

PHARMACY BULLETIN

ISSUE Dec 2025

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Shinza Arshad (Clinical Pharmacist)

Fizza Afzal (Clinical Pharmacist)

Noor ul Hudda (Clinical Pharmacist)

Zikra Zulfiqar (Clinical Pharmacist)

Published by:

Drug and Poison Information Centre, Department of Pharmacy Services, Shifa International Hospitals Ltd., H- 8 /4, Pitrus Bukhari Road, Islamabad - Pakistan

For Comments/Feedback:

Tel: +92-51-846-3492, 3005, 3977

Email: drug.information@shifa.com.pk

Raising Awareness on World Asthma Day Environmental Impact of Inhalers

To mark **World Asthma Day (May 6–7, 2025)**, the Pharmacy Department at **Shifa International Hospital** organized a wellness activity highlighting the often-overlooked **environmental impact of inhalers**.

Held in the main hospital lobbies and reinforced during inpatient ward rounds, the initiative engaged both patients and healthcare professionals. Pharmacists led information desks, demonstrating correct inhaler technique and disposal, explaining differences between inhaler types, and raising awareness that **MDIs contribute to**

climate change, while **DPIs are a more eco-friendly option** in many cases.

Educational brochures supported key messages, emphasizing how small choices can make a meaningful impact.

The event reinforced that **effective asthma care and environmental responsibility can go hand in hand**, resonating strongly with all participants.



Greenhouse Gases (GHGs)

These are gases that trap heat in the Earth's atmosphere. They let sunlight in but prevent some of the heat that the sunlight brings from leaving the atmosphere. This is called the **greenhouse effect**.

Main GHGs include: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Fluorinated gases (like HFCs, used in refrigeration, Inhalers etc.)



Did you know?

One Metered Dose Inhaler (MDI) can have the **carbon footprint of a ~290 km car journey** (~10–25 kg CO₂ per inhaler).

Inside this issue

- World Asthma Day
- World Pharmacist Day
- Annual Medication Management Conference and workshop.
- World Antimicrobial Awareness week.

And Much More

Better Reporting, Safer Medications: Strengthening ADR Tracking

The pharmacy team, comprising **Clinical Pharmacist Ms. Bushra Anjum** and **Resident Pharmacists Mr. Ali Hassan** and **Mr. S.M. Yousaf**, conducted a series of interactive sessions to strengthen ADR (Adverse Drug Reaction) reporting and pharmacovigilance across the hospital. **These sessions were delivered to nurses, doctors, and pharmacists**, emphasizing the critical role of ADR reporting in improving patient safety.

The sessions highlighted the clinical impact of ADRs, common barriers to reporting, and the importance of correctly identifying drug reactions, supported by real-world clinical examples. Emphasis was placed on rational medication use, regular patient monitoring, and timely ADR reporting within a blame-free culture.

Participants were also oriented to simplified reporting mechanisms, including the hospital intranet ADR form and the **DRAP Med Safety App**, along with an overview of the evolution of pharmacovigilance practices in Pakistan.



Pharmacovigilance Update: Adverse Drug Reactions (ADRs)

Bushra Anjum
Charge Clinical Pharmacist

In the second quarter of 2025, a total of **101 Adverse Drug Reactions (ADRs)** were reported in Shifa, showing continued progress in enhancing **pharmacovigilance** and fostering a culture of **patient safety** within hospital.

Among the reported ADRs, the largest proportion was **hypersensitivity reactions (38.6%)**. These were managed using stat **antihistamines** and **corticosteroids**, and drug-allergy status on patient record was updated accordingly.

Additionally, **infusion-related reactions (11.9%)** were associated with medications like **vancomycin, ceftriaxone, rituximab, and fluoroquinolones**, often requiring **premedication** or modifications in **infusion rate and/or concentration for infusion**. Other ADRs include:

- **Neurological** (e.g. **psychosis, slurred speech**) (7.9%), were linked with **colistimethate** and **tacrolimus**.
- **Seizures (3%)** were noted with **carbapenems** and **immunosuppressant drugs**
- **Acute kidney injury (6.9%)** - mainly with **Amphotericin B** and **vancomycin**, requiring close renal function monitoring.
- **Electrolyte abnormalities (5.9%)** such as **hypokalemia, hyponatremia, and metabolic acidosis** were most commonly linked to **amphotericin B, fosfomycin, voriconazole, and co-trimoxazole**.
- **Drug-induced liver injury (3%)** was associated with **cytarabine** and **voriconazole**.
- **Tachycardia (4%)** occurred with **salbutamol, fluconazole, glycopyrrolate, and liposomal doxorubicin**

The hospital's **PV program** remains a top priority for patient safety. Through **training, active surveillance, and improved reporting mechanisms**, efforts remain ongoing to improve **ADR detection, data quality, and clinical responsiveness**, ensuring better patient outcomes and maintaining a culture of **medication safety**.

Goals of ADR Monitoring in Healthcare Setting:

1. To identify safety concerns with **new medications** (in the market, or new on the hospital formulary)
2. To identify **unusual severity or frequency** of the side effects of common drugs (prompting review to uncover potential product quality issues)
3. To update **drug allergy status** of patients to prevent future occurrence (as applicable)
4. To identify **preventable ADRs** and implement actions (such as prescribing, monitoring protocol, dilution/administration guideline etc.) to reduce the reoccurrence, or severity of the reaction
5. To **identify potentially unsafe medicines** in hospital formulary and replace them with safer options available
6. To continuously **train and educate healthcare staff and patients** on strategies that can avert an ADR
7. To **improve safe use, handling and monitoring** of medicines



The Schumock and Thornton scale

It is a tool used to assess the preventability of ADRs, determining whether an ADR could have been avoided. It uses a series of questions, and if the answer to one or more of these questions is "yes," the ADR is considered preventable, while all negative responses indicate a non-preventable ADR.

"Medicines Work Better When We Know: Report ADRs!"

Cancer-Associated Clotting - A Delicate Balancing Act

When it comes to anticoagulation in cancer patients, one size does not fit all. Certain **malignancies** come with unique **thrombotic and bleeding risks**. For instance, brain tumors heighten bleeding concerns, while pancreatic and upper GI cancers increase both clotting and bleeding risks.

A post-hoc analysis revealed that **VTE recurrence rates** vary: 11% in gynecological, 9% in GI, and 6% in lung cancers, with the highest bleeding risks seen in genitourinary (7%) and GI cancers (5%).

Thrombocytopenia adds complexity.

Anticoagulation is typically **contraindicated** when **platelets < 20,000/ML**.

Though arterial thromboembolism is less common (2–6% incidence), it warrants consideration—especially with causes

like nonbacterial thrombotic endocarditis or embolism from occult tumors.

Outpatient anticoagulation is standard for stable cancer-associated DVT, while PE often requires brief inpatient



observation. For most such cases, where no contraindications are present (such as severe renal impairment), **oral factor Xa inhibitors** are now preferred as first-line agents. They offer convenience, comparable efficacy to **low molecular weight heparin (LMWH)**, and growing safety

data. Among these, apixaban is often favored due to its favorable bleeding profile, particularly in GI malignancies.

Recent May 2025 trial involving over 1700 patients supports the use of reduced-dose **apixaban** (2.5 mg BID instead of 5 mg BID) for extended anticoagulation beyond 6 months. This regimen achieved similar 12-month VTE recurrence rates (2.1% vs. 2.8%) compared to full-dose apixaban, but with fewer clinically relevant bleeding events (12.1% vs. 15.6%). This supports the shift toward **reduced-dose apixaban** as a safer, practical long-term option for many patients with active cancer.

Ref: <https://pubmed.ncbi.nlm.nih.gov/40162636/>

Mehrab Tahir,
ASHP Resident Pharmacist



On November 16, the **Advanced Medication Management Conference (AMMC)** unfolded as a vibrant day dedicated to the future of pharmacy and clinical excellence. The event commenced with a welcoming note from **Salwa Ahsan**, Chief Pharmaceutical Officer and Chairperson of AMMC, followed by opening remarks from Shifa's COO, **Taimoor Shah**.

A major highlight of the morning was the Keynote Address delivered by Dr. Obaidullah Malik, CEO of the Drug Regulatory Authority of Pakistan, while **Eric Maroyka** from the ASHP shared global perspectives on practice advancement.

Throughout the day, the atmosphere was charged with intellectual energy during the **"MMU Champions," "Rxperts,"** and **"Rxcellence"** panel discussions, where physicians, nurses, and pharmacists bridged the gap between academia and hospital practice. Between competitive oral poster presentations and a lively fun quiz, attendees explored the latest innovations in the stalls and gallery during the tea break.

The day concluded with a celebratory shield presentation and a group photo, marking another successful chapter for the AMMC community.

What began as a mere thought to strengthen medication practices, has today transformed into one of Pakistan's most impactful medication-management gatherings, bringing together over 650 participants, 60+ innovative research projects, and insights from national and international expert. This conference has strengthened the foundation for safer, patient-centered medication practices in Pakistan.



For details, please visit our website: <https://ammc.shifa.com.pk/>

Exciting Visit!

We were honoured to host **Nasir Mahmood**, Chair Emeritus New York State Board of Pharmacy, and a renowned senior pharmacist from the USA at Shifa International Hospitals Limited!

During an open discussion forum with pharmacists and residents, he shared valuable insights on professional advancements, expanding role of pharmacists, collaboration opportunities, and the impactful work of the **Pakistani American Pharmacists Association (PAPA)** in supporting these initiatives. Mr. Mahmood was impressed by the passion and dedication of our pharmacy team and appreciated the great work being done here.

Thank you, Mr. Mahmood, for your time and expertise! We're grateful for your support and look forward to future collaborations.



Increased Risk of Congenital Malformations with TMP-SMX Use in Early Pregnancy: Large Cohort Study

A recent study published in *JAMA Network Open* highlights potential safety concerns with the use of trimethoprim-sulfamethoxazole (TMP-SMX) for urinary tract infections (UTIs) during the first trimester of pregnancy. Compared to beta-lactam antibiotics, first-trimester exposure to TMP-SMX was associated with an **increased risk of any congenital malformation particularly severe cardiac defects and cleft lip and palate.**

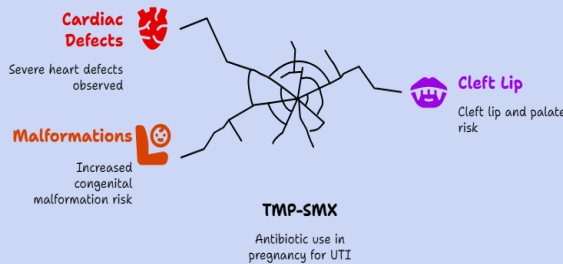
The large cohort analysis included over 71,000 pregnancies and found that beta-lactams had the lowest absolute risk of malfor-

mations, followed by **nitrofurantoin, fluoroquinolones, and TMP-SMX.** Notably, nitrofurantoin, while traditionally avoided in early pregnancy per ACOG guidelines, was not associated with increased malformation risk in this study.

TMP-SMX was often prescribed earlier in pregnancy, potentially reflecting use be-

fore pregnancy was recognized. Researchers suggest that the higher malformation risk may be influenced by residual confounding factors such as unplanned pregnancies or co-exposure to teratogenic substances.

TMP-SMX should be avoided in the first trimester when alternatives are available, while **nitrofurantoin may be a safer** and effective option, particularly for lower UTIs. Experts emphasize the importance of individualized risk-benefit assessment when prescribing antibiotics during pregnancy.



Reference: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2836169#250437153>

Wajeeda Khan,
ASHP Resident Pharmacist

Drug in Focus | Once-Monthly: Romosozumab

Romosozumab is a **once-a-month** injection used to treat osteoporosis in postmenopausal women at high risk of fractures. It is unique because it both builds new bone and reduces bone breakdown, offering a dual approach to improving bone health.

Romosozumab works by blocking sclerostin, a protein that typically inhibits bone formation. Inhibiting sclerostin stimulates bone growth while slowing bone resorption, leading to stronger bones and an increase in bone mineral density (BMD).

This **dual mechanism** makes romosozumab effective in enhancing bone strength and preventing fractures. Studies like **FRAME** and **ARCH** have shown that romosozumab significantly increases BMD in the spine and hips. It also reduces the risk of **vertebral**

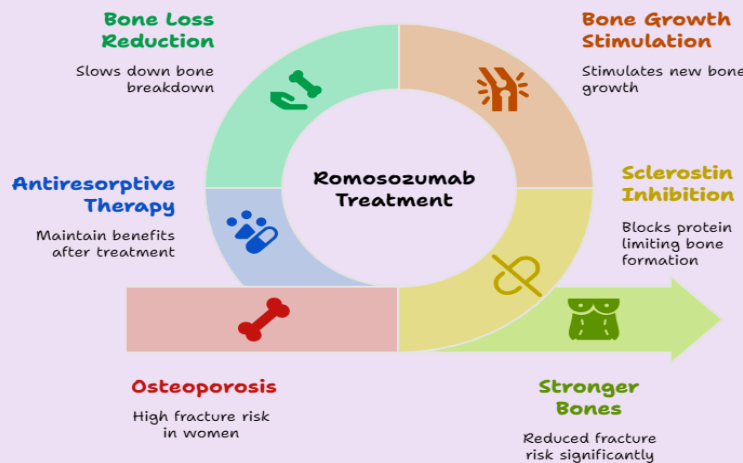
fractures by up to **73%** and clinical fractures by **36%**, compared to placebo or other osteoporosis treatments.

Romosozumab is administered as a **210 mg injection once a month** for **12**

patients may experience mild **injection site reactions** or **low calcium levels.** Therefore, checking calcium levels before starting treatment is essential.

Romosozumab is also **contraindicated** for those with a recent **heart attack** or **stroke** due to potential cardiovascular risks.

Romosozumab is especially beneficial for postmenopausal women with severe osteoporosis, a **history of fractures**, or those who haven't responded well to other treatments.



Reference: <https://www.nejm.org/doi/full/10.1056/NEJMoa1607948>

Muhammad Asim Latif,
Resident Pharmacist

Flood Relief Camp hosted by Shifa International Hospitals Ltd.

Shifa International Hospital successfully organized a three-day medical camp from July 22 to 24 in several flood-affected regions of Rawalpindi, including Fauji Colony, New Chakra, and Chakri, as part of its ongoing commitment to community health and welfare. Over the course of the camp, approximately 1,000 individuals: including children, women, and men; received free medical care and support at a time when their access to healthcare was severely disrupted by recent flooding.

A dedicated team of specialist doctors provided thorough consultations, patient treatments, and comprehensive health assessments, ensuring that both acute medical needs and underlying health concerns were properly addressed. The central objective of this initiative was to prevent and control the spread of water-borne diseases, which are particularly prevalent following floods and can pose serious public health risks if left unchecked.

Beyond immediate treatment, the camp served as an important preventive effort, raising awareness among communities about hygiene, safe water practices, and early symptom recognition. This initiative not only delivered tangible health benefits but also highlighted the vital role of organized outreach programs in improving resilience and health outcomes in vulnerable populations. By extending essential medical services directly to those most in need, Shifa International Hospital reinforced its mission of advancing healthcare access and promoting long-term public health in times of crisis.



World Pharmacist Day 2025



Shifa Hospital commemorated **World Pharmacists Day 2025** with a week-long series of activities under the theme *“Think Pharmacy, Think Health,”* highlighting the essential role of pharmacists in promoting safe and effective healthcare. Dedicated counter activities and drug information counters were set up across the hospital, where pharmacists actively engaged with patients and attendants, providing counseling on medication use, safety, and adherence. Outstanding pharmacists were also recognized and awarded for their commitment, innovation, and excellence in pharmaceutical care. The celebration reflected Shifa Hospital’s continued dedication to patient safety, professional



World Antimicrobial Resistance (AMR) Awareness (18th-24th Nov)

Act Now: Protect Our Present, secure our Future

As in previous years, World Antimicrobial Awareness Week (WAAW) was observed at Shifa International Hospital Ltd. with great enthusiasm and commitment to promoting responsible antimicrobial use. The week commenced with an awareness walk led by **Dr. Ejaz Ahmed Khan**, joined by hospital leadership including **Mr. Taimoor Shah**, Chief Operating Officer; **Prof. Dr. Muhammad Iqbal**, Vice Chancellor, Shifa Tameer-e-Millat University; **Ms. Salwa Ahsan**, Chief Pharmaceutical Officer; and **Ms. Arifa Khatoun**, Infection Prevention and Control Manager. The walk witnessed active participation from doctors, nurses, pharma-



cists, and other healthcare professionals, reflecting a strong, unified institutional effort to raise awareness about antimicrobial resistance (AMR).

Throughout the week, educational and awareness activities were conducted at an information counter set up in the A0 lobby, where patients and attendants were counseled on the appropriate and responsible use of antibiotics. Educational flyers and brochures were distributed, outpatient clinics were visited to disseminate antimicrobial stewardship (AMS) guidelines, and awareness messages were shared through social media platforms to extend outreach beyond the hospital. In addition, **Dr. Ejaz Ahmed Khan** recorded a podcast titled "*Why Antibiotic Misuse Is Dangerous*", and an article highlighting the importance of WAAW was published in **Dawn**, further amplifying the message of antimicrobial stewardship and public awareness.



At Shifa International Hospital – Pharmacy Department, we strongly believe in continuous professional development for pharmacists and pharmacy students.

Each year, we organize multiple free educational webinars, led by highly qualified professionals, with certificates provided upon completion.

To receive timely updates about upcoming sessions, kindly fill out the form:

<https://lnkd.in/eu5ewn65>

This is a valuable opportunity for anyone eager to enhance their knowledge, skills, and professional growth in pharmacy practice.



**LEARNING
NEVER
ENDS**

Annual Medication Management Conference (AMMC-2025), Pre-conference workshop

As part of the 5th Annual Medication Management Conference (AMMC-2025), a pre-conference workshop titled “Standards for Establishment of Hospital Pharmacies (SEHP) in Pakistan” was successfully conducted at Shifa International Hospitals, Islamabad.

The workshop was led by esteemed trainers Ms. Salwa Ahsan, Chief Pharmaceutical Officer, Shifa International Hospitals Ltd. and Chairperson Organizing Committee AMMC; Mr. Faisal Aziz Sandeela, Senior Manager Pharmacy, Shifa International Hospitals Ltd.; and Ms. Asma Hamid, Director Of Pharmacy Services, Dow University of health sciences.

The session provided valuable insights into regulatory, operational, and quality standards required for hospital pharmacy establishment in Pakistan.

The workshop was well received, with active participation from attendees, fostering engaging discussions and knowledge sharing, and contributing meaningfully to professional development in hospital pharmacy practice.



CONGRATULATIONS

Join us in congratulating **Miss Shinza Arshad**, Oncology Clinical Pharmacist, on achieving her **BCOP certification**;

Miss Zikra Zulfiqar, Neonatal Clinical Pharmacist, on earning the **ASHP Pediatrics Certificate**;

and **Mr. Usama Ahmed**, Staff Pharmacist, on attaining the **SIDP certification**.

Their accomplishments reflect a strong commitment to professional excellence and continuous learning.





Shifa Team in Action on National Forums



Salwa Ahsan (Chief Pharmaceutical Officer) was invited Trainer in the WHO-DRAP hosted 2-days national session on Medication safety and High Risk Medication (COMSTECH,



Salwa Ahsan discussed the importance of antimicrobial stewardship at the Capital University of Science & Technology annual conference (June 2025)



Faisal Aziz Sandeela, Sr. Manager Pharmacy addressed at the 1st International Symposium on Medication Safety (COMSATS University, Abbottabad Campus, June 2025)

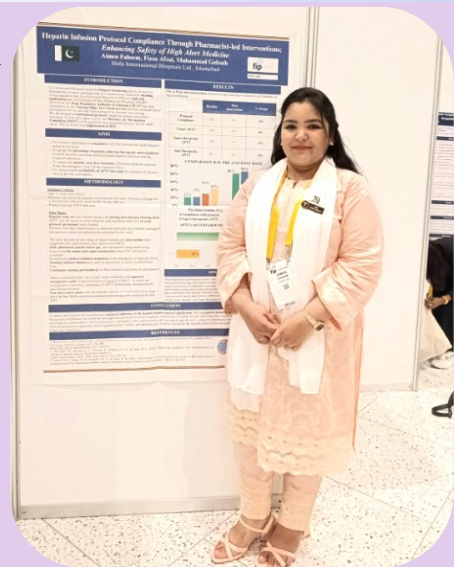


Fizza Afzal (Transplant Clinical Pharmacist) and Bushra Anjum (Oncology Clinical Pharmacist) shared insights on clinical pharmacy and patient safety at a seminar addressing a large gathering of pharmacists

Miss Aimen Faheem, Clinical Pharmacist, attended the 83rd FIP World Congress 2025 held in Copenhagen, Denmark, following the selection of her abstract titled "A Step Towards Safety: Enhancing Heparin Infusion Protocol Compliance Through Pharmacist-Led Interventions" for poster presentation. She proudly represented Shifa International Hospital and PSHP on an international platform. In recognition of her contribution, she was also awarded complimentary registration for the next FIP World Congress.



The congress brought together over 3,455 participants from 120 countries and featured more than 100 scientific sessions covering key areas such as antimicrobial resistance, artificial intelligence, and ethics in pharmacy, offering valuable opportunities for learning, collaboration, and global knowledge exchange. Congratulations to Miss Aimen on this outstanding achievement.



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