



PHARMACY BULLETIN

Shifa International Hospitals Ltd.

شفا انٹرنیشنل ہسپتال لمیٹڈ

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Celebrating World Pharmacist Day - Recognizing the Pillars of Healthcare

World Pharmacist Day is an annual event, celebrated on September 25th, dedicated to recognizing and appreciating the indispensable role of pharmacists in healthcare. The Department of Pharmacy Services at Shifa International Hospitals Ltd. (SIH) stands out as a leading hospital and clinical pharmacy, holding prestigious accreditations from Joint Commission International (JCI) and ISO. Our pharmacy residency program has earned 'candidate' status from the American Society of Health-System Pharmacists (ASHP), reflecting our commitment to excellence.

This year's World Pharmacist Day theme, "**Pharmacy Strengthening Health Systems**," underscored the pivotal position of pharmacy services within healthcare. Throughout the week, pharmacy organized activities to raise awareness among both the public and healthcare professionals about the responsible use of medications and the crucial role that pharmacists play.

One of the focal points of the celebration was the **role of pharmacists in medication management and use**. It emphasized their duty in ensuring the safe and effective use of medications. To recognize the outstanding contributions of our pharmacists and pharmacy workforce, an **award ceremony** was hosted. This symbolized our collective dedication to advancing pharmacy practice and patient care.

Information desks were placed within the hospital, where our dedicated team of pharmacists, residents, and intern pharmacists provided patient counseling, promoted medication safety, and addressed queries. Gifts and giveaways were distributed to those displaying a strong grasp of medication-related topics.

Patients and their families visited pharmacy counters to seek guidance on their medications and overall health. The response was overwhelmingly positive, with numerous individuals expressed their appreciations through both spoken and written testimonials.

Moreover, pharmacy teams visited various patient care areas, clinics, and wards, engaging healthcare professionals in fun-learning activities, including a **medication-related quiz**. Also raised awareness about adverse drug reaction reporting, antibiotic stewardship, and safe medication usage. World Pharmacist Day at SIH was a resounding success, reaffirming hospital commitment to advancing pharmaceutical care and patient well-being.

Inside this issue

- ◇ Glimpse of World Pharmacist Day
- ◇ Silencing the Alarm: Confronting Fatigue Alerts in Healthcare
- ◇ Pink Eye Outbreak in Pakistan
- ◇ Understanding the Clopidogrel-Omeprazole Interaction
- ◇ Ketorolac High Dose Or Low: Which One Is Better?
- ◇ Switching between Insulin Products

and much more.....



Medication alerts are crucial for pharmacists to ensure patient safety by preventing medication errors, identifying potential drug interactions, and warning against known allergies. These alerts help pharmacists make informed decisions and provide optimal medication therapy management.

Alert fatigue refers to the desensitization that occurs when pharmacists are presented with too many warnings/alerts. They start to ignore them because if everything causes an alert, then they stop having any real meaning.

According to a study, up to 99% of clinical alarms are false, and a security study found that over half of notifications were erroneous or redundant.

Alert Fatigue may result in missed or disregarded alarms, lower effectiveness, an increase in mistakes, burnout, a delay in vital information, and even a threat to patient safety. The more exposure to something, the more you will tolerate, normalize, and disregard it.

Optimizing alert fatigue can lead to several positive outcomes such as decreased alert burden, improved alert relevance, enhanced patient safety, reduced alert fatigue and burnout, increased provider satisfaction, patient safety, efficiency, efficient resource utilization, and user experience can be improved by reducing alert fatigue.

The following specific tactics can help reduce alert fatigue and enhance the efficiency of electronic health record systems:

1. Consolidate redundant alerts/ Reducing duplicate alerts:

Redundant alerts cause alert fatigue. With each subsequent reminder of the same alert, the alertee's attention level reduces by 30%. Over 60% of security system warnings are unnecessary. Combining warnings and minimizing reminders can help workers pay better attention.

2. Prioritize continuous review and improvement

There is no one-time, universal treatment for alert weariness and the risks it brings. To ensure that you're finding the appropriate balance, it's crucial to regularly examine your procedures, alerts, and systems.

- **Prioritizing alerts:** Assigning different levels of urgency or importance to alerts can help healthcare providers focus on the most critical alerts and reduce cognitive overload.
- **Customizing alert thresholds:** Adjusting alert thresholds based on clinical context and provider preferences can help reduce the number of false-positive alerts and improve the accuracy of alerts.
- **Regularly reviewing and updating alerts:** Conducting regular reviews of alert performance and relevance, and updating alerts based on feedback from healthcare providers, can help ensure that alerts remain useful and effective.
- **Tailoring alerts to individual patient characteristics:** By customizing alerts based on patient-specific factors such as age, comorbidities, and medication history, the relevance and clinical significance of alerts can be improved.
- **Implementing evidence-based guidelines:** Aligning alert algorithms with evidence-based guidelines ensures that alerts are triggered for clinically relevant situations, reducing the number of unnecessary alerts.

To improve alerts, healthcare organizations can implement evidence-based recommendations, reduce duplicates, prioritize, customize thresholds, and regularly update.

Reference: <https://aacnjournals.org/aacnacconline/article-abstract/24/4/378/14745/Alarm-FatigueA-Patient-Safety-Concern?redirectedFrom=fulltext>



SHIFA'S PHARMACIST-LED INNOVATION SHINES ON THE GLOBAL STAGE AT ISQua CONFERENCE

Naima Manzoor, Charge Pharmacist has recently represented Shifa International Hospital and Pakistan among 7 other countries via her poster display titled as “**Pharmacist-**



Led Medication Discharge Counseling from Emergency Department of a Tertiary Care Hospital” in the International Society for Quality in Health Care (ISQua) 39th Conference held in Seoul, South Korea. The Idea of Emergency Department Discharge Counselling led by Pharmacist was highly appreciated by the conference attendees and many took a deep dive in the whole process so that it can be replicated in their organizations as well. It was a proud moment to exhibit Shifa Patient Care Standards to the world.

Want to learn more about alert fatigue? Here is a suggested reading:

Safe Practices to Reduce CPOE Alert Fatigue through Monitoring, Analysis, and Optimization (white paper) - AHRQ;

<https://psnet.ahrq.gov/issue/safe-practices-reduce-cpoe-alert-fatigue-through-monitoring-analysis-and-optimization>

Pink Eye Outbreak in Pakistan

WHAT IS CONJUNCTIVITIS?

Conjunctivitis, or pink eye, is an inflammation of the conjunctiva, a thin, transparent layer covering the white part of the eye and the inner surface of the eyelids. This condition can affect one or both eyes.

- It can be caused by infections (bacterial or viral), allergens, or irritants.
- While it can be due to a minor infection that can resolve on its own, it can also be the sign of a more serious problem.
- Though pink eye can be irritating, it rarely affects your vision. Pink eye can be contagious. Treatment of the condition varies based on the cause



What are the symptoms of pink eye?

Pink eye symptoms vary based on the cause of the irritation or infection. Symptoms can include:

- Pink or red discoloration in one or both eyes
- Gritty feeling in one or both eyes
- Itching, irritation and/or burning sensation in the eyes
- Clear, thin drainage of liquid and increased shedding of tears
- Stringy and/or thick, white or green discharge from the eyes
- Eyelids that are matted together in the morning
- Swelling of the eyelids
- Blurred vision

What causes pink eye?

- **Bacteria:** Bacteria can be transferred to one or both eyes through physical contact, poor hygiene (touching eyes with unclean hands), or use of contaminated makeup or face lotions.
- **Viruses:** Infection can be caused by viruses associated with the common cold, upper respiratory tract infection and, in rarer instances, herpes and sexually transmitted diseases.
- **Chemicals:** Facial or eye makeup, air pollution, chlorine in swimming pools or other toxic chemicals can cause irritation or inflammation in one or both eyes.
- **Allergies/sensitivities:** The eyes can have an adverse reaction to allergens or irritants such as pollen, mold, dust mites, cosmetics or contact lenses and solutions

Management And Treatment

Viral Conjunctivitis

- resolve on its own within a few days to a week.
- cold compresses and artificial tears can help alleviate symptoms.

Bacterial Conjunctivitis

- Antibiotic eye drops or ointments are prescribed by a healthcare professional
- Be sure to complete the full course of antibiotics even if your symptoms improve.

Allergic Conjunctivitis

- Antihistamines, decongestant eye drops, or artificial tears can provide relief.
- Identifying and avoiding allergens is essential to prevent recurrences.

Irritant Conjunctivitis

- The key to treating irritant conjunctivitis is to remove or avoid the irritant.
- Artificial tears can help soothe the eye.

Preventing the spread of pink eye: Pink eye can be contagious if it is caused by a virus. Stop The Spread



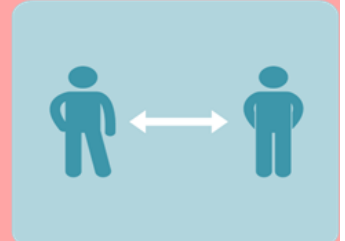
Wash your hands before touching to the eyes!



Avoid sharing personal items towels, etc.



Maintain good hygiene while coughing and sneezing!



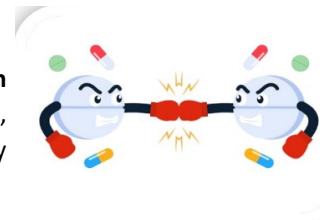
Avoid close contact!

You should see an ophthalmologist if your pink eye does not resolve or if it gets worse after a week of treatment.

Patient with cardiovascular diseases are often provided with anticoagulation and proton pump inhibitor to suppress acid production in the stomach. **One of the mostly used drug combination for this in Pakistan is clopidogrel and omeprazole. Drug interaction between these two drugs stands out as a significant concern.**

⇒ Interaction Category:

Classified as a **Category X** interaction, this pairing **could compromise the effectiveness of Clopidogrel, an antiplatelet medication crucial for managing cardiovascular conditions.** Studies have shown that Omeprazole, commonly used to treat acid-related gastrointestinal issues, can reduce the antiplatelet effects of Clopidogrel, by reduction in the AUC and Cmax of the clopidogrel active metabolite by 33% and 44%, respectively.



⇒ Health Impact:

Several trials have evaluated this possible interaction, with many reporting significantly increased risks for negative **cardiac-related outcomes (6% to 18% increased incidence)** and **overall mortality (3% to 9% increased mortality rate)** associated with concurrent use of omeprazole and clopidogrel.

A large retrospective study (n=12,440) found a **12.2% higher risk of myocardial infarction** among patients coadministered omeprazole and clopidogrel compared to clopidogrel alone; overall mortality was not significantly increased.

Two meta-analyses reported an increase in the odds of **major adverse cardiovascular effects (MACE)** with omeprazole (OR=1.42 and 1.24, respectively). An analysis of 11 PPI studies (0.5-48.9% omeprazole use in 6 of 11) reported an increase in **short-term mortality** and **target vessel revascularization (TVR)**, favoring clopidogrel alone (OR=1.55 and 1.26, respectively). Long-term MACE, MI, ST elevation and TVR also significantly **favoured clopidogrel alone** (OR=1.37, 1.41, 1.38, and 1.28, respectively). An analysis of 12 PPI studies (up to 100% omeprazole use) reported **significant increases in MACE, MI, and stroke** with PPI and clopidogrel (OR=1.28, 1.51, and 1.46, respectively).

Although some studies suggest a limited impact on cardiovascular outcomes, the general consensus leans towards caution when combining Omeprazole and Clopidogrel. Clopidogrel prescribing information states concomitant use with omeprazole should be avoided.

⇒ Can dosing gap help? One approach to overcome this interaction (omeprazole 8-12 hours after clopidogrel) did not significantly improve diminished inhibition of platelet aggregation, use of higher dose clopidogrel (600 mg once, then 150 mg/day) with omeprazole 80 mg/day inhibited platelet function more than standard clopidogrel dosing.

⇒ Use of alternate drugs: **Pantoprazole or Rabeprazole** may be a better alternative to omeprazole. The **FDA recommends** pantoprazole as a possible alternative due to weaker CYP2C19 inhibition though several meta-analyses reported a statistically significant interaction with pantoprazole of similar magnitude to that seen with omeprazole. Rabeprazole was not associated with a statistically significant increase in the odds of MACE among clopidogrel users in 2 meta-analyses. In conclusion, coadministration of the Clopidogrel and omeprazole should be avoided.

Reference: Uptodate Drug Interaction/ Last accessed 18th Oct 2023

Medication Safety for Look-alike, Sound-alike Medicines (LASA) - A new guideline launched by WHO (Oct 2023)

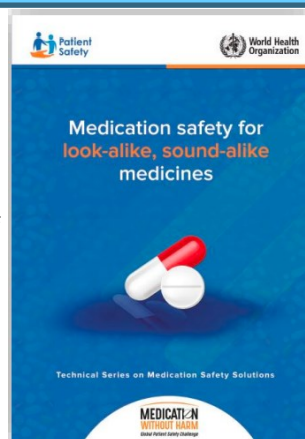
WHO has launched its new publication

“Medication Safety for Look-alike, Sound-alike Medicines”,

as part of the WHO technical series on “Medication Safety Solutions”.

It carries preventive strategies that can be implemented by healthcare professionals and organizations to prevent LASA errors to reduce the risk of medication-related harm. WHO third Global Patient Safety Challenge warrants to prevent severe patient harm due to medication errors and unsafe medication practices globally. LASA related errors account for serious errors worldwide

WHO LASA document QR code



LASA are High Alert Medicines

Example of Read-alike Drugs:

Pheniramine - Phenylephrine
Digoxin - Thyroxine
Toradol - Tramadol
avodart - duodart

Examples of Look-alike Drugs



Information for Healthcare Professionals Switching between Insulin Products in Shortage/Disaster Situations

These recommendations are intended to be used only in disaster response situations when patients are not on their usual schedule, may have limited monitoring capabilities, or don't have access to their prescribed insulins.

- **Individuals with Type 1 diabetes have priority for receiving insulin.** Even a few hours of interrupted insulin therapy can result in life-threatening Diabetic Ketoacidosis (DKA).
- **These guidelines do not replace clinical judgment and are intended to assist with short-term diabetes management until a patient can resume their prescribed care regimen.**
- **A reduction in insulin dose by 20%** is recommended when switching to another insulin under disaster response situations to avoid hypoglycemia. This may result in short-term, mild hyperglycemia until the patient is back to a normal routine and insulin regimen.

Important Notes:

Insulin should be kept away from direct heat and sunlight. **DO NOT use insulin that has been frozen.**
Unopened insulin vials and pens should be stored in a refrigerator at 2-8°C and are good until the expiration date.
Opened vials and pens may be left unrefrigerated at 15°C- 30°C for up to 28 days.

Rapid-acting and Regular Insulin are typically given before meals to regulate the rise in glucose after a meal.

Rapid-acting insulins should be injected no more than 15 minutes before the start of a meal

Regular insulin can be injected up to 30 minutes before the start of a meal

If the patient is taking this:

Rapid Acting Insulin

Humalog® (insulin lispro)

Novorapid® (insulin aspart)

Apidra® (insulin glulisine)

Short Acting Insulin:

Regular insulin brand name examples

Humulin®R, Actrapid Penfill

Interchange Recommendations:

Rapid- and Short-acting insulins may be interchanged with a 20% reduction in the dose

Example: Humalog® 10 units before meals can be switched to Regular 8 units before meals (80% of 10 units = 8 units)

Example: Regular 10 units before meals can be switched to Novorapid® 8 units before meals (80% of 10 units = 8 units)

Intermediate-acting and Basal insulin analogs are typically given once or twice daily to provide basal insulin needs (to prevent high glucose between meals and overnight).

If the patient is taking this:

Intermediate Acting Insulin:

NPH insulin brand name

examples

Humulin®N

Interchange Recommendations:

Intermediate-acting insulins may be interchanged with another intermediate-acting insulin or Basal insulin analog with a 20% reduction in dose
NPH ONCE daily to a Basal insulin analog

Example: NPH 20 units daily can be switched to Levemir® 16 units daily

NPH TWICE daily to a Basal insulin analog

Example: NPH 34 units AM and 16 units PM can be switched to Lantus® 40 units daily (80% of 50 units daily = 40 units)

If a patient is taking this:

BASAL INSULIN ANALOGS:

Levemir® (detemir)

Lantus®, (glargine U-100)

Toujeo® (glargine U-300)

Interchange Recommendations:

Basal insulin analogs may be interchanged with NPH with a 20% reduction in dose and divided based on predicted meal frequency

- If eating 2 meals per day- Split the new dose into ½ NPH with first meal of the day and ½ NPH with second meal of the day

Premixed insulins combine an intermediate-acting insulin or basal insulin analog with a rapid or regular insulin. The ratio of the mixture is indicated in the name. e.g. 70% intermediate or long-acting with 30% rapid or short-acting.

If the patient is taking this:

Premixed Insulins with Regular insulin

NPH/Regular (Humulin® 70/30, Novolin® 70/30)

Premixed Insulins with rapid-acting insulin

Humalog® Mix 75/25

Humalog® Mix 50/50

Novolog® Mix 70/30

Premixed Insulins with rapid- and ultralong-acting insulins

Ryzodeg® 70/30 (degludec/aspart)

Interchange Recommendations:

Regular and Rapid-acting PREMIXED insulins may be interchanged with another PREMIXED insulin with a 20% reduction in the dose

- Insulin mixes containing rapid-acting insulin should be injected no more than 15 minutes before the start of a meal
- Insulin mixes containing Regular insulin can be injected up to 30 minutes before the start of a meal
- PREMIXED insulin may be interchanged with to NPH using a 20% reduction in dose

Unique Insulin Therapies (Insulin Pump)

Insulin pump patients may only substitute Humalog®, Novolog®, Apidra®, or Regular insulin in the pump

Substitutions cannot include an intermediate-acting insulin or a Basal insulin analog or concentrated insulin (i.e., U200, U300, or U500)

Individuals with Type 1 diabetes have priority for receiving insulin. Even a few hours of interrupted insulin therapy can result in life-threatening Diabetic Ketoacidosis (DKA).

If the patient does not have a plan for pump failure, consult with a healthcare professional experienced in insulin pump management

When the insulin pump cannot be used, basal insulin is the primary need with rapid- or short-acting insulin a desirable addition:

Give 0.3 units/kg of a Basal insulin analog as a once daily dose

Example: patient weighs 60 kg, give 18 units of a Basal insulin analog once daily

If rapid or short-acting insulin is available, give 0.3 units/kg divided by 6 at each meal

Example: patient weighs 60 kg, give 3 units of rapid or short-acting insulin with each meal

Pharmacy Training Programs offered by Department of Pharmacy Shifa




Shifa International Hospital Ltd.

شفا انٹرنیشنل ہسپتال لمیٹڈ اسلام آباد



Candidate

INTERNATIONAL PHARMACY PRACTICE RESIDENCY PROGRAM (IPPRP)

One-year Pharmacy Residency Program

International pharmacy practice residency programs build on pharmacy education and outcomes to contribute to the development of clinical pharmacists responsible for medication-related care of patients with a wide range of conditions and to have a leadership role in advancing pharmacy practice in their country.

WHY PHARMACY RESIDENCY

At Shifa International Hospital, we offer pharmacy residents valuable learning experiences and exposure to diverse pharmacy specialties while being guided by certified and highly qualified preceptors. These experiences aid in the enhancement of their professional skills

APPLY NOW

Last date to apply is 15 November, 2023

Type: On-site training with stipend.
Positions : 05 seats available.
Shortlisting will be done via written test and interviews.

LEARNING EXPERIENCES

- Inpatient pharmacy services
- Critical care pharmacy services
- Ambulatory care services and home health care.
- Emergency Pharmacy services
- Clinical pharmacy services/Drug and poison information center
- Chemo Admixture.
- IV admixture, TPN and compounding.

ELIGIBILITY CRITERIA

- Pharm-D (5 Years) from university recognized by Pharmacy Council of Pakistan (PCP)
- Having Pharmacy council registration or eligible to apply for Pharmacy registration / license.
- Applicant must have minimum CGPA of 2.5/4 or 60% marks as applicable in Pharm-D
- Undergraduates/students are not eligible to apply

How to apply: Fill the application form on the link below or scan the QR code.

<https://forms.gle/qc7onyVYGNTExjds6>

For further Details, Email us at pharmacy.cv@shifa.com.pk or contact us at 051-846-3492, 3977, 3055 (8:30am-5:00pm, Mon-sat)
Any CV sent directly to email will not be accepted



Pharmacy Internship Program

A Gateway to Hospital Pharmacy Excellence for Fresh Pharmacy Graduates

Shifa Pharmacy Internship program aims to provide aspiring pharmacy graduates with practical knowledge and exposure to various aspects of hospital & clinical pharmacy operations.

Benefits :

- A Well structured program
 - Focused learning outcomes
 - Practical insights—Hands-on training
 - Shadowing experienced pharmacists
 - Interaction with healthcare staff and patients
 - Learn communication and problem-solving skills
- ⇒ Certificate of Completion will be awarded.

Eligibility: Pharm D graduates (not students)

Duration: 6 weeks (Day Time Only)

Seats: 20 Seats (First Come - first served basis)

How to Apply:

Visit our website for details:

<https://www.shifa.com.pk/pharmacy/>

Send your CV with required documents in one pdf file to: pharmacy.cv@shifa.com.pk

Pharmacy Observership Program

A program to provide valuable experience for pharmacy students

Eligibility: Pharm D Students (2nd year and above)

Duration: 2 weeks (Day Time Only)

Seats: 5 Seats (First Come first served, based on seniority)

How to Apply:

Send your CV with these documents in one pdf file to: pharmacy.cv@shifa.com.pk

Your CV, Bonafide Student Certificate, CNIC, and Recommendation letter by the university.

Formulary Updates (Visit Shifa Intranet Home Page—click Medication Updates for details)

Brand	Generic	Class	Indications
Influvac	Influenza vaccine	Vaccine	Prevention of Flu
Kytril	Granisteron	5HT3 Blocker	For chemo induced nausea and vomiting
Full V	Fulvestrant	Estrogen receptor antagonist	Breast Cancer
Decibine	Decitabine	Nucleoside metabolic inhibitors	Acute myeloid leukemia

Looking for Valuable Feedback

We want to bring to you valuable, updated and interesting information via Pharmacy Newsletter, so please spare some time to provide feedback in the form of comments or suggestions. Its your newsletter and with your help we'll make it better!

Contact us to get e-copy or hard copy of newsletter or to give comments/suggestions via email at : drug.information@shifa.com.pk

Thank you.



Shifa International Hospitals Ltd.

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30 YEAR
OF EXCELLENCE