DIRC Newsletter

Vol. 20 No. 4 October - December 2018

Newsletter of Drug Information and Research Center, KSPC

Member of International Society of Drug Bulletins (ISDB)

Official Desk

Wish you all a very Happy and Prosperous New Year 2019

Our Council is proud to introduce the following services for the benefit of Registered Pharmacist of Karnataka.

- **Best Student Award** - Award to a student passing out with the highest score for B.Pharm, M.Pharm & Pharm D courses from the Rajiv Gandhi University of Health Sciences and for D.Pharm from Board of Examining Authority.
- **Best Pharmacist award** in Karnataka among **Community/Hospital/Industry/ Regulatory** - One Pharmacist a year under each category.
- **Best Pharmacy teacher award** in Karnataka - One Teacher a Year.
- **Travel Grant** for Pharmacy teachers / Community Pharmacist / Hospital Pharmacist registered with KSPC for paper or poster presentation in International Conference. Total 10 applicants per year.
- **Sponsorship for organizing a conference/seminar by Pharmacy Colleges** for the professional development of Community/Hospital/Clinical Pharmacist – One sponsorship per year per college.
- **Scholarship for the legal heirs (son/daughter) of Registered Pharmacists** in Karnataka for pursuing a course in Pharmacy - D.Pharm, B.Pharm, M.Pharm and Pharm D - Two scholarships per year for each course.

Spread this message among all the Pharmacists regarding the new initiatives of KSPC.

More details of the above services will be displayed on our website shortly. For any clarification, please free to email kspcblr@gmail.com.

Sri. Gangadhar V. Yavagal
President
Karnataka State
Pharmacy Council

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Renewal of Registration-2019

Renew your Registration for 2019 without fail before the grace period 31-03-2019. Refer to general instructions of renewal for more information.

Visit: www.kspcdic.com

Benefit under KPCRPWT

The Karnataka Pharmacy Council Registered Pharmacist Welfare Trust (KPCRPWT) committee has increased the welfare trust benefit from Rs.1,00,000/- to Rs.1,25,000/-. If you have not enrolled for KPCRPWT and below 60 years, you can apply through online. For more information refer general instructions of KPCRPWT-A. Ignore if already enrolled / applied.

Online Reporting System as a performance enhancing tool for Medical Representatives

There was a time when field force in ethical Pharma marketing companies used to send their Daily Call Reports – DCRs – using a post card. Then printed DCR format has been given to fill up and send by post till the advent of Computers. Any analytical work like Field Work Analysis, Sales Performance Analysis, etc. used to be done manually which took time and also there was no guarantee for accuracy.

Today almost all Pharma Companies, irrespective of size have invested heavily into 'online reporting system' with following inbuilt conveniences:

- Once the day's work is over, one can log in, enter details of work done for the day and at the click of a button, submit the report, which can be accessible immediately to all his superiors, from the first line manager till National Sales Manager. They can go through the reports and send their feedback on the quality and quantity of work done immediately for correction and implementation from the very next day wherever required.
- No paper work is required now, as everything is online. Saves on stationery items like paper, therefore lot of trees and pen.
- No need to send reports by post or courier, hence saves on postage/courier expenses.
- Very easy, and doesn't take much time to fill up and send reports, hence saves precious field working time of field personnel.
- No need to carry lot of manual files relating to work, sales performance details for discussion with superiors. The laptop containing all the details is more than adequate for a meaningful participation in any meeting. Thus saves extra baggage/load and precious meeting hours. Ensures paperless and files less office environment.
- Communication to field personnel, Newsletters, internal magazines, etc can be sent through this platform and reach the field force immediately, thus saves on postage/courier, and transit time as well.
- Very importantly, online reporting system has empowered the field force to do lot of important analytics relating to quantity and quality of field work, Sales performance overall as well as Product-wise month-wise, Stockiest-wise Product- wise Secondary sales vis-à-vis Primary sales, Customer wise Product wise Sales performance, etc. can all be done just at the click of a button. Accuracy is guaranteed though it depends upon the accuracy of the input data keyed in.
- Many Pharma Companies have also been using this platform to update Product knowledge and for conducting tests for field personnel to evaluate their understanding of Product knowledge.
- Many Pharma Companies have also included 'performance evaluation' for annual increment in the online reporting system, as to ensure transparency, and also to avoid subjectivity. The parameters for evaluation along with the weightage for each parameter is loaded in the system at the beginning of the year, and then at the end of every month, it shows the points scored against each parameter based on actual performance of the field force for the month, as well as cumulatively till date. This enables the field force to understand where they stand now, and under which parameter they need to improve upon in the coming months to post the best overall score before the year end.

Srinivasan V
Pharma Business Consultant

Thus the online reporting system acts as a mirror which always shows the real picture for the field personnel to understand and analyze their performance and act upon immediately where required, thus improve performance consistently, earn the best increments year after year and reach for the stars in their career.

Unfortunately, a majority of the field personnel uses the online reporting system as a tool to send Daily Call Reports and also to send and receive inter office memos/communication only. Any field force, who is keen on doing well and succeed, besides using this platform to post Daily Call Reports, and sending and receiving mails, should also regularly use the platform for other important activities like various analytics, as discussed above in detail, to brush up products knowledge, and also see how he has fared in the performance evaluation parameters, and then take corrective measures where required immediately either on his/her own or in consultation with the superiors. Chances are more for such field personnel to deliver consistently and succeed in their career. Therefore, I would prefer to call this platform as a performance enhancing tool rather than a simple online reporting system.

The challenge now in front of Pharma Companies and its Line Managers is how to impress upon all their field personnel to use this performance enhancing tool in the most ideal manner, as discussed in detail in the previous paragraphs, so as to improve the performance of individuals, all teams, consistently and therefore the organization as a whole. Line Managers, are you up for the challenge?

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Drug of the Quarter

Drug: **Lorcaserin**

Class: Antidepressant

Dosage form: Tablet

Strength: 10mg

DCGI Approval: 22-10-2018

USFDA Approval: 27-06-2012

Indication: Used in adults as an adjunct to reduced-calorie diet and increased physical activity for chronic weight management.

Dose Information

Adult Dosing: The recommended starting dose is 10mg administered orally twice daily. Dose should then be increased to maximum 20 mg/day. Discontinue if 5% weight loss has not been achieved by week 12.

Pediatric Dosing: Safety and efficacy have not been established in pediatric patients younger than 18 years and use in pediatric patients is not recommended.

Pharmacokinetics

Absorption

- Tmax, immediate-release, oral: 1.5 hours (range, 1 to 3 hours); prolonged to 2.5 hours in elderly subjects.
- Tmax, extended-release, oral: 10 hours (range, 6 to 12 hours)
- Effect of food: no significant effect on exposure

Distribution

- Protein binding, plasma proteins: 70%

Metabolism

- Liver: Extensive
- Lorcaserin sulfamate (major): Inactive
- N-carbamoyl glucuronide lorcaserin (major): Inactive

Excretion

- Fecal: 2.2%
- Renal: 92.3%
- Dialyzable: No (hemodialysis)
- Total body clearance: 12.7 to 13.7 L/hr

Elimination Half Life

- 11.9 hours (immediate-release); 11.8 hours (extended-release)
- Moderate hepatic impairment, 19 hours

Contraindication:

- Hypersensitivity to lorcaserin or to any component of the product.
- Pregnancy; weight loss may cause fetal harm

Caution:

- Bradycardia or heart block greater than first degree; decreased heart rate has been reported.
- Cognitive impairment, including impairment in attention and memory and confusion, has been reported; warn patient not to operate hazardous machinery, including automobiles, until effects are realized.
- Concomitant use with serotonergic and dopaminergic drugs that are potent 5-HT(2B) receptor agonists and that are known to increase the risk for cardiac valvulopathy (eg, cabergoline) is not recommended.
- Congestive heart failure; potentially increased risk of regurgitant cardiac valvular disease.
- Diabetes mellitus treated with insulin or insulin secretagogues (eg, sulfonylureas); weight loss may increase risk of hypoglycemia; monitoring recommended and dose adjustment of antidiabetic medications may be necessary.
- Hematologic changes, including decreased WBC (eg, leukopenia, lymphopenia, neutropenia, and decreased white cell count) and decreased RBC (eg, anemia and decreases in hemoglobin and hematocrit), have been reported; monitoring recommended.
- Priapism may occur, with an increased risk in predisposing conditions (eg, sickle cell anemia, multiple myeloma, or leukemia) or anatomical deformation of the penis; discontinue use if occurs.
- Prolactin level elevations have been reported.
- Pulmonary hypertension may occur.
- Renal impairment, severe, or ESRD; use not recommended.
- Serotonin syndrome, including cases that are life-threatening or that resemble neuroleptic malignant syndrome, may occur; increased risk with concomitant serotonergic or antidopaminergic medications or drugs that impair serotonin metabolism; discontinue use if suspected.
- Suicidal ideation and behavior, new-onset or worsening of depression, and unusual changes in mood or behavior may occur; monitoring recommended; discontinue therapy if suicidal thoughts or behaviors develop.
- Valvular heart disease, regurgitant, may occur; drug discontinuation may be required.

Storage & Stability

Store at a controlled room temperature of 25 degrees C (77 degrees F), with excursions permitted between 15 and 30 degrees C (59 and 86 degrees F).

Mechanism of Action:

Lorcaserin is a selective serotonin 2C (5-HT(2C)) receptor agonist. The exact mechanism of action is not known, but lorcaserin is believed to promote satiety (the feeling or state of being sated) and decrease food intake by activating 5-HT(2C) receptors on anorexigenic pro-opiomelanocortin neurons in the hypothalamus.

Adverse Effects

Common

- Gastrointestinal: Nausea
- Neurologic: Dizziness, Headache
- Respiratory: Nasopharyngitis
- Other: Fatigue

Serious

- Cardiovascular: Valvular regurgitation
- Endocrine metabolic: Hypoglycemia (Type 2 diabetic patients)
- Psychiatric: Depression, Euphoria, Mental disorder, Mood disorder, Suicidal thoughts
- Other: Serotonin syndrome

Drug-Drug Interactions

Category	Drug/s (Examples	Interaction Effect	Management
Antipsychotic*	Thioridazine	Concurrent use of Lorcaserin and Thioridazine may result in increased thioridazine plasma concentrations and increased risk of QT prolongation effects or proarrhythmic effects such as torsades de pointes.	Contraindicated for concurrent use.
Antitussive**	Dextromethorphan	Concurrent use of Dextromethorphan and Lorcaserin may result in increased dextromethorphan plasma concentrations and increased risk of serotonin syndrome (hypertension, hyperthermia, myoclonus, mental status changes).	Avoid concomitant use.

Category	Drug/s (Examples	Interaction Effect	Management
Antidepressant**	Amitriptyline, Venlafaxine, Desipramine, Duloxetine	Concurrent use of Amitriptyline and Lorcaserin may result in increased amitriptyline plasma concentrations and increased risk of serotonin syndrome.	Avoid concomitant use.

Severity: *The drugs are contraindicated for concurrent use. **The interaction may be life-threatening and/or require medical intervention to minimize or prevent serious adverse effects.

Effects in Pregnancy

Severity	Management
Moderate	Fetal risk has been demonstrated. Available evidence has demonstrated fetal abnormalities or risks when used during pregnancy or in women of childbearing potential. Lorcaserin is contraindicated for use during pregnancy. An alternative to this drug should be prescribed during pregnancy or in women of childbearing potential.

Effects in lactation:

Severity	Management
Major	Infant risk cannot be ruled out. Available evidence and/or expert consensus is inconclusive or is inadequate for determining infant risk when Vortioxetine is used during breast-feeding. Weigh the potential benefits of treatment against potential risks before prescribing Vortioxetine during breast-feeding.

Patient Education:

1. Counsel patient to report symptoms of serotonin syndrome (high body temperature, agitation, increased reflexes, tremor, sweating, dilated pupils, and diarrhea).
2. Advise patient to avoid activities requiring mental alertness or coordination until drug effects are realized as drug may cause dizziness, confusion and somnolence.
3. Advise patient or caretakers to report the emergence or worsening of depression, suicidal thoughts or behavior, and/or unusual changes in mood or behavior, especially at initiation of therapy or with dose changes.
4. Advise diabetic patient to monitor for symptoms of hypoglycemia and report difficulties with glycemic control.

References:

1. www.micromedexsolutions.com, Micromedex (R) 2.0, 2002-2018, Truven Health Analytics Inc.
2. http://www.cdsco.nic.in/
3. http://www.rxlist.com/

Drug Safety Alerts - National

Pharmacovigilance Programme of India (PvPI)

The preliminary analysis of Serious Unexpected Serious Adverse Reaction (SUSARs) from the PvPI database reveals that the following drugs are associated with the risks as given below.

Sl.No	Suspected Drug/s	Category	Indication/Use	Adverse Reaction/s Reported
September 2018				
1.	Fluoxetine	Antidepressant	Bipolar disorder; Depressive Episode	Hypoacusis (Hearing Impairment or partial loss of hearing)

Healthcare professionals, Patients / Consumers are advised to closely monitor the possibility of the above adverse events associated with the use of above drugs.

If such events are encountered, please report to the NCC-PvPI either by filling of Suspected Adverse Drug Reactions Reporting Form/Medicines Side Effect Reporting Form for Consumer (http://www.ipc.gov.in) or by PvPI Helpline No. 1800-180-3024.

Reference: www.ipc.gov.in

Serious Risks/Safety Information – USFDA

Potential Signals of Serious Risks/New Safety Information Identified by the Adverse Event Reporting System (AERS) - USFDA

The USFDA Adverse Event Reporting System (FAERS) is a database that contains information on adverse event and medication error reports submitted to FDA. The database is designed to support the FDA's post-marketing safety surveillance program for drug and therapeutic biologic products.

The appearance of a drug on this list does not mean that conclusive of the risk. It means that FDA has identified a ***potential safety issue***, but does not mean that FDA has identified a causal relationship between the drug and the listed risk. If after further evaluation the FDA determines whether

the drug is associated with the risk or not and it may take a variety of actions including requiring changes to the labeling of the drug, requiring development of a Risk Evaluation and Mitigation Strategy (REMS) or gathering additional data to better characterize the risk.

Therapeutic Class / Category	Drug (Examples)	Route of Administration	Dosage Form	Potential Signal of a Serious Risk / New Safety Information	Additional Information
April-June 2018					
Antigout, Antirheumatic	Azathioprine, Mercaptopurine, Febuxostat	Oral, Intravenous	Tablets injection oral suspension	Drug-drug interaction between thiopurines and febuxostat.	Evaluation is in progress.
Antineoplastic	Bortezomib	Intravenous	Injection	Thrombotic microangiopathy	Evaluation is in progress.
Antihyperlipidemic	Mipomersen sodium	Intravenous	Injection	Angioedema	Evaluation is in progress.
Antithyroid Agent	Methimazole	Oral	Tablet	Vasculitis	Evaluation is in progress.
Endocrine-Metabolic Agent	Parathyroid hormone	Intravenous	Injection	Seizures	Evaluation is in progress.
Antirheumatic/ Immune Modulator	Abatacept	Intravenous	Injection	Psoriasis	Evaluation is in progress.
Antineoplastic Agent	Pomalidomide, Lenalidomide	Oral	Capsule	Solid organ transplant rejection	Evaluation is in progress.
Antihyperlipidemic	Evolocumab	Intravenous	Injection	Angioedema	Evaluation is in progress.
Anticonvulsant	Topiramate	Oral	Capsule	Eye-related adverse events	Evaluation is in progress.

References:

1. http://www.fda.gov/
2. www.micromedexsolutions.com, Micromedex (R) 2.0, 2002-2018, Truven Health Analytics Inc.

Meaning: Thrombotic Microangiopathy - A pathology that results in thrombosis in capillaries and arterioles, due to an endothelial injury.

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Drug News – Around the Globe

1. Drug: Amifampridine* **Country: USA**

Amifampridine is a broad-spectrum potassium channel blocker.

Approved Indication: Amifampridine is the first drug approved for treatment of Lambert-Eaton myasthenic syndrome (LEMS) in adults.

Approved Dosage Form: Tablets

Side-effects: Burning or prickling sensation (paresthesia), upper respiratory tract infection, abdominal pain, nausea, diarrhea, headache, elevated liver enzymes, back pain, hypertension and muscle spasms[1].

2. Drug: Emapalumab* **Country: USA**

Emapalumab is a monoclonal antibody.

Approved Indication: Emapalumab is the first drug approved in pediatric (newborn and above) and adult patients with primary hemophagocytic lymphohistiocytosis (HLH) who have refractory, recurrent or progressive disease or intolerance with conventional HLH therapy.

Approved Dosage Form: Injection

Side-effects: Infections, hypertension, infusion-related reactions, low potassium and fever[1].

3. Drug: Rifamycin** **Country: USA**

Rifamycin is an antibacterial drug.

Approved Indication: Rifamycin is approved for the treatment of adult patients with travelers' diarrhea caused by noninvasive strains of Escherichia coli (E. coli), not complicated by fever or blood in the stool.

Approved Dosage Form: Tablet.

Side-effects: Headache and constipation[1].

4. Drug: Revefenacin* **Country: USA**

Revefenacin is a long-acting muscarinic antagonist.

Approved Indication: Revefenacin is approved for the maintenance treatment of patients with chronic obstructive pulmonary disease (COPD).

Approved Dosage Form: Inhalation.

Side-effects: Cough, nasopharyngitis (swelling of the nasal passages and the back of the throat), upper respiratory tract infection, headache and back pain[1].

5. Drug: Sodium Oxybate* **Country: USA**

Sodium oxybate is a central nervous system (CNS) depressant.

Approved Indication: Sodium oxybate is approved for the treatment of cataplexy and excessive daytime sleepiness (EDS) in pediatric patients (7 to 17 years old) with narcolepsy. This drug was first approved in 2002 for the treatment of cataplexy in adult patients with narcolepsy.

Approved Dosage Form: Tablet.

Side-effects: Enuresis (bed-wetting), nausea, headache, vomiting, weight decrease, decreased appetite and dizziness[1].

6. Drug: Baloxavir Marboxil* **Country: USA**

Baloxavir marboxil is an antiviral drug.

Approved Indication: Baloxavir marboxil is approved for the treatment of acute uncomplicated influenza (flu) in patients 12 years of age and older who have been symptomatic for no more than 48 hours.

Approved Dosage Form: Tablet.

Side-effects: Diarrhea and bronchitis[1].

Reference: www.fda.gov

Meanings: Lambert-Eaton myasthenic syndrome (LEMS)- A rare autoimmune disorder that affects the connection between nerves and muscles and causes weakness and other symptoms in affected patients, **Hemophagocytic lymphohistiocytosis (HLH)-** A condition in which the body makes too many activated immune cells (macrophages and lymphocytes), **Cataplexy-** A sudden and transient episode of muscle weakness accompanied by full conscious awareness, typically triggered by emotions such as laughing, crying or terror.

Note - * Not available in India ** Available in India

Safety Alert - Around the Globe

1. Drug: Fluoroquinolone Antibiotics* **Country: USA**

May cause rare aortic dissections or ruptures of aorta and can lead to dangerous bleeding or even death.

Fluoroquinolone antibiotics like ciprofloxacin, levofloxacin, moxifloxacin, norfloxacin, ofloxacin are used to treat certain bacterial infections.

Alert: The USFDA has warned that fluoroquinolone antibiotics can increase the occurrence of rare but serious events of ruptures or tears in the main artery of the body, called the aorta. These tears, called aortic dissections or ruptures of an aortic aneurysm can lead to dangerous bleeding or even death. They can occur with fluoroquinolones for systemic use given by mouth or through an injection.

Hence, KSPC-DIRC alerts the healthcare professionals to be cautious while prescribing fluoroquinolone antibiotics[1].

Reference: www.fda.gov.in/

Note - *Available in India

Continuing Pharmacy Education (CPE)

Dispensing Instructions to the Pharmacists

Hepatitis-B

Hepatitis B is a liver disease caused by the hepatitis B virus (HBV). The virus can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure and death.

Possible methods of transmission include:

- direct contact with infected blood
- injection-drug use
- transfer from mother to baby during birth
- being pricked with a contaminated needle
- intimate contact with a person with HBV
- oral, vaginal, and anal sex
- using a razor or any other personal item with remnants of infected fluid

Hepatitis B virus can be found in the blood and, to a lesser extent, saliva, semen and other body fluids of an infected person. It is spread by direct contact with infected body fluids; usually by needle stick injury or sexual contact. Hepatitis B virus is not spread by casual contact. It doesn't spread through sneezing, coughing or breastfeeding.

Some of the common symptoms in persons infected with HBV include fatigue, dark urine, joint and muscle pain, loss of appetite, fever, abdominal discomfort, weakness, yellowing of the whites of the eyes (sclera) and skin (jaundice). The symptoms may appear six weeks to six months after exposure, but usually within four months.

HBV infection can be acute or chronic. Acute hepatitis B causes symptoms to appear quickly in adults. Infants infected at birth rarely develop only acute hepatitis B. Nearly all hepatitis B infections in infants go on to become chronic. Chronic hepatitis B develops slowly. Symptoms may not be noticeable unless complications develop.

Treatment

Treatment depends on severity. There are no special medicines or antibiotics that can be used to treat a person that is acutely infected once the symptoms appear. This includes following.

Self-care

Avoid alcohol: May be harmful and aggravate certain conditions. Chronic carriers of HBV should avoid drinking alcohol or taking medications which are harmful to the liver, as these actions can make the liver disease worse.

Preventative

Hepatitis B vaccination and Post-exposure prevention

Antiviral drugs: Reduces viruses ability to replicate. Egs: Tenofovir, Lamivudine, Entecavir, Adefovir

Prevention of Hepatitis B

- A safe and effective vaccine to prevent hepatitis B is available.
- The hepatitis B vaccine is recommended for people in high-risk settings who have not already been infected and for infants who are born to infected mothers.
- It is recommended that all children and adolescents be vaccinated against hepatitis B along with their routine childhood immunizations beginning at birth.
- A special hepatitis B immune globulin is also available for people who are exposed to the virus.

Antiviral drugs-oral

Drugs/ Category	Use	Warnings	Less serious side effects	Advice
Tenofovir	Treatment of chronic hepatitis B infection in adults with compensated liver failure.	Prescription to be reconfirmed in case of patient is pregnant or breastfeeding or if have basal cell carcinoma (a type of skin cancer) or have liver disease or kidney problem.	Abdominal pain, backache, headache, fatigue.	Take this medicine with food or milk.
Lamivudine	Treats hepatitis B and HIV infection. This medicine will not cure hepatitis B, HIV or AIDS, but it may help slow the progress of the disease.	Prescription to be reconfirmed in case of patient is pregnant or breastfeeding or having a liver disease (including hepatitis C or D), diabetes, or a history of pancreas problems.	Cough, stuffy or runny nose, sore throat, diarrhea headache, dizziness numbness, tingling or burning pain in hands, arms, legs, or feet, trouble sleeping, weight gain around neck, upper back, breast, face, or waist.	Do not discontinue the drug unless directed by a healthcare professional. Oral liquid: Measure the oral liquid medicine with a marked measuring spoon, oral syringe, or medicine cup.
Entecavir	Treats hepatitis B.	Prescription to be reconfirmed in case of patient is pregnant or breastfeeding or have kidney disease or had a liver transplant or have HIV.	Nausea, dizziness, headache and fatigue.	Take this medicine on an empty stomach, at least 2 hours before or 2 hours after a meal. Do not discontinue this drug unless directed by a healthcare professional.
Telbivudine	Treats chronic hepatitis B infection.	Prescription to be reconfirmed in case of patient is pregnant or breast feeding, or have kidney disease, myopathy, or peripheral neuropathy.	Diarrhea, headache.	Do not discontinue this drug unless directed by a healthcare professional. Report to your healthcare professional if any signs / symptoms of muscle weakness, tenderness, or pain, numbness, tingling, and/or burning sensations in the arms and/or legs, with or without difficulty walking during this treatment.
Adefovir Dipivoxil	Treats chronic (long-term) hepatitis B infection.	Prescription to be reconfirmed in case of patient is pregnant or breastfeeding, or have kidney disease, HIV or AIDS or other liver disease such as cirrhosis.	Mild stomach pain, mild weakness, abdominal pain, diarrhea, dyspepsia, flatulence, nausea, asthenia, or headache.	Do not discontinuing drug unless directed by a healthcare professional. Report to your healthcare professional if any signs / symptoms of nephrotoxicity, lactic acidosis (nausea, vomiting, abdominal pain, tachypnea), or hepatotoxicity (severe abdominal pain, muscle pain, yellowing of the eyes, dark urine, pale stools, loss of appetite.

Storage: Advice the patient or caretaker to store the medicine in a closed container at room temperature, away from heat, moisture and direct light. Ensure to keep all medicine out of the reach of children.

References:

1. Handbook of Pharma SOS, Educational Series-I, 7th Edition 2018, published by Karnataka State Pharmacy Council, Bangalore.

2. www.micromedexsolutions.com, Micromedex (R) 2.0, 2002-2018, Truven Health Analytics Inc.

3. https://www.webmd.com/

Drug Usage in Special Population - Pediatrics and Geriatrics

(From KSPCDIRC publication)

Anti-infectives

Drug	Usage in Children (Pediatrics)	Usage in Elderly (Geriatrics)
Antibacterial Drugs		
Doxycycline	It is contraindicated in infancy, childhood till the age 8 years (may cause permanent discoloration teeth).	No dosage adjustment required.
Erythromycin	Dosage adjustment required in severe renal and hepatic impairment.	No dosage adjustment is necessary for patients with mild to moderate renal failure.
Gentamycin	Dosage needs to be adjusted in renal impairment but not required in hepatic insufficiency.	Dosage needs to be adjusted in renal impairment.
Sofosbuvir	Safety and efficacy have not been established.	No dosage adjustment required.
Metronidazole	Safety and efficacy have been well established in pediatric patients.	Dosage adjustment required in severe renal and hepatic impairment. For severe hepatic disease, dose reductions are recommended.
Norfloxacin	Safety and efficacy in children is not established. Should be used when first line therapy has failed or in life threatening condition.	No dosage adjustment required in elderly.
Ofloxacin	Safety and efficacy in children below 18 years is not established.	Geriatric guidelines not available.
Tetracycline	It is contraindicated in last trimester of pregnancy, infancy, childhood till the age 8 yrs (may cause permanent discoloration teeth).	Dosage reductions required due to prolonged half-life.

Reference: Drug Usage in special Population-Pediatrics and Geriatrics, Educational Series-II, 7thEdition 2018, published by Karnataka State Pharmacy Council, Bengaluru.

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Drug Usage in Special Population - Pregnancy and Lactation

(From KSPCDIRC publication)

Anti-infectives

Drug	Usage in Pregnancy (Teratogenicity)	Usage in Breastfeeding (Lactation)
Antibacterial Drugs		
Doxycycline	USFDA Category D. Due to the risk of teratogenic effects which have been reported with the use of tetracyclines throughout pregnancy, doxycycline should not be used in pregnant women. If the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective	Conflicting data available. Use with caution.
Erythromycin	USFDA Category B. Not known to be harmful. No adequate and well-controlled studies available. Use only if clearly needed.	Excreted into breast milk in low concentrations. Safe to use.
Gentamycin	USFDA Category D: Auditory or vestibular nerve damage has been reported in second and third trimester. But risk is probably very small with gentamicin. Avoid unless essential (if given, serum gentamycin concentration should be monitored).	Excreted into breast milk in low concentrations. Monitor infant for thrush and diarrhea. Use with caution.
Sofosbuvir	USFDA Category B. Use Sofosbuvir during pregnancy only if the potential benefit outweighs the potential fetal risk.	No reports describing the excretion of drug in milk.

Drug	Usage in Pregnancy (Teratogenicity)	Usage in Breastfeeding (Lactation)
Metronidazole	Fetal risk has been demonstrated. Data regarding metronidazole use during pregnancy are conflicting. Evidence has demonstrated fetal abnormalities or risks when used during pregnancy or in women of childbearing potential. An alternative to this drug should be prescribed during pregnancy or in women of childbearing potential.	Controversial data. Avoid breast feeding during use of this drug.
Norfloxacin	USFDA Category C. Fluoroquinolones is relatively contraindicated in pregnancy. Use if potential benefit outweighs risk.	Controversial data. Use with caution.
Ofloxacin	USFDA Category C. Quinolone-type antibiotics are not recommended for general use during pregnancy due to the possibility of teratogenic effects as suggested by animal studies. Ofloxacin should only be considered during pregnancy if the potential benefit of the drug outweighs the potential risk to the fetus	Controversial data. Use with caution.
Tetracycline	ADEC Category D. Due to the risk of teratogenic effects which have been reported with the use of tetracyclines throughout pregnancy, tetracycline should not be used in pregnant women. If the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective	Excreted in low concentrations. Safe to use.

USFDA Category B: Either animal-reproduction studies have not demonstrated a fetal risk but there are no controlled studies in pregnant women or animal-reproduction studies have shown adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women in the first trimester (and there is no evidence of a risk in later trimesters).

USFDA Category C: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans. Drug should be given only if the potential benefit justifies the potential risk to the fetus.

USFDA Category D: There is positive evidence of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk (e.g., if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective).

Reference: Drug Usage in special Population-Pregnancy and Lactation, Educational Series-I, 7th Edition 2018, published by Karnataka State Pharmacy Council, Bangalore.

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ಭೇಷಜೀ ಪರಿಕರ್ಮ ನಿಬಂಧನೆಗಳು, 2015 (Pharmacy Practice Regulation, 2015)

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April – September 2018 ಸಂಚಿಕೆಯಿಂದ

ವ್ಯಾಖ್ಯಾನಗಳು

(ಡಿ) "ವಿನಿಯೋಗ" (ಡಿಸ್ಪೆನ್ಸಿಂಗ್) ಎಂದರೆ, ಒಂದು ಔಷಧಿ ಅಥವಾ ಉಪಕರಣವನ್ನು ತಯಾರಿಸುವುದು ಮತ್ತು ಸೂಕ್ತವಾದ ಪೊಟ್ಟಣದಲ್ಲಿಟ್ಟು ಸಮರ್ಪಕವಾಗಿ ಧಾರಕ ಲಗತ್ತಿಸಿ,ಒಬ್ಬ ರೋಗಿಯ ಮುಂದಿನ ಉಪಯೋಗಕ್ಕಾಗಿ ಅಥವಾ ಆತನಿಂದ ಉಪಯೋಗಿಸಲ್ಪಡಲು ಆತನಿಗೆ ಅಥವಾ ಆತನ ಪ್ರತಿನಿಧಿಗೆ ಹಸ್ತಾಂತರಿಸುವ ಕ್ರಿಯೆಯೂ ಒಳಗೊಂಡಂತೆ ಒಂದು ವೈದ್ಯಲಿಖಿತವನ್ನು, ಔಷಧಿ ಆದೇಶವನ್ನು ಅರ್ಥೈಸುವುದು, ಮೌಲ್ಯಮಾಪನಗೊಳಿಸುವುದು, ಸರಬರಾಜು ಮಾಡುವುದು, ಮತ್ತು ಅನುಷ್ಠಾನಗೊಳಿಸುವುದು.

(ಇ) "ವಿತರಿಸು" (ಡಿಸ್ಟ್ರಿಬ್ಯೂಟ್) ಎಂದರೆ, ವಿನಿಯೋಗ ಅಥವಾ ಉಣಿಸುವ ಕ್ರಿಯೆಗಳನ್ನು ಹೊರತು ಪಡಿಸಿ, ಒಂದು ಔಷಧಿ ಅಥವಾ ಉಪಕರಣವನ್ನು ಇತರ ವಿಧಾನಗಳಿಂದ ಹಸ್ತಾಂತರಿಸುವ ಕ್ರಿಯೆಯಾಗಿದೆ.

(ಎಫ್) "ರೋಗಿ ಸಮಾಲೋಚನೆ"(ಪೇಷೆಂಟ್ ಕೌನ್ಸೆಲಿಂಗ್) ಎಂದರೆ, ಔಷಧಿಗಳ

Definitions

d) "Dispensing" means the interpretation, evaluation, supply and implementation of a prescription, drug order, including the preparation and delivery of a drug or 4ievice to a patient or patient's agent in a suitable container appropriately labeled for subsequent administration to, or use by, a patient.

e) "Distribute" means the delivery of a drug or device other than by administering or dispensing.

f) "Patient counseling" means the oral communication by the pharmacist of information to the patient or

ಮತ್ತು ಉಪಕರಣಗಳ ಸಕ್ರಮ ಉಪಯೋಗ ಖಾತ್ರಿ ಪಡಿಸುವ ಸಲುವಾಗಿ, ಆ ರೋಗಿಗೆ ಅಥವಾ ಆತನ ಆರೈಕೆದಾರರಿಗೆ ಭೇಷಜಜ್ಞರಿಂದ ಬಾಯ್ದರೆ ನಿಡಲ್ಪಡುವ ಮಾಹಿತಿ ಪೂರ್ಣ ಸಂದೇಶವಾಗಿದೆ.

(ಜಿ) "ಭೈಷಜ್ಯೀಯ ಆರೈಕೆ" (ಫಾರ್ಮಸ್ಯೂಟಿಕಲ್ ಕೇರ್) ಎಂದರೆ ಭಾರತ ಭೇಷಜೀ ಪರಿಷತ್ತಿನಿಂದ ವ್ಯಾಖ್ಯಾನಿಸಲ್ಪಟ್ಟಂತೆ ರೋಗಿಯ ಆರೈಕೆಗೆ ಯಾ ರೋಗದ ತಡೆಯುವಿಕೆಗೆ, ಒಬ್ಬ ರೋಗಿಯ ರೋಗ ಲಕ್ಷಣಗಳನ್ನು ಮುಕ್ತಗೊಳಿಸಲು ಯಾ ತಗ್ಗಿಸಲು ಅಥವಾ ಒಂದು ರೋಗ ಪರಿಸ್ಥಿತಿಯನ್ನು ಕೊನೆಗಾಣಿಸಲು ಯಾ ನಿಧಾನಗೊಳಿಸಲು ಸಂಬಂಧಿಸಿದ ಉದ್ದೇಶ ಈಡೇರಿಸಲು ಅವಶ್ಯಕವಾಗಿ ನೀಡಬೇಕಾದ ಔಷಧೋಪಚಾರ ಮತ್ತು ಇತರ ರೋಗಿ ಆರೈಕೆಯ ಸೇವೆಗಳು.

(ಹೆಚ್) "ಭೇಷಜೀ ಪರಿಕರ್ಮಿ" (ಫಾರ್ಮೆಸಿ ಪ್ರಾಕ್ಟೀಷನರ್) ಎಂದರೆ, ಕಾಯ್ದೆಯ ಅಡಿಯಲ್ಲಿ ಸಮಾಲೋಚನೆ ನಡೆಸಲು ಅಧಿಕಾರವುಳ್ಳ ಅಥವಾ ಇಲ್ಲದ, ಮತ್ತು ವೃತ್ತಿಪರ ಪರಿಕರ್ಮದ ಅನುಷ್ಠಾನದಲ್ಲಿ ಔಷಧಗಳನ್ನು ಉಣಿಸಲು ಅಧಿಕಾರಯುಕ್ತವಾದ ವ್ಯಕ್ತಿ ಅಥವಾ ಈ ಕಾಯ್ದೆ ಅಡಿಯಲ್ಲಿ ಪರಿವಾನಿಗೆ ಹೊಂದಿದ ಅಥವಾ ನೋಂದಾಯಿತ ಒಬ್ಬ ವ್ಯಕ್ತಿ (ಸಮುದಾಯ ಭೇಷಜಜ್ಞ / ಆಸ್ಪತ್ರೆ ಭೇಷಜಜ್ಞ /ಶುಶ್ರೂಷಾ ಭೇಷಜಜ್ಞ ಔಷಧಿ ಮಾಹಿತಿ ಭೇಷಜಜ್ಞ)

(1) **"ಸಮುದಾಯ ಭೇಷಜಜ್ಞ"** (ಕಮ್ಯುನಿಟಿ ಫಾರ್ಮೆಸಿಸ್ಟ್) ಎಂದರೆ, ನೋಂದಾವಣೆ ಚಾಲ್ತಿಯಲ್ಲಿರುವ ಒಬ್ಬ ವ್ಯಕ್ತಿ ಮತ್ತು ಆತನು ಜನಸಾಮಾನ್ಯರಿಗೆ, ನಿಖರವಾದ ಹಾಗೂ ಸುರಕ್ಷಿತವಾದ ವೈದ್ಯಕೀಯ ಉತ್ಪನ್ನಗಳ ಸರಬರಾಜಿಗಾಗಿ ಕಾನೂನು ಮತ್ತು ನೀತಿ ಸಂಹಿತೆಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಕೆಲಸ ಮಾಡುತ್ತಿರತಕ್ಕದ್ದು. ಸಲಹೆ ಮತ್ತು ಮಾಹಿತಿ ನೀಡುವ ಮೂಲಕ ಹಾಗೂ ವೈದ್ಯಲಿಖಿತಗಳಂತೆ ಔಷಧಗಳನ್ನು ಸರಬರಾಜು ಮಾಡುವ ಮೂಲಕ ಜನಸಾಮಾನ್ಯರ ಆರೋಗ್ಯ ಕಾಪಾಡುವಲ್ಲಿ ಮತ್ತು ಉತ್ತಮಗೊಳಿಸುವಲ್ಲಿ ಅವರ ಸಹಯೋಗ ಹೊಂದಿರತಕ್ಕದ್ದು.

(2) **"ಆಸ್ಪತ್ರೆ ಭೇಷಜಜ್ಞ"** (ಹಾಸ್ಪಿಟಲ್ ಫಾರ್ಮೆಸಿಸ್ಟ್) ಎಂದರೆ, ನೋಂದಾವಣೆ ಚಾಲ್ತಿಯಲ್ಲಿರುವ ಒಬ್ಬ ವ್ಯಕ್ತಿ ಮತ್ತು ಆತನು ಪ್ರಮುಖವಾಗಿ ಸಾರ್ವಜನಿಕ /ಖಾಸಗಿ ರಂಗದ ಒಂದು ಆಸ್ಪತ್ರೆಯ ಭೇಷಜೀ ಸೇವೆಯಲ್ಲಿ ಕೆಲಸ ಮಾಡುತ್ತಿರುವವನು. ಸುರಕ್ಷತೆ, ನಿಖರವಾದ ಹಾಗೂ ಸಂತುಲಿತ ಮೌಲ್ಯದ ಔಷಧಗಳ ಉಪಯೋಗವನ್ನು ಖಾತ್ರಿಪಡಿಸಲು ಅವರು ಜವಾಬ್ದಾರರಾಗಿರತಕ್ಕದ್ದು. ಆಸ್ಪತ್ರೆ ಭೇಷಜಜ್ಞರು, ತಮ್ಮ ಪ್ರಗಲ್ಭ ಜ್ಞಾನವನ್ನು ಔಷಧಿಗಳ ವಿನಿಯೋಗ ಮಾಡಲು ಮತ್ತು ವೈದ್ಯರು ಪ್ರದಾನಿಸಿದ ಔಷಧಿಗಳ ಪರಿಜ್ಞಾನದ ಬಗ್ಗೆ ರೋಗಿಗಳಿಗೆ ಯುಕ್ತ ತಿಳುವಳಿಕೆ ನೀಡತಕ್ಕವರು ರೋಗಿಗಳಿಗೆ ಅತ್ಯಂತ ಸೂಕ್ತವಾದ ಔಷಧಿ ಚಿಕಿತ್ಸೆ ರೂಪಿಸುವುದಕ್ಕಾಗಿ ಅವರು, ಇತರ ಆರೋಗ್ಯ ಸಿಬ್ಬಂದಿಗಳ ಜೊತೆಗೂಡಿ ಕೆಲಸ ಮಾಡತಕ್ಕವರು. ಕೆಲವು ಆಸ್ಪತ್ರೆ ಭೇಷಜಜ್ಞರು ಔಷಧಿ ಚಿಕಿತ್ಸೆಗಳಿಗೆ ಅಗತ್ಯವಾದವುಗಳನ್ನು ಉತ್ಪಾದಿಸುವ ಕಾರ್ಯದಲ್ಲಿ ಸಹಾ ತೊಡಗಿರುತ್ತಾರೆ.

(3) **"ಔಷಧಿ ಮಾಹಿತಿ ಭೇಷಜಜ್ಞ"** (ಡ್ರಗ್ ಇನ್ಫೋರ್ಮೇಶನ್ ಫಾರ್ಮೆಸಿಸ್ಟ್) ಎಂದರೆ, ನೋಂದಾವಣೆ ಚಾಲ್ತಿಯಲ್ಲಿರುವ ಒಬ್ಬ ವ್ಯಕ್ತಿ ಮತ್ತು ಆತನು ಸಮುದಾಯ ಭೇಷಜೀ / ಆಸ್ಪತ್ರೆ ಭೇಷಜೀ / ಬೋಧಕ ಆಸ್ಪತ್ರೆ / ಇತರೆ ಆರೋಗ್ಯ ಸೇವಾ ಸನ್ನಿಧಾನಗಳಲ್ಲಿ ಉದ್ಯೋಗ ಮಾಡುತ್ತಿರುತ್ತಾನೆ ಮತ್ತು ಔಷಧಗಳಲ್ಲಿನ ಅಂತರ್‌ಕ್ರಿಯೆಗಳು / ಅಡ್ಡ ಪರಿಣಾಮಗಳು/ ಸೇವಿಸತಕ್ಕ ಪರಿಮಾಣ ಮತ್ತು ಔಷಧಗಳ ಸೂಕ್ತ ಶೇಖರಣಾ ವಿಧಾನಗಳ ಬಗ್ಗೆ ಮಾಹಿತಿ ಹಾಗೂ ಯುಕ್ತ ತಿಳುವಳಿಕೆಯನ್ನು ,ರೋಗಿಗಳಿಗೆ/ವೈದ್ಯರಿಗೆ/ ದಂತ ವೈದ್ಯರಿಗೆ / ಇತರ ಆರೋಗ್ಯ ರಕ್ಷಣಾ ವೃತ್ತಿಪರರಿಗೆ ನೀಡತಕ್ಕವರಾಗಿದ್ದಾರೆ.

(4) **"ನೈದಾನಿಕ ಭೇಷಜಜ್ಞ"** (ಕ್ಲಿನಿಕಲ್ ಫಾರ್ಮೆಸಿಸ್ಟ್) ಎಂದರೆ, ನೋಂದಾವಣೆ ಚಾಲ್ತಿಯಲ್ಲಿರುವ ಒಬ್ಬ ವ್ಯಕ್ತಿ ಮತ್ತು ಆತನು ಆರೋಗ್ಯ, ಸೌಖ್ಯ ಮತ್ತು ರೋಗ ತಡೆಗಟ್ಟುವಿಕೆಯನ್ನು ಮೇಲ್ದರ್ಜೆಗೇರಿಸುವುದು ಮತ್ತು ಔಷಧೋಪಚಾರದ ಗರಿಷ್ಠತಮ ಉಪಯೋಗ ಲಬ್ಧವಾಗುವಂತೆ ಔಷಧವನ್ನು ಉಪಯೋಗಿಸುವಂತಹ ರೀತಿಯಲ್ಲಿ ಒಬ್ಬ ರೋಗಿಯ ರಕ್ಷಣೆ ಹೊಂದಿಸುವಾತನು ಆಗಿರುತ್ತಾನೆ. ಎಲ್ಲಾ ಆರೋಗ್ಯ ರಕ್ಷಣಾ ವಲಯದಲ್ಲಿರುವ ರೋಗಿಗಳ ಪಾಲನೆಗಾಗಿ ನೈದಾನಿಕ ಭೇಷಜಜ್ಞರು ಕಾಳಜಿ ವಹಿಸತಕ್ಕದ್ದು.

caregiver, in order to ensure proper use of drugs and devices.

g) "Pharmaceutical care" means the provision of drug therapy and other patient care services intended to achieve outcomes related to the care or prevention of a disease, elimination or reduction of a patient's symptoms, or arresting or slowing of a disease process, as defined by the Pharmacy Council of India.

h) "Pharmacy Practitioner" means an individual (Community Pharmacist! Hospital pharmacist! Clinical pharmacist! Drug information Pharmacist) currently licensed, registered or otherwise authorized under the Act to counsel or otherwise and administer drugs in the course of professional practice.

i. "Community pharmacist" means an individual currently registered and who works according to legal and ethical guidelines to ensure the correct and safe supply of medical products to the general public. They are involved' in maintaining and improving people's, health by providing advice' and information as well as supplying prescription medicines.

ii. "Hospital Pharmacist" means an individual currently registered and who works in a hospital pharmacy service, primarily within the public / private sector. They are responsible for ensuring the safe, appropriate and cost- effective use of medicines. Hospital pharmacists use their specialist knowledge to dispense drugs and advise patients about the medicines which have been prescribed. They work collaboratively with other health care professionals to devise the most appropriate drug treatment for patients. Some pharmacists are also involved in manufacturing required drug treatments.

iii. "Drug Information Pharmacist" means an individual currently registered who works in a community pharmacy/hospital Pharmacy/teaching hospital/ other health care settings and provides information and advice regarding drug interactions, side effects, dosage and proper medication storage to patients/ physicians/dentists/other health care professionals.

iv. "Clinical Pharmacist" means an individual currently registered and who provides patient care that optimizes the use of medication and promotes health, wellness and disease prevention. Clinical pharmacists-care—for patients in all health care

ನೈದಾನಿಕ ಭೇಷಜಜ್ಞರು ಮತ್ತು ಇತರ ವೃತ್ತಿಪರ ಆರೋಗ್ಯ ರಕ್ಷಣಾ ಕಾರ್ಯಕರ್ತರೊಡನೆ ಪದೇ ಪದೇ ಮೇಳಯಿಸತಕ್ಕದ್ದು.

(ಐ) **"ನೋಂದಾಯಿತ ಭೇಷಜಜ್ಞ"** (ರಿಜಿಸ್ಟರ್ಡ್) ಎಂದರೆ,ಯಾರ ಹೆಸರು,ತತ್ಕಾಲದಲ್ಲಿ ಆತನು ವಾಸವಾಗಿರುವ ಅಥವಾ ಭೇಷಜೀ ಕಾಯ್ದೆ 1948 ರ ಅಡಿಯಲ್ಲಿ ತನ್ನ ಭೇಷಜೀ ವೃತ್ತ ಅಥವಾ ವ್ಯವಹಾರವನ್ನು ನಡೆಸುತ್ತಿರುವ ರಾಜ್ಯದ ನೋಂದಣಿಯಲ್ಲಿ ಸೇರಿಸಲ್ಪಟ್ಟಿದೆಯೋ ಅಂತಹ ಒಬ್ಬ ವ್ಯಕ್ತಿಯಾಗಿರುತ್ತಾನೆ.

(ಜಿ) **"ವೈದ್ಯಲಿಖಿತ"** (ಪ್ರಿಸ್ಕ್ರಿಪ್ಷನ್) ಎಂದರೆ ನೋಂದಾಯಿತ ವೈದ್ಯಕೀಯ ಪರಿಕರ್ಮಿಯಿಂದ ಅಥವಾ ದಂತ ವೈದ್ಯರು,ಪಶು ವೈದ್ಯರು ಮುಂತಾದ ಇತರ ಸಕ್ರಮವಾಗಿ ಪರವಾನಿಗೆ ಹೊಂದಿದ ಪರಿಕರ್ಮಿಗಳಿಂದ, ಒಂದು ನಿರ್ದಿಷ್ಟ ರೀತಿಯ ಮತ್ತು ಪರಿಮಾಣದ ತಯಾರಿಕೆಯನ್ನು ಅಥವಾ ಮೊದಲೇ ತಯಾರಿಸಲಾದ ಸಿದ್ಧೌಷಧವನ್ನು ಒಬ್ಬ ರೋಗಿಗಾಗಿ ಸಂಯುಕ್ತಗೊಳಿಸಲು ಮತ್ತು ವಿನಿಯೋಗಗೊಳಿಸಲು ಒಬ್ಬ ಭೇಷಜಜ್ಞರಿಗೆ ನೀಡಲಾದ ಒಂದು ಲಿಖಿತ ಅಥವಾ ವಿದ್ಯುನ್ಮಾನದ ಆದೇಶವಾಗಿದೆ.

settings. Clinical pharmacists often collaborate with physicians and other healthcare professionals.

i) "Registered Pharmacist" means a person whose name is for the time being entered in the register of the State in which he is for the time being residing or carrying on his profession or business of pharmacy under the Pharmacy Act, 1948.

j) "Prescription" means a written or electronic direction from a Registered Medical Practitioner or Other properly licensed practitioners such as Dentist, Veterinarian, etc. to a Pharmacist to compound and dispense a specific type and quantity of preparation or prefabricated drug to a patient.

KSPC News

1) RMES' College of Pharmacy, Kalaburagi

Rajiv Memorial Education Society's College (RMES) of Pharmacy, Gulbarga organized an awareness program for the villagers at Jambaga village, Gulbarga on 22nd December 2018.

Dr. Kishore Singh Chatrapathi, Director, Rajiv Memorial Education Society's College of Pharmacy, Kalaburagi and Executive Committee Member, Karnataka State Pharmacy Council along with other college staffs created awareness among the villagers regarding the 'Safe Use of Medicines and symptoms & first aid management during Organophosphate Poisoning'. They also conducted a General Health Checkup camp for the villagers. Staffs and students participated in programme.

2) K R College of Pharmacy, Bangalore

Mr. Samson P George, Dy. Registrar cum DIRC Pharmacist, Karnataka State Pharmacy Council was the guest speaker for the 57th National Pharmacy Week-2018 celebration held on 19th November 2018 at K R College of Pharmacy, Bengaluru. The theme for the Pharmacy Week was "Pharmacists for a Healthy India".

Mr. Samson encouraged the students to popularize the professional service of Pharmacists among the public. He further delivered a talk on various professional developments of Karnataka State Pharmacy Council and functions of Drug Information and Research Centre.

The Chief Guest was Dr.Md. Salahuddin, Principal, Farooqia College of Pharmacy, Mysuru. The meeting was presided by Dr.R.Dilip Kumar, Trustee, Dr.T.R.Malathi, Managing Trustee, Mrs.Kavitha P.N. Director, K.R. Institutions and Dr.Saraswathi C.D., Principal K.R. College of Pharmacy. 100 students along with management and staff of the college were present for the celebrations.

3) KAAPTICON 2018 at NET Pharmacy College, Raichur.

Sri. Gangadhar V. Yavagal, President, Karnataka State Pharmacy Council was one of the dignitary for the 'KAAPTICON 2018' along with Sri. D.A. Gundu Rao, Vice President, Prof. B. G. Shivananda, Registrar, Sri. Y. Veeranarayana Gowda, EC member attended 3rd Annual Convention of Association of Pharmaceutical Teachers of India [APTI]-Karnataka State branch organized by NET Pharmacy College, Raichur on 26th & 27th October 2018 as a part of Silver Jubilee Celebrations of Navodaya Education Trust & NET Pharmacy College.

The theme for the convention was "Role & Challenges for Pharmacy Teachers in Transforming Education into Research & Health Care".

Dr. S. Sacchidanand, Hon'ble Vice-Chancellor, Rajiv Gandhi University of Health Sciences was the chief guest. Sri. S. R. Reddy, Hon'ble Chairman, Navodaya Education Trust presided the convention.

The other distinguished dignitaries on the dias were Sri. Vishnukant Bhutada, Managing Director, Shilpa Medicare Ltd, Raichur, Dr. Raman Dang, Secretary, ATPI, Central, Sri. Rudragouda G. Patil, President,

APTI-Karnataka State Branch, Dr. T. Srinivas, Registrar, Navodaya Education Trust, Raichur and Dr. H. Doddayya, Principal, NET Pharmacy College & Chairman-LOC, KAAPTICON 2018.

4) Acharya & BM Reddy College of Pharmacy, Bengaluru

Acharya & BM Reddy College of Pharmacy organized a one-day seminar on "Pharmacy: Avenues in the Hospital" in association with the Indian Pharmaceutical Association, Karnataka State Branch & Peenya branch on 15th October 2018 at the Acharya Institutes Campus.

Sri. Nagaraj M.S., Member, Karnataka State Pharmacy Council was the guest of honour for the inaugural ceremony. He stressed the importance of pharmacists in the hospital and their importance in medication management in the hospital.

Mr. Samson P George, Deputy Registrar and DIRC Pharmacist, Karnataka State Pharmacy Council was one of the speakers during this occasion. He highlighted the various online services for Pharmacists implemented by Karnataka State Pharmacy Council and the importance of Drug Information and Research Centre of the State Pharmacy Council.

The other guest speaker Dr Roop Narayan Gupta, Professor at BITS, Mesra, stressed upon the roles essayed by hospital pharmacists and the newer arenas available in the hospital for budding pharmacists.

Over 120 delegates participated in the one-day seminar.

Additional Information on any article is available on request
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Printed & published by: Registrar on behalf of Drug Information and Research Center (DIRC), Karnataka State Pharmacy Council