



Shaukat Khanum Memorial Cancer Hospital and Research Centre

Pharmacy Newsletter

Volume XII, Issue # 1, 2022

Special Edition – JCI Enterprises

Issued By:

Drug Information Centre, SKMCH&RC

P&TC Updates:

Pharmacy & Therapeutics Committee (P&TC) approved following drugs during 2022 at SKMCH&RC:

1. **Apixaban Tablet** – as regular formulary item.
2. **Alectinib Capsules** – as regular formulary item (restricted by cost).
3. **Pegylated Filgrastim 6 mg Injection** – as regular formulary item.

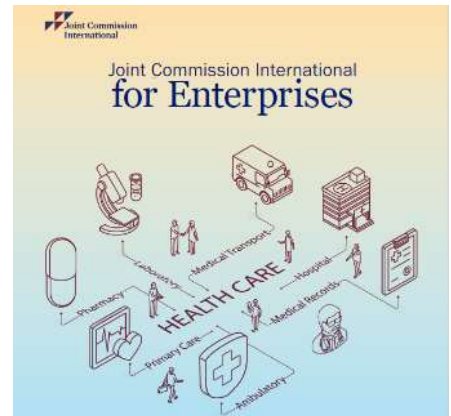
Formulary Deletion

1. **Ranitidine** (All dosage forms).



Joint Commission International (JCI)

The mission of JCI is aimed at fervently improving the safety and quality of patient care in the international community through the provision of education, advisory services, international accreditation and certification. JCI envisions a future with zero harm and highly reliable delivery of care. We are committed to making it a reality by collaborating with health care organizations to transform the way they work. Moreover, JCI has introduced the concept of JCI Enterprise; a process of accreditation for organizations with five or more campuses to be accredited fully in a single audit process. Shaukat Khanum Memorial Cancer Hospital & Research Centre is among the first organization in the region that has pursued for JCI Enterprise. We hope that this process will bring more quality and safety to our patients.



We Win Because We Work Together as a Team – We Believe Each Other

PHARMACY TEAM - LAHORE



PHARMACY TEAM - PESHAWAR



PHARMACY TEAM - KARACHI



American Society of Health System Pharmacist (ASHP) - Updates

Journey towards IPPRP year II

We are pleased to inform you that after being the first organization in South Asia, to be accredited by the American Society of Health-system Pharmacists (ASHP), for International Pharmacy Practice Residency Program (IPPRP), the Department of Pharmaceutical Services is heading towards 2nd year Advanced International Pharmacy Practice Residency Program (AIPPRP) accreditation. At this point, standard and supporting documents are being reviewed by International Accreditation Commission. Thereafter, ASHP Board of Directors will process the standards and in the fourth quarter of this year, the AIPPRP shall kick-off.

Completion of Pharmacy Residency – Mr. Soban

Mr. Soban Ahmed, the pharmacy resident for ASHP program for the year 2021-2022, has completed the IPPRP year 1. This was a great learning opportunity for him and the residency program nurtured him with great knowledge and skills. A farewell was also organized for him in the last month. We wish him good luck in his future endeavours.



Sharing is Caring

We, at the department of pharmacy services, SKMCH&RC, Lahore, being the second international site outside the USA, accredited for ASHP –IPPRP, are now taking the lead to share our knowledge with other institutes struggling for ASHP residency program nationally and internationally. Currently, we are providing guidance to top national institutes including Shifa International Hospital, Islamabad and Agha Khan University Hospital, Karachi to achieve their pharmacy residency from ASHP. Moreover, an international hospital from Africa is also in contact with us to seek our guidance regarding the pharmacy residency program.

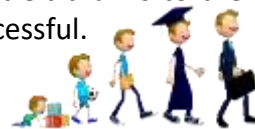
Preceptor of the Year

Each year, the outgoing pharmacy residents elect two preceptors who went above-and-beyond in teaching and mentoring the practice of pharmacy.

We are proud to announce the pharmacy residency program preceptors of the year 2021. This includes Mr. Rehan Khan Niazi, Preceptor Infectious Diseases and Ms. Mariam Fatima, Preceptor Aseptic Services & TPN. Heartfelt thanks to the team who works with our residents to make the program successful.



New Members as Preceptor in IPPRP – Year I



Mr. Adeel Siddiqui
Research Project



Mr. Umar Javed
Internal Medicine



Ms. Hamayal Khalid Dar
In-training Critical Care



Mr. Irfan Raza
Quality & Patient Safety

Medication Duplication Alert (MDA)

Cost Reduction & Improved Patient Safety

Direct Cost Saving from Implementation of Medication Duplication Alert in Hospital Information System

An in-house built Medication Duplication Alert (MDA) was integrated and implemented in hospital information system (HIS) to prevent duplication of prophylactic medications of online chemotherapy protocols with current medication list.



Study Design & Statistical Analysis:

Data of six month, before and after the implementation of medication duplication alert in in-patient chemotherapy protocols was analysed. Independent sample t-test, Pearson Chi-Square test and analysis of variance (ANOVA) were used to compare the mean differences in groups. Direct cost saving of average/day & annually prescribed prophylactic medications of chemotherapy protocols was calculated.

Results:

61.53 % reduction in dose duplication after MDA implementation.

81.85 % reduction in time taken by pharmacist intervention after MDA implementation.

With an average of 2 chemotherapy protocols prescribed, approximately PKR 4,000/day and **PKR 1.46 million/year** is estimated to be saved.

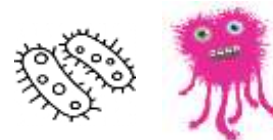
Future Considerations:

Medication duplication alert role should be expanded to identify different generic drugs with same therapeutic duplication.

Antimicrobial Stewardship Program

Ambulatory Care Settings

The major elements of Outpatient Antibiotic Stewardship provide us with a framework for antibiotic stewardship for outpatient clinicians and facilities that routinely provide antibiotic treatment. Antibiotic stewardship is the process to measure and improve antibiotics trend which are prescribed by clinicians and used by patients. Improving antibiotic prescribing involves implementing effective strategies to modify prescribing practices to align them with evidence-based recommendations for diagnosis and management. The four core elements of outpatient antibiotic stewardship are commitment, action for policy and practice, tracking and reporting. Establishing effective antibiotic stewardship interventions can protect patients and improve clinical outcomes in outpatient health care settings.



Fosfomycin VS Ertapenem for Outpatient Treatment of Complicated Urinary Tract Infections: A Multicentre, Retrospective Cohort Study

The increasing prevalence of extended spectrum beta-lactamases (ESBLs) and uptrend of community-acquired resistance to fluoroquinolones have made it difficult to treat the urinary tract infections with oral agents such as fosfomycin and co-trimoxazole etc. Hence, intravenous (IV) antibiotics, like ertapenem, are prescribed even if patients are tolerating oral intake. A multicenter, retrospective study comprising of 322 patients, was conducted to evaluate the relative efficacy of oral fosfomycin vs intravenous ertapenem, and to compare the outcomes of patients (resolution of clinical symptoms, length of hospital stay and adverse event frequency). Most infections were due to ESBL-producing *E. coli* and *Klebsiella pneumoniae*, 80%–90% of which were resistant to other oral options. Patients treated with fosfomycin, either as initial or subsequent stepdown therapy, had similar outcomes compared with those receiving definitive therapy with ertapenem. In addition, fosfomycin treated patients had significant reductions in length of hospital stay, duration of antimicrobial therapy and adverse events (1 vs 10). Fosfomycin outcomes were similar irrespective of duration of lead-in intravenous (IV) therapy or fosfomycin dosing interval (daily, every other day, every third day). It is suggested that fosfomycin may be a reasonable stepdown from IV antibiotics for UTI. Fosfomycin is cost effective, in view of the local prices, one month's therapy of ertapenem (~\$760) is more than ten times the cost of fosfomycin (~\$65).



Ref: Wald-Dickler N, Lee TC, Tangraphaphorn S, Butler-Wu SM, Wang N, Degener T, Kan C, Phillips MC, Cho E, Canamar C, Holtom P. Fosfomycin vs Ertapenem for Outpatient Treatment of Complicated Urinary Tract Infections: A Multicenter, Retrospective Cohort Study. In *Open forum infectious diseases* 2022 Jan (Vol. 9, No. 1, p. ofab620). US: Oxford University Press.

Covid-19 vaccine – Doses Administered at SKMCH

Vaccine	Vaccine Type	Storage (Temp.)	No. of Doses	Total doses dispensed
Sinopharm	BBIBP-CorV	2-8°C	2	700
CanSinoBio Convidecia	(Ad5-nCoV)	2-8°C	1	1991
Sputnik V	Adenovirus	-18°C	2	3600
Pfizer BioNTech	mRNA	-80°C	2 Booster ≥ 5months	8460

Therapeutic Guidelines - Update

Following guidelines were reviewed and updated in HIS.

- Critical Care (ICU)
 - ✓ Neuromuscular blockade (Updated)
 - ✓ Dexmedetomidine Protocol (Updated)
 - ✓ PICU Infusion (Updated)

Buprenorphine Safety Alert: January 2022

Buprenorphine is a semisynthetic partial mu-opioid receptor agonist with hypothesized safety and efficacy benefits over pure opioid agonists, owing to its proposed limitation on respiratory depression. Buprenorphine is available in different dosage forms like; sublingual tablets, buccal film tablets, extended injections for subcutaneous administration, immediate release injections for IM/slow IV administration and transdermal dosage forms.



The FDA warns about dental problems with buprenorphine medicines (transmucosal buccal or sublingual preparations) dissolved in the mouth to treat opioid use disorder and pain. The benefits for use outweigh risks as oral care can help prevent these problems. Dental adverse events, including tooth decay etc. have been reported even in patients with no history of dental issues. The FDA requires that a new warning about the risk of dental problems to be added to the prescribing information and the patient medication guide for all trans-mucosal buprenorphine-containing medicines. Prescribers should advise patients to see a dentist soon after starting the medicine and during treatment.

Ref: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-warns-about-dental-problems-buprenorphine-medicines-dissolved-mouth-treat-opioid-use-disorder>

Possible Safety Issues with Newly Authorized Paxlovid – ISMP Warning

The Institute for Safe Medication Practices (ISMP) has identified possible error risks with Paxlovid, which recently received Emergency Use Authorization (EUA) for the treatment of mild-to-moderate COVID-19.



Paxlovid is an inhibitor of CYP3A, the most abundant clinically significant group of cytochrome P450 isoenzymes, which may increase plasma concentrations of drugs that are primarily metabolized by CYP3A. On the other hand, Nirmatrelvir and Ritonavir are CYP3A substrates. Therefore, drugs that induce CYP3A may decrease Nirmatrelvir and Ritonavir plasma concentrations and reduce the therapeutic effect of Paxlovid.

Ref: <https://www.ismp.org/alerts/medication-safety-issues-newly-authorized-paxlovid>

<https://www.ismp.org/news/ismp-issues-warning-about-possible-safety-issues-newly-authorized-paxlovid>

Brand Recall - Accuretic (Quinapril HCL/Hydrochlorothiazide)

In accordance to the presence of a potential cancer-causing impurity called N-nitroso-quinapril, Pfizer Canada recently recalled an anti-hypertensive drug, Accuretic about which the Canadian health regulator announced on Friday, March 4 (Reuters).



According to Health Canada, prolonged exposure to N-nitroso-quinapril at a level higher than what is considered acceptable may increase the risk of cancer. Regardless, patients are permitted to take their medication as prescribed and do not need to return the drug to their pharmacy, however they were asked to look at alternatives. Health Canada further added that there is no immediate risk with temporary use of Accuretic.

Furthermore, similar recalls regarding NDMA have been observed in past years. One such example is the ranitidine recall.

Ref: <https://www.reuters.com/business/healthcare-pharmaceuticals/pfizer-canada-recalls-bp-drug-potential-cancer-causing-impurity-2022-03-04/>

Role of Pharmacist Interventions in Emergency Assessment Room (EAR)

Emergency medicine is a dynamic and rapidly evolving practice. In a meta-analysis by Shaat et. al., pharmacist interventions in the ambulatory setting had a positive impact on clinical outcomes related to disease management, drug optimization, ensuring patient safety, and providing quality of care.



The essential roles of pharmacists in EAR include: Medication order review, Medication therapy monitoring, and patient care involving High-Alert Medications, Drug Information, Medication preparation and Documentation. Empirical therapy should be started within the emergency department (ED). The role of clinical pharmacists has increased significantly especially in hospitalized patients, as they interact and communicate with the healthcare team regarding the health of patients, reconciling medications, interviewing patients, advising, and following up on discharge patients.

A total of 9 studies were quality assessed and included for evidence synthesis. Four studies showed a significant reduction in the readmission rate with an odds ratio (OR) of 1.6341 for the patients with the pharmacist care group. Patient's in-hospital mortality and appropriateness of medications had an OR of 3.2196 and 0.1444, respectively. The pooled OR (n = 1026) in 4 studies was 1.4534 (95% confidence interval = 0.2844–0.7292) in antibiotic guidelines for pharmacist interventions. In addition, evidence showed a statistically significant reduction in hospital revisits (OR = 2.05, 95% confidence interval = 1.76–2.39) with the pharmacist in the emergency department compared with no pharmacist. Lastly, pharmacists in emergency department can do far more than the role played by hospital pharmacists in the distribution of medications. Clinical pharmacists regularly advise patients on the importance of medication adherence and proactively identify reasons for no adherence, such as adverse effects of medication and cost barriers.

Ref: Shaat, M. S., Gillani, S. W., Mohiuddin, S., Menon, V., Azhar, A., & Jiaan, N. (2022). Influence of Clinical Pharmacist's Interventions on Clinical Outcomes of Patients With Pneumonia in the Emergency Department of Tertiary Care Healthcare Setting. *Infectious Diseases in Clinical Practice*, 30(2), 1-6.

Hospital Pharmacy CME Program for Future Pharmacists

The continued pharmacy education is the cornerstone of sustainable quality pharmaceutical care. Department of Pharmacy has taken numerous initiatives for knowledge and competency building measures for community and hospital pharmacists as well as graduating students. Continuing the tradition, an opportunity for future clinical pharmacists interested in upgrading themselves has been created. A program designed to provide virtual sessions, one each month, which will provide information rich interactions with the presenters.



Medication Management & Use (MMU) - Updates

Following MMU procedures have been revised which can be accessed through the intranet.

- 1- Procedure on Procurement & Management of Medication
- 2- Procedure on Pharmacy Disaster Regulations
- 3- List of High alert Medication and Look Alike Sound Alike medication (LASA)

Dress-in-Blue Day

Pharmacy on the front lines spreading Colorectal Cancer Awareness

On March 4, pharmacy department participated in activities related to cancer awareness. Pharmacy staff wore blue colour dress code, to spread awareness & show its support and commitment to the global campaign for the colorectal cancer in order to honor the cancer survivors and to support and commemorate those who are impacted by it.



Pharmacy Staff Achievements - Computer Course Completion

Learning essential skills is vital for career progression as well as improvement of performance in assigned tasks. We hope that the knowledge and skills learnt during the course would be beneficial for our staff in excelling in their job responsibilities. Following employees from pharmacy department have successfully completed Basic Computer Course:

- Muhammad Shabbir
- Muhammad Rashid Javed



Certificate of Achievement – Improving Global Health



Publications

Following research publication submitted by pharmacist of SKMCH&RC, Lahore has been accepted and published online, in a well-reputed international journal:

Muhammad Rehan Khan, Zikria Saleem, Narjis Batool, Mahrukh Babar, Aleena Shabbir. Retrospective drug utilization review of meropenem and role of infectious disease pharmacist in specialized cancer care hospital. *Journal of Oncology Pharmacy Practice*. 2022;10781552221077929. doi: 10.1177/10781552221077929. PMID: 35253504. **Impact Factor: 1.809**

FIP 2022 – Pharmacy United in Action for the Healthcare World

This year's theme aims to showcase pharmacy's positive impact on health around the world and to further strengthen solidarity among the profession. Pharmacy team of SKMCH&RC will participate with full zeal and spirit in this initiative.



**Pharmacy
united in action for
a healthier world**

Sharing is Caring - Presentations, Webinars, & Conferences

The pharmacy department, as per tradition has participated in various events and continued this trajectory in the first quarter of 2022.

Webinar - Role of Oncology Pharmacist in Cancer Care at SKMCH & RC

As part of the World Cancer Day Initiative of Union for International Cancer Control (UICC), Department of Pharmacy, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, organised an online webinar. This was among the 955 activities logged related to the World Cancer Day, across the globe. During this webinar, Oncology Pharmacist Mr. Ehsan Elahi, shed light on the role and impact of oncology pharmacist in clinical, ambulatory, emergency and aseptic services.

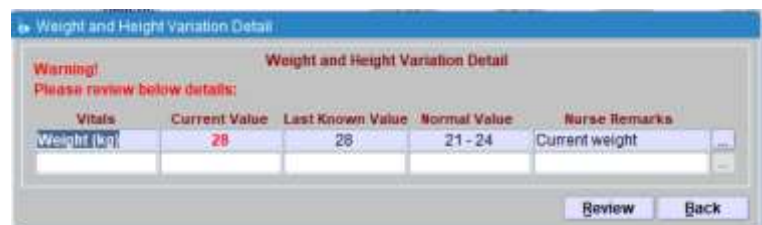


Pharmacy Oversight Improvement Committee (POIC)

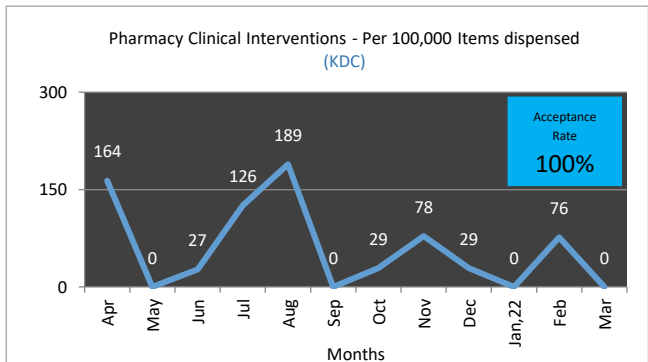
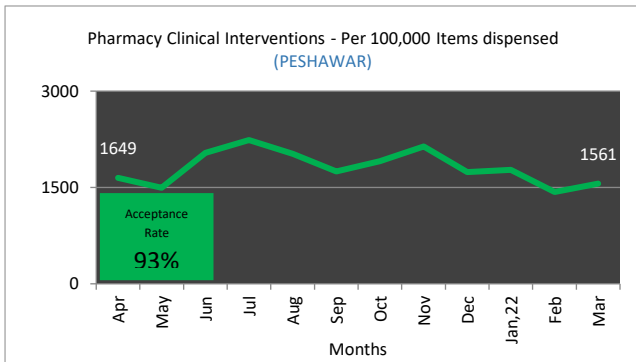
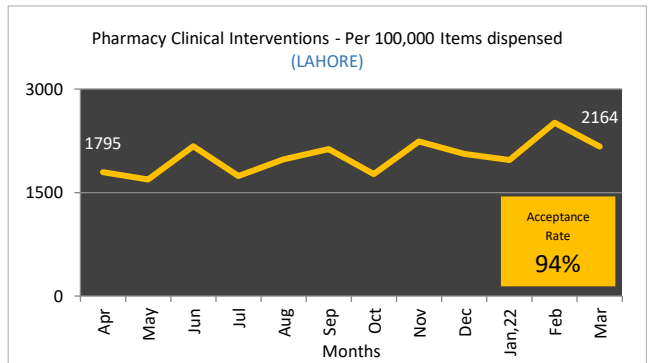
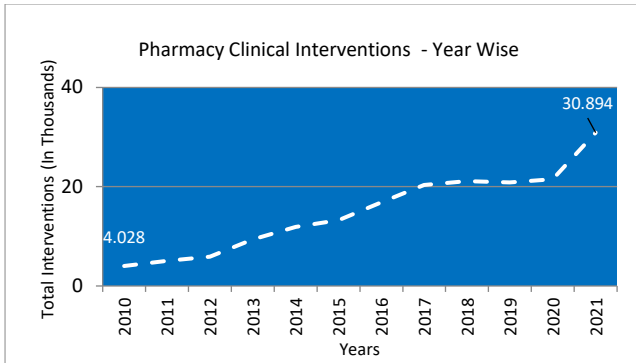
Pharmacy Oversight Improvement Committee (POIC) comprises of the team of pharmacy from all sites and is chaired by the head of pharmacy under the umbrella of P&TC. POIC coordinates department's performance improvement program, assesses and enhances the quality of pharmaceutical services by maintaining a mechanism to evaluate the clinical and operational performance of the pharmacy department. It Identifies and prioritizes opportunities for performance improvements based on findings from on-going monitoring programs and other sources. In addition it receives reports and provides summary of departmental operations to the Pharmacy and Therapeutic Committee (P&TC) periodically.

Hospital Information System (HIS) - Updates

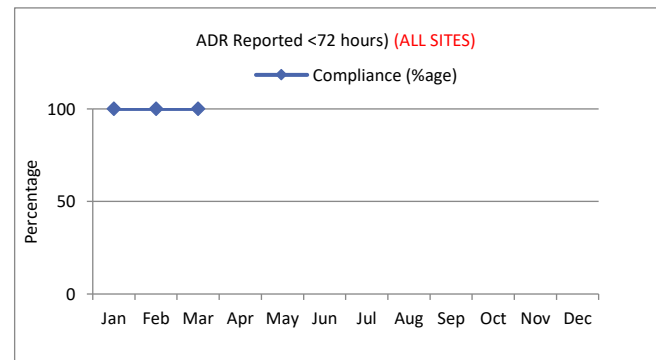
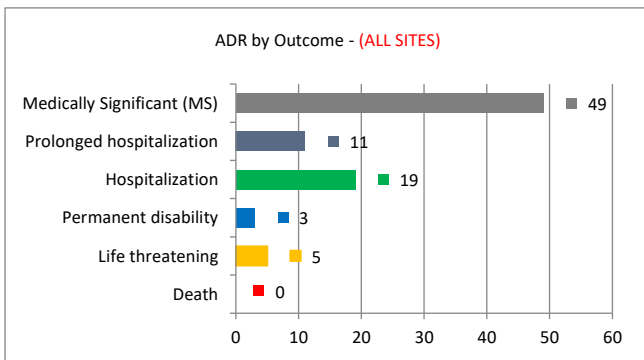
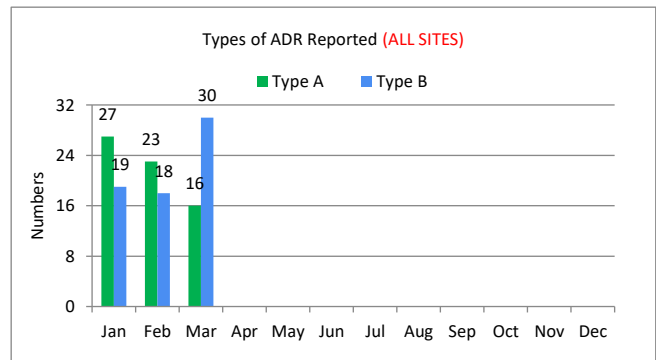
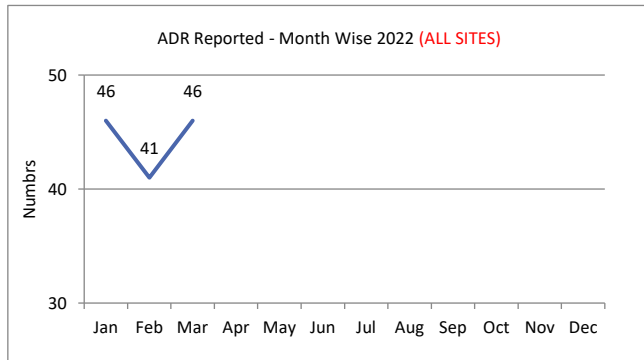
1. Weight and height alerts have been activated at physician, pharmacist and nursing level.
2. ADR reporting form upgradation with respect to further improved information in patient chart.
3. Addition of medication counselling instructions in Urdu language on OPD and discharge medication prescription.



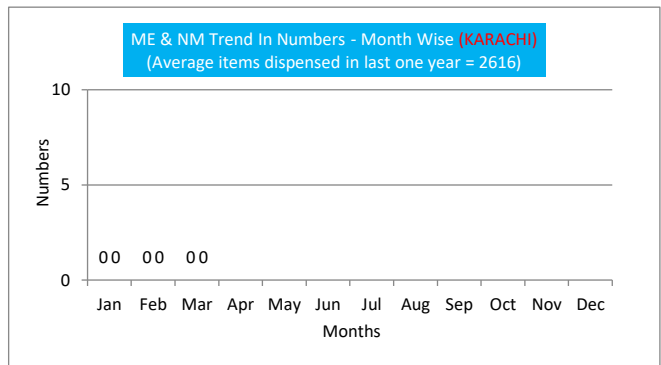
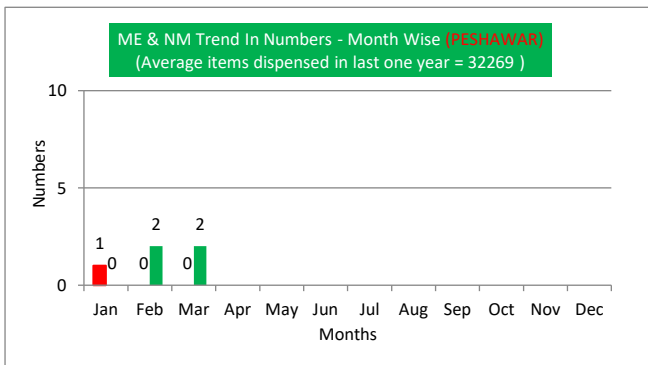
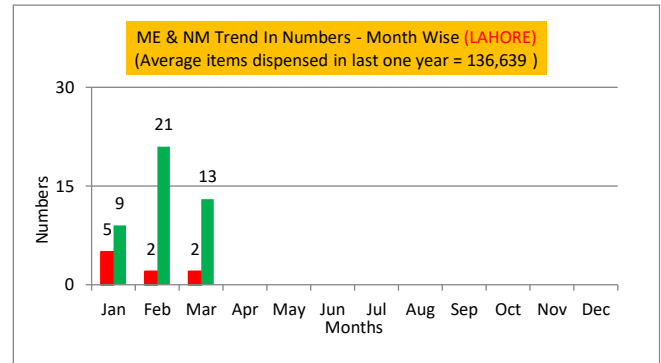
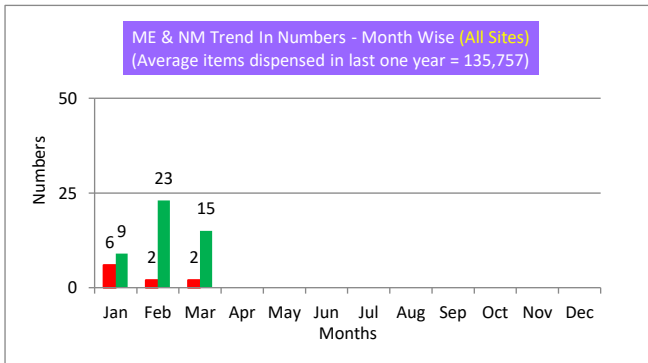
Pharmacy Clinical Interventions



Adverse Drug Reaction (ADR) Reported



Medication Errors and Near Miss Reported



Ward Stock Audits – Common Findings Observed

1. Syrups without opening dates.
2. Missing unit stock emergency medicines.
3. Unlabeled trolley medicines.
4. Medicines of discharged/transferred patients not returned to pharmacy.
5. Prepared hydrations not timely returned to pharmacy leading to expiration.
6. Incomplete documentation of room/fridge temperature.



Biennial Pharmacy Workshop - For Pharmacy Technicians (Feb 2022)

The department of pharmaceutical services, SKMCH&RC has recently organized an advanced workshop that focuses on the development of a comprehensive personnel training and assessment for sterile compounding. This is held biennially as a part of staff competency. The purpose of this training program incorporates sterile compounding best practice recommendations and ensures compliance with USP 797 and 800 standards.



To keep the Pharmacy Newsletter updated,
Please contact at druginfo@skm.org.pk