A NEWSLETTER BY DEPARTMENT OF PHARMACY—SIH

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Inside this issue

Should Metformin Be First-Line Therapy for Patients with Type 2 Diabetes and Chronic Kidney

Fatima Butt Clinical Pharmacist (Transplant)

In an era of individualizing glycemic targets, using shared decision making, patients must choose among medication options based on their understanding of their own potential benefits and harms, costs, and impact of adverse effects on their quality of life.

Metformin hydrochloride has remained the preferred first-line treatment for T2DM for decades, based on safety and effectiveness, as well as low cost. But until recently its use in patients with chronic kidney disease (CKD) has been viewed as contraindicated.

Because metformin trials typically excluded patients with CKD, the Food and Drug Administration (FDA) relied on well-done observational studies in their recent decision to permit the use of metformin in patients with mild to moderate CKD.

Subsequently published meta-analyses also support this decision.

However, the US-FDA recommended against starting metformin therapy in patients with CKD with estimated glomerular filtration rate (eGFR) between 30 and 45 mL/min/1.73m. although patients already taking metformin can continue with caution in that setting.

Source: JAMA Int. Med. June 4, 2018.

Team Pharmacy posing for photo—World Pharmacist Day 25th September 2018

Is Rituximab superior for Multiple Sclerosis treatment?

Anum Butt Clinical Pharmacist (Oncology)

Rituximab was superior to all other disease-modifying treatment (DMT) in terms of drug discontinuation and displayed better clinical efficacy compared with injectable DMTs and dimethyl fumarate with borderline significance compared with natalizumab and fingolimod.

The country where rituximab constituted the main initial treatment choice, displayed better outcomes in most measured variables. Collectively, our findings suggest that rituximab performs better than other commonly used DMTs in patients with newly diagnosed relapsing-remitting multiple sclerosis .

Rate of clinical relapses and/or neuroradiologic disease activity were significantly lower for rituximab compared with injectable DMTs and dimethyl fumarate, with a tendency for lower relapse rates also compared with natalizumab and fingolimod.

Source: JAMA Neurology, January 8, 2018.

CLINICAL PHARMACY INDICATORS

1. Assessment of current medication management

Number of patient medication profiles reviewed by pharmacists to assess drug related problems and making clinical interventions.

2. Renal Dose Adjustment

Number of patient profiles reviewed for adjusting doses based on creatinine clearance

3. Drug Evaluation Monographs (DEMs)

Compiling background information, identifying potentially useful scientific evidence, critically appraising that evidence for validity and creating an overall summary for the drug monograph or drug class review and making recommendations for formulary addition/deletion.

4. IV to Oral Switch

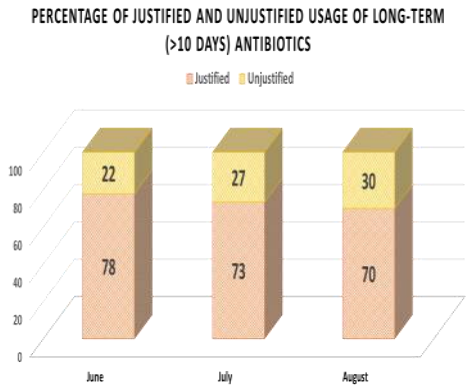
Cost saving by switching from intravenous (IV) to oral (PO) therapy as soon as patients are clinically stable (and meet switch criteria). It's a key indicator of Antibiotics Stewardship.

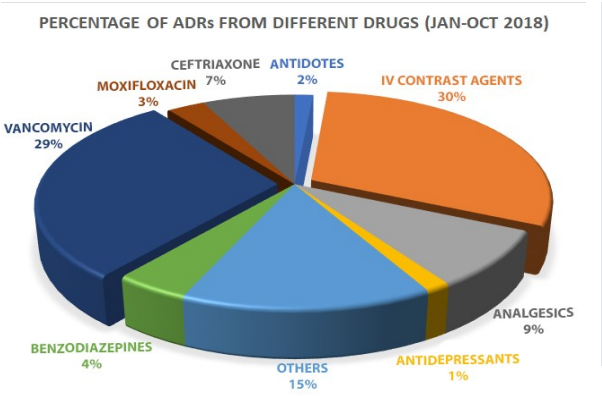
5. ADR Trigger Tool

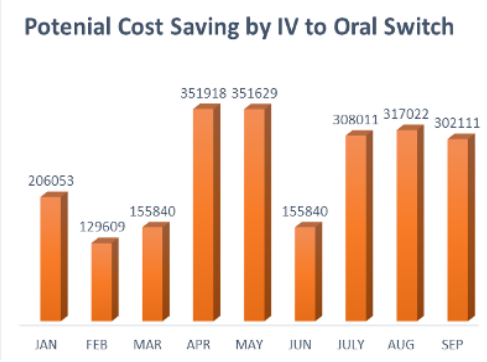
Trigger tool is one of the active data collection process where medication triggers are used to identify an ADR and medication errors. Preventive strategies are then recommended to P&T Committee.

6. Provision of medicines information to patients

Percentage of patients that received appropriate verbal counselling and/or written information about their medicines prior to discharge.







A Step towards Specialty Based Pharmacy services:

Pharmacist *Muhammad Awais* has successfully completed his online certification in Anticoagulation Management from University of Southern Indiana (USA).

This certification is a milestone achieved towards specialty based pharmacy practice; and it will definitely help improving safe use and handling of Anticoagulants (being High Alert Medicines).

Lets See How Good You Know Anti-Diabetics

E	R	A	S	I	T	A	G	L	I	P	T	I	N
N	D	E	R	I	D	A	J	J	A	S	I	S	E
A	E	I	S	U	L	P	H	U	U	R	L	U	S
E	X	G	M	N	I	M	R	O	F	T	E	M	T
D	E	L	E	A	V	E	M	E	T	A	E	M	G
I	L	A	R	C	L	E	E	T	S	T	M	U	L
T	L	R	A	P	E	C	G	E	N	E	U	I	U
A	M	G	P	A	F	F	N	O	O	N	I	M	C
N	A	I	T	B	A	O	A	E	T	U	H	O	O
E	S	N	R	T	Z	A	T	E	B	S	T	R	P
X	O	E	I	A	S	R	E	S	L	I	I	H	H
E	A	M	T	H	C	E	C	A	R	E	L	C	A
N	A	I	R	N	I	M	R	O	F	U	B	G	T
A	L	I	S	P	R	O	I	N	S	U	L	I	N
G	E	T	T	A	C	R	A	B	O	S	E	B	E

My US and UK names differ
Those bothered by sulfa may suffer
Pottasium channel are my site of action
Weight gain is my adverse reaction

I'm polypeptide in nature
Sourced from a poisonous creature
I mimic the gut hormone in action
Pancreatitis my serious reaction
(lizard Spit component)

I am 50 year old
But as antidiabetic I am gold
I am extracted from a goat's rue
After just one months' therapy,
My benefit is due

I am a microneutrient
For insulin resistance I am important

Carbohydrates I am the boss
Will not allow you to increase the glucose
I will not let you in
Can cause abdominal Bloating

Diabetes mellitus is my indication
I'm very rapid in action
And least variable in absorption
Administer me as sub cutaneous injection.

I work by Modulating gene expression
Peripheral edema Created my bad impression
Raised liver enzymes just Added fuel to the flame
Cardiovascular events On the increase
made me lame

Key: Chromium Exenatide Glibenclamide Acarbose Metformin Lipro Insulin Glitazones

SIH Formulary has been updated with availability of following medications

Brand Name	Generic Name	Class	Brand Name	Generic Name	Class
Precidex	Dexmedetomidine	Sedating agent	Polymalt F	Iron polymaltose	Iron supplement
Ryzodeg	Insulin Aspart + Insulin Degludec	Ultra long acting insulin	Xiga	Dapagliflozin	SGLT2 inhibitor Antidiabetic
Influvac Vaccine	Influenza Vaccine	Vaccine	Cis curan	CisAtracurium	Neuromuscular Blocking agent
Anplag	Ticagrelor	Antiplatelet	Nebcin	Tobramycin	Antibiotic (IV/Neb)
Lutrate 22.5 mg	Leuprorelin Acetate	Gonadotropin releasing hormone	Dextop	Dexlansoprazole	Proton Pump Inhibitor
Varitect CP	Varicella zoster imunoglobulin	Varicella Immunoglobulin	Tinositol	Inositol folic acid herbal nutrients	Herbal formulation for PCOS

Isoniazid Monotherapy for Latent TB is it still first line therapy ? *Fatima Butt (Clinical Pharmacist, Transplant)*

Two new trials support rifampin as a better option than isoniazid for latent tuberculosis. Two studies indicate that the shorter-course rifampin or INH-rifapentine regimens have a clear benefit over INH monotherapy for latent tuberculosis in terms of treatment adherence (NEJM JW Infect Dis Sep 2018 and MMWR Morb Mortal Wkly Rep 2018; 67:723). The treatments have comparable efficacy in adults and likely have comparable efficacy in children. In addition, the safety profile may slightly favor rifampin. In author own practice he suggested only opt for INH monotherapy when rifampin or rifapentine are not options due to a history of past adverse reactions, potential significant drug-drug interactions, or known patient exposure to a rifampin-resistant Mycobacterium tuberculosis isolate.

Source: Richard T. Ellison III, MD reviewing Menzies D et al. N Engl J Med 2018 Aug

A POTENTIAL THREAT Look Alike Sound Alike Drugs

Rehan Anjum (Clinical Pharmacist, ICU)

Look alike and sound alike (LASA) medications have potential effects for causing serious harm to the patients. Double checking and safe dispensing of medications can save from serious harms that may occur. E.g. instead of an analgesic a patient gets anticancer drug, or a child receives a dose way higher than required. Errors have been caused by poor storage of medicines, nurses and pharmacists confusing the drug names while transcribing and/or dispensing them, or misinterpreted the drug name due to illegible handwriting of doctors or verbal order.

There are many LASA medications available in our pharmacy that could cause serious harm. Organizational policy must be followed to avoid the harm. **(See policy: http://www.int.shifa.com.pk/wp/?)page_id=10)**

Look Alike Medications	
Genticyn inj	**D-cort inj**
Antibiotic	Corticosteroid
Maxolon inj	**Zantac inj.**
Prokinetic	Anti ulcer
Varedet	**Amphotericin**
Antibiotic	Antifungal
Vancomycin	**Acyclovir inj**
Antibiotic	Antiviral
Unitrexate inj	**Vincristine inj**
Methotrexate	Vincristine
Cisplasol	**Carpsol**
Cisplatin	Carboplatin
Adriblastina	**Farmarubicin**
Doxorubicin	Epirubicin
Gravinate inj	**Nalbin inj**
Dimenhydrinate	Nalbuphine
Voren inj	**Transamin inj**
Diclofenac Sodium	Transexamic Acid

Antibiotic is always not an answer...

Taking antibiotics when they are not needed accelerates emergence of antibiotic resistance

USE ANTIBIOTICS CAREFULLY

Sound Alike Medications	
Varitect CP	**Varedet CP**
Varcilla Zoster IG	Vancomycin
Avastin	**Avaxim**
Monoclonal antibody	Hep A vaccine
Falgan	**Filgen**
Antipyretic	GCSF
Acylex	**Avelox**
Antiviral	Antibiotic
Dobutamine	**Dopamine**
Dobutamine	Dopamine
Risek	**Rize**
Omeprazole	Fluoxetine
Thyroxin	**Lanoxin**
Thyroxine	Digoxin
Osnate	**Onset**
Calcium /phos.	Ondansetrone
Sofiget	**Cefiget**
Sofosbuvir	Cefixime

FDA warns against Fluoroquinolone antibiotics:

Quinolones were previously reported for increasing risk of tendinitis, tendon rupture, worsening myasthenia gravis and irreversible neuropathy. Recently FDA updates warning on risks of mental health and hypoglycemia. The mental health related side effects to be included in the labeling across all the Fluoroquinolones are: disturbances in attention, disorientation, agitation, nervousness, memory impairment and delirium. It is also found that quinolones may cause hypoglycemic coma. The FDA determined that fluoroquinolones should be reserved for use in patients who have no alternative treatment options.

FDA Press Release July 10, 2018