

Issued by:

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## 1) Pharmacy and Therapeutics Committee (P & TC) Updates:

### Drug Addition (as regular formulary item)

Prucalopride Tab 1mg, 2mg

Colistimethate Sodium Inj 4.5MIU

Empagliflozin+Metformin Tab 5/500mg

Dapsone Gel 5%

Apremilast Tab 30mg

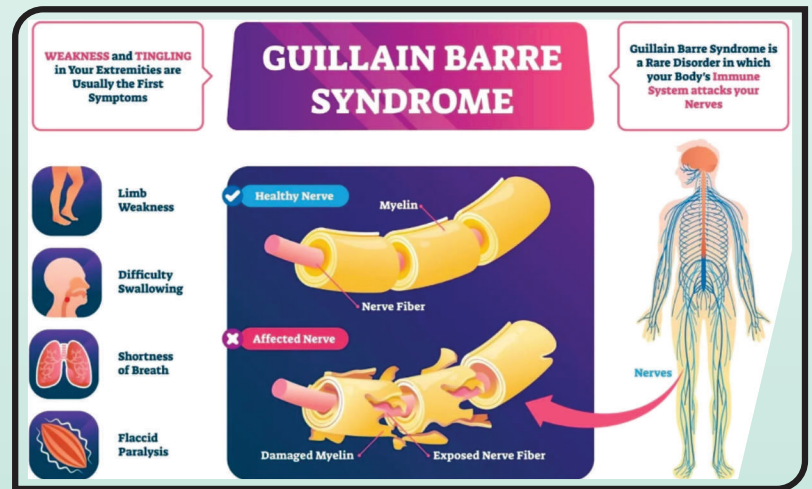
CVP Scale



Department of Pharmacy Services

## 2) Role of Immunoglobulins In Guillain-Barre Syndrome (GBS)

Guillain-Barre Syndrome (GBS) is a rare autoimmune disorder that affects the body's nerves. It is characterized by the body's immune system misfiring and attacking its own nerves instead of the infection, breaking down the outer coating (myelin) of the nerves and causing them to malfunction.



**Immunoglobulin therapy:** Intravenous immunoglobulin (IVIg) is the proven immunotherapy for GBS. The human immune system in GBS is modulated by immunoglobulin therapy in several ways. Although, the definitive mechanism has not been established, the most probable modes of action of IVIg include constraining autoantibody production and autoantibody neutralization through anti-idiotypic antibodies inhibition of complement activation and membrane attack complex formation that leads to modulated expression and function of Fc receptors on macrophages and other effector cells. IVIg also suppresses cytokine, chemokine, and adhesion molecules. Moreover, it modulates T-cell functions and interferences with pathogenic antigen recognition. All these actions of immunoglobulin result in a reduction of demyelination and axonal injury that results in expeditious recovery of the patients.

**Dose:** The typical IVIg dosage for GBS is 0.4 g/kg body weight daily for five consecutive days, with a total of 2 g/kg. Administering the total dose over 2 days is equally efficacious when compared to 5 days.

### 3) Management of Iron Deficiency

Iron deficiency affects billions of people worldwide and remains the leading cause of anemia with significant negative impacts on health. The main approach to iron deficiency (ID) and iron deficiency anemia (IDA) involves three steps:

- Identification of ID/IDA
- Investigation and management of the underlying etiology of ID
- Iron repletion.



#### Ganzoni Equation for Iron Deficiency Anemia

**Total iron dose (mg iron) = body weight (kg) × (target-actual Hb (g/dl) × 2.4 + iron store (mg iron)\*.**

**\*Iron store:** body weight < 35 kg = 15 mg/kg body weight; body weight > 35 kg = 500 mg.

**Iron repletion** options include oral and intravenous (IV) iron formulations. Oral iron remains a therapeutic option for the treatment of ID in stable patients, but there are many populations for whom IV iron is more effective. Therefore, IV iron should be considered when there are no contraindications, when a poor response to oral iron is anticipated, and when rapid hematologic responses are desired.

Sr No	Iron Formulation (Generic)	Brand	Strength	Elemental Iron
1.	Exsiccated Ferrous Sulphate	Fefol Vit Cap	150mg	49mg
2.	Ferrous Sulphate	Iberet folic Tab	525mg	105mg
3.	Iron Polymaltose	Bisleri Tab	100mg	100mg
4.	Iron Polysaccharide complex	Elezo Cap	150mg	150mg
5.	Ferric Pyrophosphate	Macfer Sachet	18mg	18mg
6.	Iron Pyrophosphate	Ferfer Sachet	14mg	14mg
7.	Ferrous Gluconate	Sangobion Cap	250mg	29mg
8.	Iron Hydroxy polymaltose	Polyfer FA Tab	100mg	100mg
9.	Iron Polysaccharide complex	Elezo Syp	100mg/5ml	100mg/5ml
10.	Ferric carboxymaltose	FCM/Ferinject/ Fercari Inj	500mg/10ml	500mg/10ml
11.	Iron Sucrose	Bisleri-S/ Venofer/RBC Inj	100mg/5ml	100mg/5ml

#### 4) Levetiracetam (Special Alert)



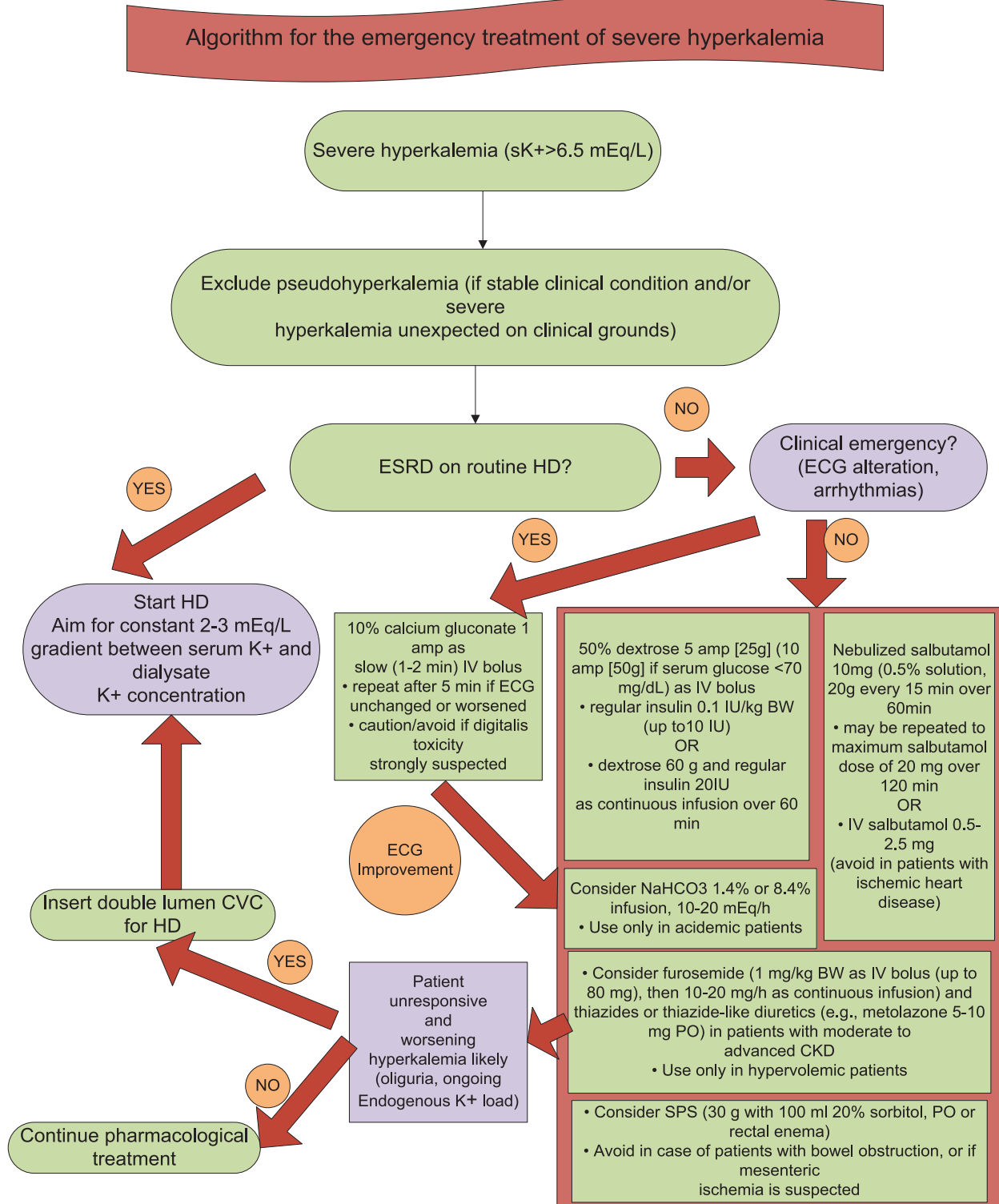
The FDA has issued a drug safety communication warning that levetiracetam can cause Drug Reactions with Eosinophilia and Systemic Symptoms (DRESS).

A rare but serious hypersensitivity reaction that can be life-threatening if not diagnosed and treated quickly. The onset of DRESS typically occurs **2 to 8 weeks after starting levetiracetam**; symptoms may include **rash, fever, or swollen lymph nodes** but can quickly progress, resulting in injury to organs including the liver, kidney, lungs, heart, or pancreas, the need for hospitalization, and death.

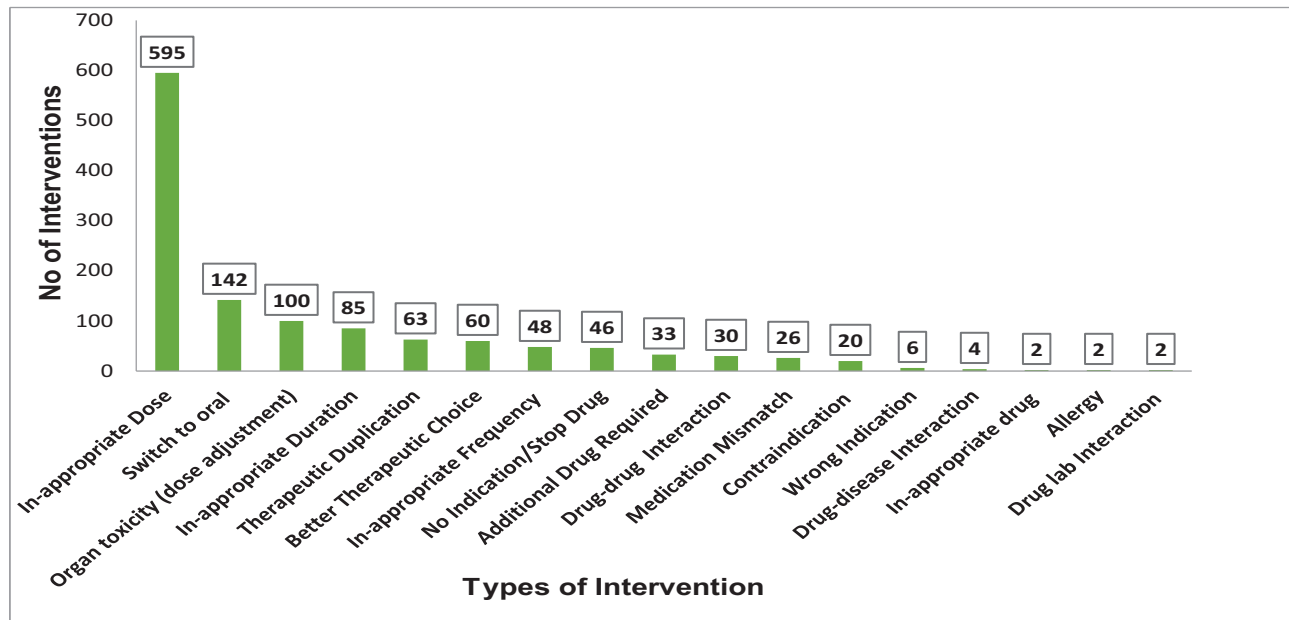
**Drug Reaction with Eosinophilia and Systemic Symptoms**



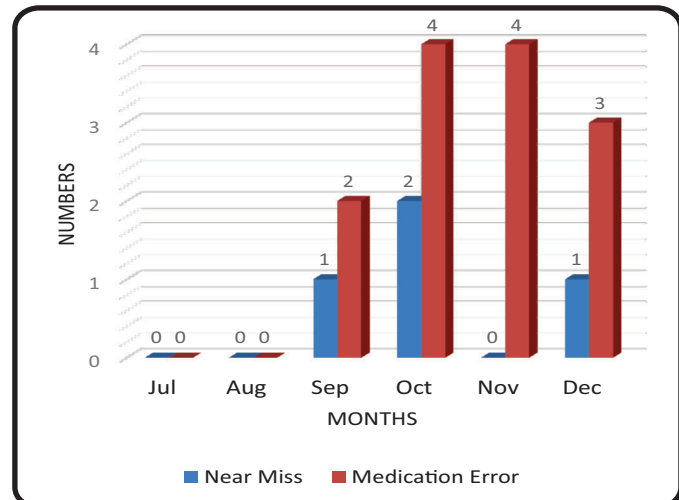
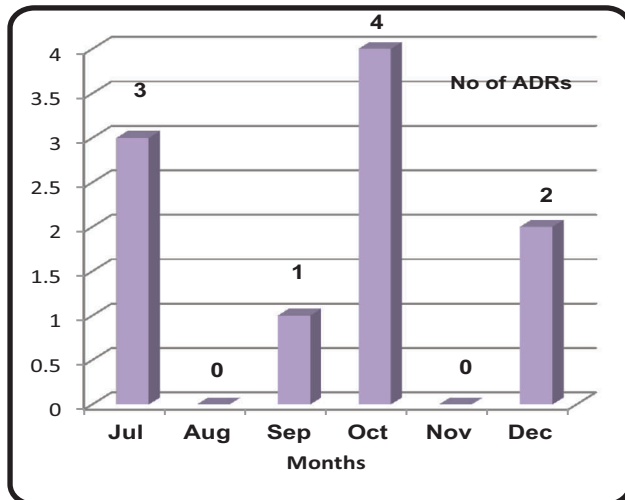
#### 5) Emergency Treatment of Severe Hyperkalemia



## Clinical Pharmacy Interventions (July-Dec 2023)

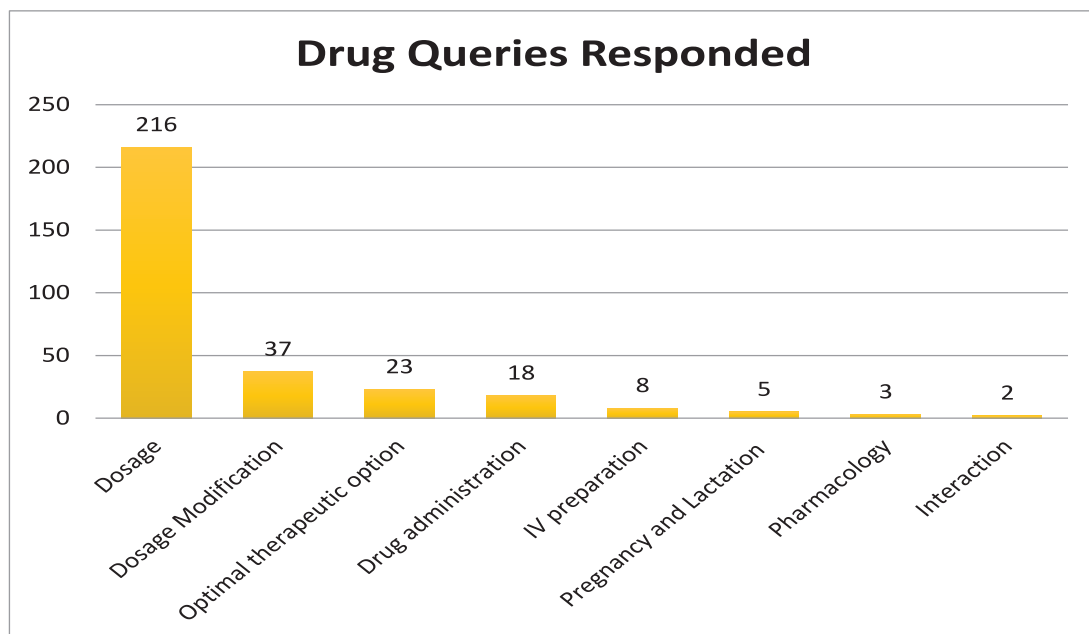


## Adverse Drug Reaction (ADR) / Medication Error / Near Miss (July-Dec 2023)



\*Improvement in Medication Error reporting system was observed after conducting training sessions of our Health Care Professionals.

## Drug Information Queries Responded (July- Dec 2023)

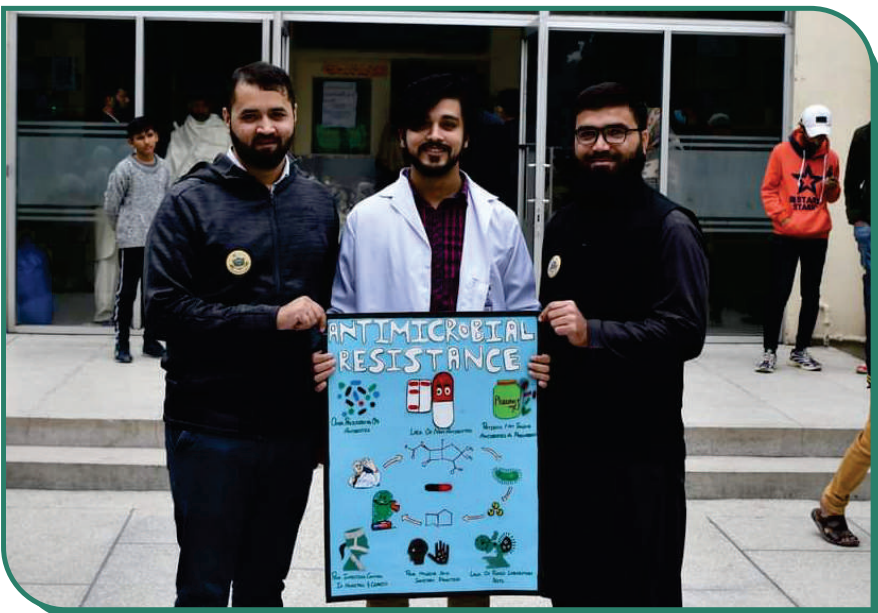




# Medication Safety Week

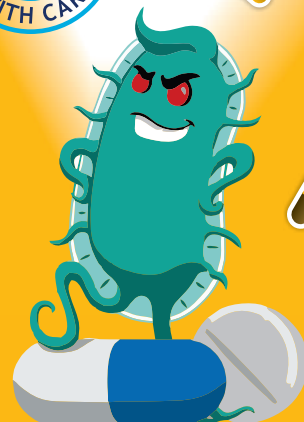


# Antimicrobial Awareness Week



**World Antimicrobial Awareness Week 2023**  
18<sup>th</sup>-24<sup>th</sup> November

**PREVENTING  
ANTIMICROBIAL  
RESISTANCE  
TOGETHER**





## Glimpses Of 3<sup>rd</sup> Hospital Pharmacy Conference GTTH August-2023





## World Pharmacists Day 25<sup>th</sup> September 2023



### Outpatient Pharmacy Extension

GTTH pharmacy has a footfall of more than 1,000 OPD/ambulatory patient(s)/Attendants per day. The patient waiting area of GTTH Outdoor Pharmacy has been extended to improve patient care services and turnaround time.





## Antimicrobial Stewardship workshop Organized By GBTPP Sep - 2023

Giving Back to Pharmacy in Pakistan (**GBTPP**), (One of Pakistan's leading non-profit organizations), aim to educate and share best practices in the pharmacy sector with all of its colleagues in Pakistan. GBTPP organized a hybrid conference in Sep 2023 with the collaboration of prestigious universities of Pakistan including Jinnah Sindh Medical University (JSMU), University of Central Punjab (UCP), University of Veterinary & Animal Sciences (UVAS), and Capital University of Science & Technology (CUST).

Mr. Muhammad Owais (Manager Pharmacy GTTH), and Ms. Ummara Altaf (Incharge Clinical Pharmacy GTTH) conducted a comprehensive workshop on **“Navigating the Path to Antimicrobial Stewardship Excellence”** at UVAS and UCP as speakers. The purpose of the workshop was to deliver practical knowledge of Antimicrobial Stewardship Implementation in a Hospital setting among the participants.

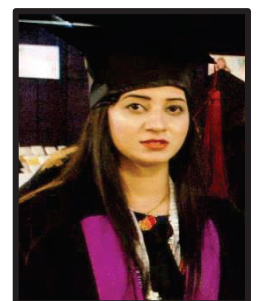


## Achievements of our Pharmacists

We are thrilled to announce that Ms. Ummara Altaf, our esteemed Pharmacist, has achieved a significant milestone in her research. Her original work **“Using Culture Sensitivity Reports to Optimize Antimicrobial Therapy: Findings and Implications of Antimicrobial Stewardship Activity in a Hospital in Pakistan”** has been published in an international journal (*Medicina*) with an impact factor of 2.9. Her research focused on optimizing antimicrobial therapy through the use of culture sensitivity reports and also emphasized the urgent need for effective implementation of Antimicrobial Stewardship Program in hospitals.



**M.Phil (Pharmacology)** Ms. Hajira Nazeer, one of our talented pharmacist, has achieved a remarkable accomplishment by completing her M.Phil. (Pharmacology) from LCWU and securing the 4th position.



## Upcoming Events “The 4th Hospital Pharmacy Conference”

The 4th Hospital Pharmacy Conference (Hybrid) will be held in May 2024 at GTTH, Lahore. This event brings together experts and stakeholders to share knowledge and experiences that drive innovation in areas like medication safety, precision medicine, and pharmacy technology. Students and healthcare workers can network and collaborate with pharmacy professionals, gaining valuable insights for their careers.