنل ہسپتال لمیٹڈ اسلام آباد

Department of Pharmacy Services in conjunction with
Antimicrobial Stewardship Subcommittee of SIH

Quarterly Newsletter
Vol. 7, July 2021

Shifa Antimicrobial Stewardship Bulletin

The Antimicrobial Stewardship Subcommittee (ASSC) is the subcommittee of Pharmacy and Therapeutics Committee (P&TC) of Shifa, and is committed to promoting rational use of antibiotics in the hospital.

Editor in Chief:
Dr. Ejaz Ahmad Khan (Chairman)
Dr. Nawaz Rashtia (Co-Chairman)

Editor in Chief:
Salwa Ahsan
(Chief of Pharmacy)

Editor & Co-Editors:
Rahat Anjum (Clinical Pharmacist)
Sundus Maria (Clinical Pharmacist)

Published by:
Antimicrobial Stewardship Subcommittee (ASSC)-Shifa;
Shifa International Hospitals Ltd.
Sector H-8/4, Islamabad-Pakistan

For Comments/Queries:
Please contact:
☎ +92-51-846-3492, 3005, 3977
Email:
drug.information@shifa.com.pk

Inside this Issue

- Highest used antibiotics in the first quarter of 2021
- Restriction on the increased use of linezolid
- Caspofungin and its Judicious use
- Meropenem to Imipenem switch guidelines.

Quarter I-2021 Quantitative Usage of Antibiotics as per DDDs (Defined daily dose) data
The defined daily dose (DDD) is a statistical measure of drug consumption, defined by the World Health Organization (WHO) and serves as an important means of gauging consumption of antibiotics in a healthcare setup for adult patients.

According to the DDD data of the Quarter-I of 2021 (Jan-March), Meropenem, Ceftriaxone and Vancomycin were among the highest used intravenous antibiotics while Azithromycin, Voriconazole and Co-Trimoxazole were among the highest used oral antibiotics.

Among the restricted antibiotics, Use of Colistin was the highest in the Liver transplant, Critical care and oncology patients and has increased as compared to the previous quarter. Use of Vancomycin was also higher among the liver transplant, neurology and gastroenterology specialties. Overall the use of Colistin, Linezolid and Tigecycline was higher as compared to the previous quarter.

Linezolid - Restricted Use
Owing to the increased use of linezolid (Both oral and IV), Restriction has been imposed on its use starting from F4 floor (will be expanded). Usage criteria has been defined by the Antimicrobial stewardship subcommittee (see next page)

% Compliance to Linezolid Use Criteria (2021)

Month	% Compliance
March	63%
April	50%
May	55.55%

From the desk of Editor in Chief



I am indebted to our Antimicrobial Stewardship team on this initiative of bringing out the first edition of Newsletter.

As we know that Antimicrobial stewardship program (ASP) is an important component in the control of antibiotic use in all healthcare settings. It has been shown that ASP plays a vital role in controlling the antimicrobial resistance, improving appropriate use of antibiotics and patient outcomes such as mortality and cost in the hospital. The Antimicrobial Stewardship Subcommittee (ASSC) has been carrying out stewardship activities since last few years in SIH. We hope and look forward to co-operation from all the stakeholders in helping us promote the appropriate use of Antibiotics.

All physicians are requested to kindly follow the updated guidelines in the selection of antibiotics. Our team is available round the clock for any help in this regard. We hope that following the stewardship strategies will further help us in establishing good practices in the hospital. Good luck to everyone and keep sending us suggestions to improve this newsletter and also our stewardship efforts.

Thank you,
Dr. Ejaz Ahmad Khan
Chairman, ASSC and Infection Control Committee - SIH



Shifa International Hospitals Ltd.
شفا انٹرنیشنل ہسپتال لمیٹڈ

A NEWSLETTER BY DEPARTMENT OF PHARMACY—Shifa [SIH]

PHARMACY BULLETIN

ISSUE 11, June 2021

Editor in Chief:
Dr. Nayer Mahmud
Chairman P&TC

Editor in Chief:
Salwa Ahsan
(Chief of Pharmacy)

Editor & Co-Editors:
Rahat Anjum (Clinical Pharmacist)
M. Gulabali (Clinical Pharmacist)
Sundus Maria (Clinical Pharmacist)
M. Awaris (Clinical Pharmacist)
Javeria Khalid (Clinical Pharmacist)
Zeeshan Ahmed (Clinical Pharmacist)

Published by:
Drug and Poison Information Centre,
Department of Pharmacy Services,
Shifa International Hospitals Ltd.
H-8/4, Islamabad - Pakistan
Tel: +92-51-846-3492, 3005, 3977
Email: drug.information@shifa.com.pk
for.Community/Feedback

Please contact on above extension or email

Inside this Issue

- Shifa Pharmacy starts Discharge Medication Counseling in Emergency
- Immunizing immunocompromised Cancer Patients
- What's New in Infectious Diseases?
- Switching to or from NPH Insulin
- SGLT-2 Inhibitors or GLP-1 Receptor Agonists?
- Myths/Facts about Covid Vaccines and much more....

Shifa Pharmacy starts Discharge Medication Counseling in Emergency
(Naima Manzoor, Emergency Pharmacist)

Background:
In Emergency Pharmacy of Shifa, our traditional role includes prescription review, dispensing, emergency supplies management (Crash cart, Disaster trolley, patient transfer bags), provision of drug information, compliance to medication use protocols, toxicological emergency management and floor stock management etc., we aspired to expand the role further by involving ED pharmacists in patient and caregiver education.

Pharmacist Patient Counseling



Methodology:
We started with identifying a team of ED pharmacists for the project. The team reviewed discharge summaries and identified common drugs, age distribution, A of discharges/day and peak timings, etc. Taking physician and nursing lead of ED in loop was the next step. Later we ensured that education info/guide/brochure etc. are available for major type of drugs prescribed. ED pharmacy then started the pilot project including patient counseling, discharge medication reconciliation and take-home medicines dispensing (therapy eliminating the need of patients to come to pharmacy for medicines after being discharged from ED)

Results:
Success of this project is visible by the numbers which is increasing every quarter. This project was started in Dec 2020 (1 hour/day) and patients were 9. Timings were gradually increased and in first 3 months (Dec 20-Feb 2021) average 21 patients/month were catered. From March 2021 onwards the A of patients increased to average 82/month (Mar-May 2021) i.e., almost 4 fold!

Patients were highly engaged and mostly asked question related to timings of dose, foods to avoid, lab tests to be done, drug allergies etc.

Also there was opportunity for pharmacists to do interventions, most commonly involved are: formulary brand switching, wrong drug/dosage form selection while duplications/omission during reconciliation, were minimal.

Overall it is a much appreciated and value added project that is important for healthcare team and patients equally.



Newsletters



Shifa International
Hospitals Ltd

POLICY ON ANTIMICROBIAL STEWRADSHIP PROGRAM (ASP) - SIH

POLICY ON ANTIMICROBIAL STEWRADSHIP PROGRAM (ASP) - SIH

Approved By:

Dr. Zeeshan Bin Ishtiaq
Chief Executive Officer



Shifa International
Hospitals Ltd

RATIONAL USE OF ANTIBIOTICS

POLICY ON RATIONAL USE OF ANTIBIOTICS

Approved By

Dr. Manzoor H. Qazi
Chief Executive Officer

Workshops in Local hospitals

 **PPA Hosting Mega Event APCP**

 **17TH Asia Pacific Conference of Pediatrics**
PC Lahore, Pakistan 10th to 13th March, 2022

 **7th Asia Pacific Conference of Paediatric Nursing** 12th to 13th March, 2022

Theme: **Every New Born, Every Child, Every Where**

 **APPA**

 **RMU**

Pre Conference Workshop

Time: 09:30 am to 12:30 pm
March 01, 2022 (Tuesday)

An Intensive Antibiotic Stewardship Workshop

Host	Speakers	Moderator
Prof. Rai Asghar	Dr. Sobyia Owais Dr. Ejaz A. Khan Ms. Maria Sundas	Dr. Abid Hussain

Venue: Benazir Bhutto Hospital, Rawalpindi



Web: www.apcp-pak.live
Email: apcp21sc@gmail.com | ppa.apcp2021@gmail.com

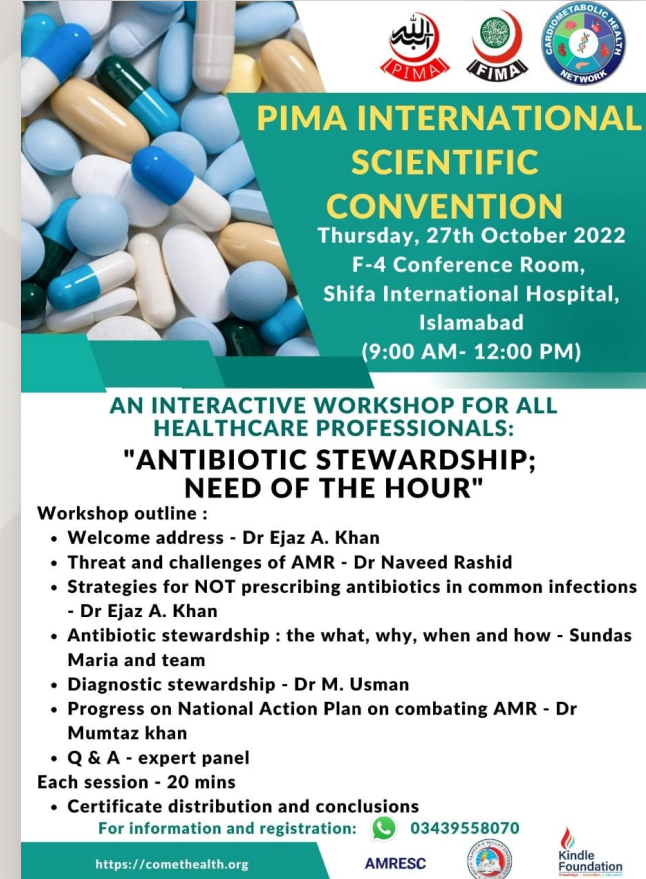
 **17th-APCP-Conference-Pakistan**
<https://www.instagram.com/apcppakistan/>

CONFERENCE SECRETARIAT
PAKISTAN PEDIATRIC ASSOCIATION (PPA)
Plot # 57-C, 11th Commercial Street, Phase II Extension,
Defence Housing Authority, Karachi - Pakistan
Karachi Office # +92 21 35387473,
Lahore Office # 042 35367925
Website: www.ppa.org.pk

 **Orbit**
Event Management



Workshops within the hospital

PIMA INTERNATIONAL SCIENTIFIC CONVENTION
Thursday, 27th October 2022
F-4 Conference Room,
Shifa International Hospital,
Islamabad
(9:00 AM- 12:00 PM)


**AN INTERACTIVE WORKSHOP FOR ALL HEALTHCARE PROFESSIONALS:
"ANTIBIOTIC STEWARDSHIP;
NEED OF THE HOUR"**



Workshop outline :

- Welcome address - Dr Ejaz A. Khan
- Threat and challenges of AMR - Dr Naveed Rashid
- Strategies for NOT prescribing antibiotics in common infections - Dr Ejaz A. Khan
- Antibiotic stewardship : the what, why, when and how - Sundas Maria and team
- Diagnostic stewardship - Dr M. Usman
- Progress on National Action Plan on combating AMR - Dr Mumtaz khan
- Q & A - expert panel

Each session - 20 mins

- Certificate distribution and conclusions

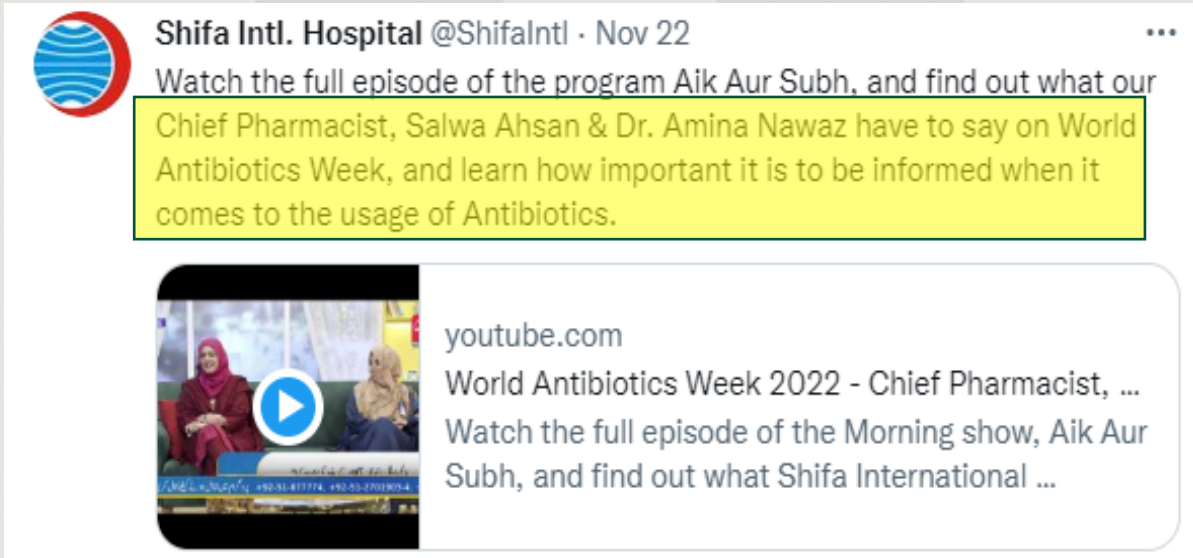
For information and registration:  03439558070

<https://comethealth.org>  

Engaging the community through Media

Shifa Antibiotic Stewardship Committee seizes every opportunity to connect with the public, fostering awareness about antibiotic resistance and promoting the judicious use of antibiotics.

This commitment is evident through activities such as **awareness walks and TV/radio talk shows.**



Shifa team regularly conducts antibiotic and AMR awareness walk with National Institutes of Health (NIH)



Dr. Ejaz Khan featuring on Roze TV and discussing irrational use of antibiotic and related threats

Videos on social media



Access full videos:

<https://www.youtube.com/watch?v=nKrpSWEWKxQ>

<https://m.facebook.com/shifa.international.hospital/videos/world-antibiotics-awareness-week-2021/635537154485184/>

Engaging the Patients & Families



- **World Antibiotic Week** is celebrated every year, and during these 6 days we setup stalls in different parts of the hospital.
- Team of doctors and pharmacists meet with general public/patients to raise awareness on the threats of AMR and importance of the rational use of antibiotics and avoiding self-medication etc.
- We distribute hand-outs, brochures for education

Milestones of the Project



Objectives	Deliverables	Activities
To assess the working of the existing ASP committees	Base-line assessment of the ASP committees of 5 hospitals Coordination, Advocacy, Monitoring and Evaluation Advocacy and Feedback Sharing with Administration	Review the structure, composition, and functioning of ASP committees Assess level of implementation of ASP strategies, policies, and guidelines. Conduct a gap analysis to identify shortcomings Propose interventions to enhance compliance with ASP and infection prevention and control (IPC) practices.
To establish Key performance indicators related to ASP and IPC	Development of the ASP and IPC related KPIs based on the baseline assessment	Establishment of at least 2-3 KPIs depending on the hospital's resources and capacity
To train and equip the Health care professionals with antibiotic stewardship skills	Nominated healthcare professionals from target facilities trained and assessed Clinical Engagement program rolled out at target sites	Nominate and Train Healthcare Professionals Conducts ASP training at Shifa International Hospital (SIH)
Monitoring the progress of the ASP and IPC committees in the form of quarterly KPI compliance	Advocacy and feedback sharing with administration will involve continuous monitoring of target facilities, focusing on ASP and IPC committee performance, trainee sessions, and policy implementation. Compliance will be assessed at three stages—baseline, interim, and final—through online meetings and onsite visits, ensuring adherence to key indicators and effective implementation of program goals.	Review the progress and success of the ASP and IPC programs through regular discussions with hospital focal points, focusing on challenges, achievements, and opportunities for improvement. Organize follow-up sessions to address identified issues and provide necessary guidance, support, and resources to ensure the committees' effective functioning.

Key Performance Indicators - KPIs



KPI	Domain	Implementation	Assessment tools
Prospective audit and feedback	Pharmacy	<ul style="list-style-type: none"> Initiation of once weekly ASP team rounds. Documentation of the Antibiotic dose optimization Intervention record (Interventions: IV-Oral switch, renal and hepatic dose adjustments, Discontinuation and de-escalation) Data and compliance monitoring Audits and Feedback 	Intervention documentation record Monthly Intervention Data Monthly Cost Saving Data
IV-to-Oral	Pharmacy	<ul style="list-style-type: none"> Identifying 5 drugs for IV-Oral switch Development of the IV-Oral switch criteria Education of the prescribers and pharmacists Data and compliance monitoring Via Audits and Feedback 	Monthly Cost Saving Data Monthly intervention data and acceptance rate
Development of Guidelines/ Pathways (Most Common Infections)	Antibiotic stewardship Core committee (ID,IPC and pharmacy)	<ul style="list-style-type: none"> Identifying common infections (e.g, UTIs, Community acquired pneumonia) Development of the guideline under the light of local antibiogram / hospital's formulary Meetings with the concerned department for finalizing the guidelines Education and dissemination of the final document 	Availability of approved guideline Staff awareness Basic compliance
Hand Hygiene	IPC	<ul style="list-style-type: none"> Education and Training Feedback and Reporting 	Monthly Hand Hygiene Compliance Rate

Support required from the hospital



	Domain	Action	Indicator
1	Leadership Support	commitment in writing from hospital leadership for the ASP, including allocation of necessary resources (time, staff, funding) and empowering the stewardship team to enforce policies.	<ul style="list-style-type: none"> • Document (<i>memo, approved policy or program</i>) • Committee notification along with ToRs • Timely closure of observations • Regular committee meetings
2	Data Access	Support in data access to related to pharmacy, purchase, PCI and patient care systems for tracking antibiotic use, and adherence to guidelines	<ul style="list-style-type: none"> • Allow comprehensive assessments onsite and follow ups • Timely response from focal persons on observations and action plan
3	Interdisciplinary Coordination	Facilitate collaboration between departments such as infectious diseases, pharmacy, microbiology, and infection control to ensure smooth communication and implementation of stewardship interventions.	<ul style="list-style-type: none"> • Assign focal persons and their backups • Ensure their continued engagement
4	Policy and Protocol Support	Assist in drafting, reviewing, and implementing hospital-wide antibiotic use policies, protocols, and clinical guidelines, ensuring alignment with national standards.	<ul style="list-style-type: none"> • Guideline – formal approval • Formal Notification • Internal trainings and audits
5	Education & Training Resources	Nomination for training at Shifa Plan for trainings as identified areas in the baseline assessment	<ul style="list-style-type: none"> • All nominated staff complete training in Shifa • # of identified trainings are conducted in time

Lab rounds



Hospital Rounds



Thank You