



Shaukat Khanum Memorial Cancer Hospital and Research Centre

Pharmacy Newsletter

Volume XI, Issue # 3, 2021

Issued By:

Drug Information Centre, SKMCH & RC

P&TC Updates:

Following drugs are approved by Pharmacy & Therapeutics Committee (P&TC) during 2021 SKMCH&RC:

For COVID-19 (Restricted by Services – ICU / IM & ID)

1. **Chlorhexidine Topical Solution (4%)** – As regular formulary item
2. **Covid-19 Vaccine** – As regular formulary item
3. **Tapentadol Tab (IR)** – As regular formulary item
4. **Morphine Sulfate Inj (Preservative Free) for IT** - As regular formulary item
5. **Palbociclib Tab** – Restricted by Cost (In Stage IV metastatic breast cancer only)
6. **Brentuximab Inj.**- Restricted by Cost (3 Indigent slots / year)
7. **Venetoclax Inj.** - Restricted by Cost (6 Indigent cycles / year)
8. **Azacitidine Inj.** - Restricted by Cost (6 Indigent cycles / year)
9. **Carbocisteine Tab/ Syp** – As regular formulary item
10. **Beclomethasone / Formoterol Inhaler.** – As regular formulary item
11. **Rocuronium Inj.** – As regular formulary item
12. **Vortioxetine Tab** – Restricted by service (Psychiatrist only)
13. **Venlafaxine Tab/Cap** – Restricted by service (Psychiatrist only)
14. **Aripiprazole Tab** – Restricted by service (Psychiatrist only)
15. **Lurasidone Tab** – Restricted by service (Psychiatrist only)
16. **Pembrolizumab Inj** - Restricted by Cost
17. **Blinatumomab Inj.** - Restricted by Cost
18. **Paclitaxel (Albumin-bound)** - Restricted by Cost
19. **Ribociclib Tab 200mg** - Restricted by Cost

SKCS 2021 – Oncology Pharmacy Virtual Session

Pharmacy department is actively participating in 20th Annual Shaukat Khanum Cancer Symposium, to be held from 5th-7th November, 2021. Presented here, is the scientific program for this year's oncology pharmacy session. Renowned international speakers will talk about new trends in clinical pharmacy practice for oncology care. Advanced pharmacy practices will be highlighted and significance of management and leadership approach in forecasting oncology pharmacy practice, will be discussed.

1110	ONCOLOGY PHARMACY	Sunday, 7 November 2021
<p><i>Moderators: Muhammad Tahir Aziz - Chief Operating Officer, SKMCH & RC, Peshawar, Pakistan & Omar Akhlaq Bhutta - Associate Director Pharmacy, SKMCH & RC, Lahore, Pakistan</i></p> <p>INTERNATIONAL ADVANCED PHARMACY PRACTICES; GOING BEYOND ADAPTATION</p>		
1110	WELCOME	
<p><i>Omar Akhlaq Bhutta - Associate Director Pharmacy, SKMCH&RC, Lahore, Pakistan</i></p>		
1115	SAFE MEDICATION PRACTICES: USING THE ISMP MEDICATION SAFETY SELF-ASSESSMENT FOR JOINT COMMISSION INTERNATIONAL ACCREDITED HOSPITALS	
<p><i>Rabih Dabliz - Senior Manager, Quality and Medication Safety Services, Cleveland Clinic, Abu Dhabi</i></p>		
1140	PHARMACY PRACTICE STANDARDS: THE PERSPECTIVE OF QUALITY ONCOLOGY PRACTICE INITIATIVE	
<p><i>Saima Qasim - Senior Oncology Pharmacist - National Guard Health Affairs, Jeddah, Saudi Arabia</i></p>		
1205	HOSPITAL PHARMACY MANAGEMENT SKILLS AND EFFECTIVE LEADERSHIP IN PAKISTAN: THE ASHP PERSPECTIVE	
<p><i>Saba Mazhar - Assistant Manager, Pharmacy Services, SKMCH&RC, Lahore, Pakistan</i></p>		
1230	ADVANCING MEDICATION MANAGEMENT SYSTEM: THE ROLE OF PHARMACY ACCORDING TO UPDATED JOINT COMMISSION INTERNATIONAL STANDARDS	
<p><i>Muhammad Umar Khalid - Pharmacy Manager, Burjeel Hospital, Abu Dhabi</i></p>		
1245	QUESTIONS AND ANSWERS	



Systemic review published about the impact of clinical pharmacists in Pakistan

By Adeel Siddiqui

Ahmed et al., has published a comprehensive systematic review comprising of detailed analysis of 7 randomised control trial (RCT) and 2 observational studies, out of 751 research articles searched from secondary literature resources. Pharmacists have shifted roles from dispensing to patient's bedside and ensured rational and evidence-based medicine use as part of multidisciplinary team of healthcare professionals. The authors found 3 RCTs having a low risk of bias (ROB), 2 RCTs were having an unclear ROB, while two RCTs were having a high ROB. The nature of clinical pharmacist's interventions included one or more components such as disease-related education, lifestyle changes, medication adherence counselling, medication therapy management, and discussions with physicians about prescription modification. Clinical pharmacists' interventions reduce medication-related errors, improve therapeutic outcomes such as blood pressure, glycemic control, lipid control, CD4 T lymphocytes, and renal functions, and improve humanistic outcomes such as patient knowledge, adherence, and health-related quality of life. However, no study reported the economic outcomes of interventions, and therefore, in future it can be a keen prospect for clinical pharmacists to study. Moreover, the authors have concluded that the clinical pharmacists played a significant role in achieving desired therapeutic outcomes. Nonetheless, the studies should have better study design and should avoid the risk of bias.



Ref. Ahmed A, Saqlain M, Tanveer M, Blebil AQ, Dujaili JA, Hasan SS. The impact of clinical pharmacist services on patient health outcomes in Pakistan: a systematic review. BMC Health Services Research. 2021 Dec;21(1):1-4

Top 10 Medication Errors and Hazards Observed in 2020

By Hafiz Muhammad Usman

Institute for safe medication practices (ISMP) has identified the Top 10 medication errors and hazards that appeared in, the ISMP Medication Safety Alert! during 2020. These errors are based on the frequency of their reporting, serious consequences, persistent nature, wherefore, can be avoided with system and practice changes. Out of ten, two errors are closely associated with the COVID-19 pandemic. Therefore, in addition to the two pandemic-related hazards, we believe the other eight issues need attention and priority in the coming Years to avoid life threatening errors.

#	Medication Errors and Hazards	SKMCH Practice
1	Prescribing, dispensing & administering extended-release opioids to opioid naïve patients	Following WHO pain ladder concept and step wise titration of opioids while treating the pain of patients.
2	Errors with oxytocin	Rarely used- We have defined checks for LASA and high alert medications at the level of prescribing, dispensing and administration.
3	Hazards associated with positioning infusion pumps outside of COVID-19 patient's room	All infusion pumps are placed in patient's room and we have a 100% compliance with WHO protocols while handling such hazards resulting in minimizing such type of errors.
4	Errors with the COVID-19 vaccines	No error found up till now due to implementation of strict storage & dispensing protocol.
5	Use of the retrospective, proxy "syringe pull-back" method of verification during pharmacy sterile compounding	We have an independent double check system before and after compounding sterile preparations.
6	Combining or manipulating commercially available sterile products outside the pharmacy	We have a separate medication room for the dilution of readily administered products for nurses. Moreover, parenteral handbook is available in hard and soft forms.
7	Medication loss in the tubing when administering small-volume infusions via a primary administration set	Currently, as per our practice, saline flush is used after every small volume infusion, where applicable. Also some medications are infused via Y-site administration.
8	Use of error-prone abbreviations, symbols, or dose designations	We have a list of hospital approved abbreviations. Pharmacists write instructions on labels and all drugs are being dispensed accordingly.
9	Wrong route (intraspinal injection) errors with tranexamic acid	Tranexamic acid is part of high alert medication and intraspinal administration is not a practice at SKMCH&RC.
10	Not using smart infusion pumps with dose error-reduction system in perioperative setting	In Process – Integration of smart infusion pumps with HIS is completed, now hardware procurement and interfacing development is in process.

Ref. <https://www.ismp.org/resources/top-10-medication-errors-and-hazards-2020>

Pfizer's Comirnaty becomes first COVID 19 vaccine to gain full FDA approval

By Saman Sadaqat

The US Food and Drug Administration (FDA) has officially approved the Pfizer BioNTech's vaccine 'Comirnaty' for people aged 16 and over, making it the first fully approved vaccine in the fight against COVID-19. Acting FDA Commissioner Janet Woodcock, M.D. called the agency's August 23 announcement a "milestone" in the ongoing pandemic and said in a statement that the public can be very confident that this vaccine is compliant with the high standards of safety, efficacy and manufacturing quality that FDA requires of an approved product. Based on the results from the clinical trial, the vaccine is 91% effective in preventing COVID-19 disease with the most commonly reported side effects being fatigue, headache, muscle or joint pain, redness and swelling at the injection site, chills and fever. Company will continue to conduct post marketing studies to further assess the risks of myocarditis and pericarditis following vaccination with Comirnaty, according to the FDA.

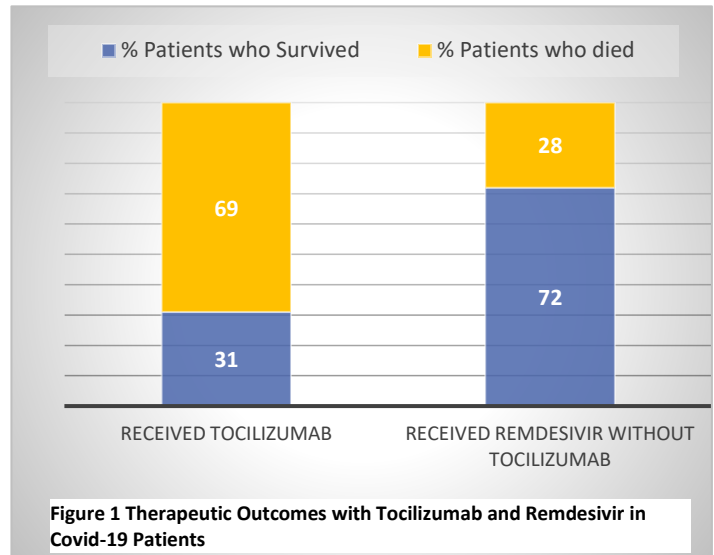


Ref. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine>

Therapeutic outcomes with Tocilizumab and Remdesivir in Covid-19 Pneumonia Patients at Cancer Care Hospital

By Fahad Javed

A retrospective study was conducted at Shaukat Khanum Memorial Cancer Hospital and Research Centre to evaluate the mortality benefit of Tocilizumab and Remdesivir along with corticosteroids in patients with severe Covid-19 Pneumonia*. Therapeutic outcome was Covid-19 pneumonia related mortality within 28 days from hospital admission. Data was collected from April 2020 to September 2021. Total 154 patients' received remdesivir and tocilizumab along with corticosteroids. Among them, 116 patients received Remdesivir and 38 patients received Tocilizumab.



A descriptive statistical analysis revealed that 72% patients survived with the use of remdesivir along with corticosteroids while 31% patients survived with tocilizumab along with corticosteroids, as shown in figure 1. Similarly, mortality rate was 28% with Remdesivir and 69% patients with Tocilizumab.

These retrospective findings showed that survival rate is greater with the use of Remdesivir (without Tocilizumab) along with corticosteroids. Further prospective studies should be done to evaluate the mortality benefit of Tocilizumab and Remdesivir in Covid-19 pneumonia patients.

*Patients who require supplemental Oxygen (SpO2 < 94%) or patients in ICU with mechanical ventilation.

FDA Approves First Interchangeable Biosimilar Insulin Product for Treatment of Diabetes

By Amna Habib

On July 28th, the U.S. Food and Drug Administration approved the first interchangeable biosimilar insulin product that is Semglee (insulin glargine-yfgn) for the Type 1 and Type 2 diabetes mellitus in adults and in pediatric patients with Type 1 diabetes mellitus. Semglee (insulin glargine-yfgn) is the first interchangeable biosimilar product approved by FDA in the U.S for the treatment of diabetes enabling health care providers with additional safe, high-quality and potentially cost-effective options for treating diabetes.

A biosimilar is a biological product that is structurally and functionally similar to, and has no clinically meaningful differences from, the reference product having same safety and effectiveness. An interchangeable biosimilar product may be substituted for the reference product without the prescriber intervention similar to how generic drugs are substituted for brand name drugs helping in reduction of health care cost.

Semglee (insulin glargine-yfgn), and Lantus (reference product) have no clinically meaningful differences in terms of safety, purity and potency. The most common side effects include edema, lipodystrophy weight gain and injection site reactions, rash, redness, pain and severe itching.

Ref. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-interchangeable-biosimilar-insulin-product-treatment-diabetes>

Hand hygiene in health care: 20 years of ongoing advances and perspectives

By Muhammad Rehan Khan

In past two decades many studies have been performed to assess the benefits of hand hygiene practices in health care settings in the prevention of health care associated infections. Cost related to hand hygiene is quite lower as compared to cost of treating health care associated infections. This will also lead to less exposure of patients to antibiotics and eventually this helps in controlling antimicrobial resistance. Issues related to gaps in hand hygiene practices are: lack of compliance by health care professionals and availability of alcohol products for hand rub. Recent COVID pandemic has improved compliance in health care professionals and patients, to great extent but this practice needs to be maintained to overcome health care associated infections. For continuation of hand hygiene practices, authorities should ensure provision of alcohol-based hand-rub products in all health care settings.



Ref. Lotfinejad N, Peters A, Tartari E, Fankhauser-Rodriguez C, Pires D, Pittet D. Hand hygiene in health care: 20 years of ongoing advances and perspectives. The Lancet Infectious Diseases. 2021 Aug 1;21(8):e209-21.

Presentations, Webinars & Conferences



Department of pharmaceutical services actively participated in the Virtual-International conference on 'Innovation in Pharmacy' organized by "Giving Back to Pharmacy Pakistan". Different presentations and sessions presented virtually were attended by pharmacy staff. The sessions were conducted at from 18-19 September, 2021. The details are as following; Associate Director Pharmacy, Mr. Omar Akhlaq Bhutta, SKMCH & RC, was part of the panel discussion about 'future trends in pharmacy'. While, Miss Hamayal Khalid Dar, who completed residency, certified from American Society of Health-System Pharmacists (ASHP) accredited hospital in Pakistan, presented on "Residency program experience". Mr. Muhammad Rehan Khan, Infectious diseases Pharmacist, presented on the topic of 'challenges in increasing MDRs in Pakistan and the role of the Pharmacist'.

World Pharmacists Day - 25th September 2021



PHARMACY
Always trusted
for your health

WORLD 25 SEPTEMBER
PHARMACISTS DAY



27 September 2021
FIP's World Pharmacists
Day campaign reached
195 countries/states

Flu Vaccine

Get the Flu Shot

Before the flu gets you

Flu vaccine is your first line of defence against influenza



Who should get vaccinated this season?

Flu Viruses are most common during the fall and winter months, seasonal flu viruses can be detected year-round, however, seasonal flu activity can begin as early as October and continue to occur as late as May.

- ✓ Everyone from 6 months of age and older
 - ✓ Pregnant Women
 - ✓ Residents of nursing homes
- People who have medical conditions including:**
- ✓ Asthma
 - ✓ Neurological disorder
 - ✓ Chronic lung disease
 - ✓ Heart disease & stroke
 - ✓ Blood disorders
 - ✓ Kidney disorders
 - ✓ Liver disorders
 - ✓ Metabolic disorders
 - ✓ Weakened immune system due to disease or medication
 - ✓ HIV/ AIDS
 - ✓ Long term aspirin therapy

Recommended Dose

Age Group	Dose	No. of Doses
6 to 35 months	0.25 ml	1* or 2 **
3 to 8 years	0.5 ml	
≥ 9 years		1

*Children 6 to 35 months of age receive 0.25 ml dose

**Previously unvaccinated children 6month to < 9years of age require 2 doses of seasonal influenza vaccine with an interval of 4 weeks

Note: Should not be administered to anyone with a history of severe allergic reaction to egg protein or any component of the vaccine

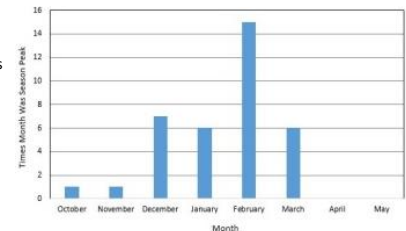


How Flu Spreads:

- 1- Person to Person
People with flu can spread it to others up to about 6 feet away. Most experts think that flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk.
- 2- When Flu Spread
People with flu are most contagious in the first three to four days after their illness begins. Most healthy adults may be able to infect others beginning 1 day **before** symptoms develop and up to 5 to 7 days **after** becoming sick. Symptoms can begin about 2 days (but can range from 1 to 4 days) after the virus enters the body.

Ref: <https://www.cdc.gov/>

Peak Month of Flu Activity
1982-1983 through 2017-2018



Extravasation

Extravasation injury is defined as the damage caused by the efflux of solutions from a vessel into surrounding tissue spaces during intravenous infusion. The damage can extend to involve nerves, tendons, and joints and can continue for months after the initial insult.



For further details, please see MMU Policy on Chemotherapy Extravasation (Ref # 22)

Minimization and Prevention of Extravasation

Correct
Site

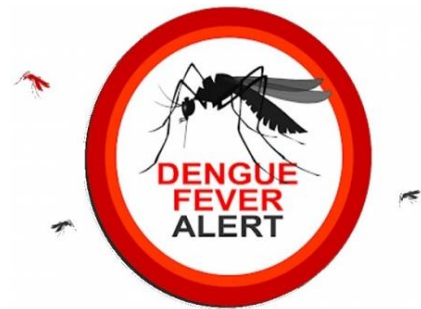
Correct
Cannulation

Correct
Technique

Correct
Knowledge

Guidelines by DEAG- Criteria for admission of Dengue Patients, The Role of Prophylactic Transfusion in Dengue and Rational use of Dextran-40

Dengue is a mosquito-borne viral infection, found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas. The virus, *Aedes* species is responsible for causing dengue. There are four DENV serotypes, meaning that it is possible to be infected four times. As per SKMCH& RC guidelines, all probable and confirmed patients must be admitted to hospital for careful monitoring and management.



Admission Criteria

Government of Punjab has issued guidelines regarding the admission of patients affected by dengue infection. And states that *'All probable and confirmed patients must be admitted to hospital for careful monitoring and management'*.



PROBABLE CASE:

WBC < 4000/mm³ + Platelet < 100000/mm³ or Falling trend in PLT count (Drop of > 20,000 in 24 hours)

CONFIRMED CASE:

- PCR: +ve
- NS1: +ve (ELISA)
- IgM: +ve

Four fold rise in IgG in paired sample

Any suspected patient with warning signs even if it does not fulfill lab criteria of probable or confirmed must also be admitted to hospital.



PROPHYLACTIC TRANSFUSION VS FLUID MANAGEMENT

There is no role of prophylactic transfusion with platelets and fresh frozen plasma to prevent bleeding.

Dextran-40 is indicated in dengue shock syndrome, not responding to three times of crystalloid administration or three boluses of (1000 ml each) crystalloid solution (N/S).

Dose of dextran-40 is 10-20 ml/kg to be administered over 30-60 min.



CONTRAINDICATION TO DEXTRAN-40

- Hypersensitivity to dextran or corn products
- Severe bleeding disorders
- Severe oliguria/anuria due to renal disease
- Disseminated intravascular coagulation and hypofibrinogenemia

Amjad Anwar, PharmD (New ASHP Pharmacy Resident 2021)

"I am Amjad Anwar, a graduate of University of Malakand, KPK. I have been a distinctive pupil throughout my student life. Apart from academics, my skills made me a member of different socio-medical seminars and conferences. I am a career-oriented person. I started my professional career as trainee pharmacist at Northwest General Hospital Peshawar, and later on, joined Maroof International Hospital Islamabad as Pharmacist. I have a dream to give my maximum clinical and technical output on behalf of my Pharmacy profession. Shaukat Khanum has provided me with an opportunity, under the umbrella of ASHP Residency, to polish my abilities and skills to be focused and determined in my field, no matter what the circumstances are. It is a conventional truth that professional organization distinguishes an ordinary graduate from a professional one; this residency will hopefully assist in my personal advancement & to strengthen my professional skills and learnings to uplift my profession in Pakistan. I am hopeful to achieve my goals, play a role as responsible & hard-working pharmacist in the future, and represent my profession in a better manner."



Publications

In recent times, following research publications submitted by pharmacist of SKMCH& RC, Lahore, have been accepted and published online, in well-reputed international journals:

Siddiqui A, Ahmed A, Tanveer M, Saqlain M, Kow CS, Hasan SS. **An overview of procurement, pricing, and uptake of COVID-19 vaccines in Pakistan.** *Vaccine*. 2021 Aug 31;39(37):5251-5253. doi: 10.1016/j.vaccine.2021.07.072. Epub 2021 Jul 31. PMID: 34364719; PMCID: PMC8324410. - **Impact Factor: 3.641**

Elahi E, Siddiqui A. A call for revamping the policy on import process of anticancer drugs in Pakistan. *Journal of the Pakistan Medical Association*. 2021 Sept 16;71(10): 2483. doi: 10.47391/JPMA.3458 -**Impact Factor: 0.781**



Reporting Makes Medicine Safer

- *By Enhancing Pharmacovigilance Capabilities*
- *By Reporting Suspected Medicine Adverse Effects*



Don't forget to report ADR(s) related with rate associated hypersensitivity reactions.



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