

WORLD  
HEALTH  
DAY  
2017  
7<sup>th</sup> April

Volume 6 • Issue 2  
March-April 2017



# IPA CPD **e**-Times

Indian Pharmaceutical Association-Community Pharmacy Division (IPA-CPD)

## In this Issue:

1-2 Message & Editorial

3 Drug information

4 Drug Watch: NSAID induced kidney disorders

5 Laboratory information

5 Brain ticklers

6 Consumer dialogue

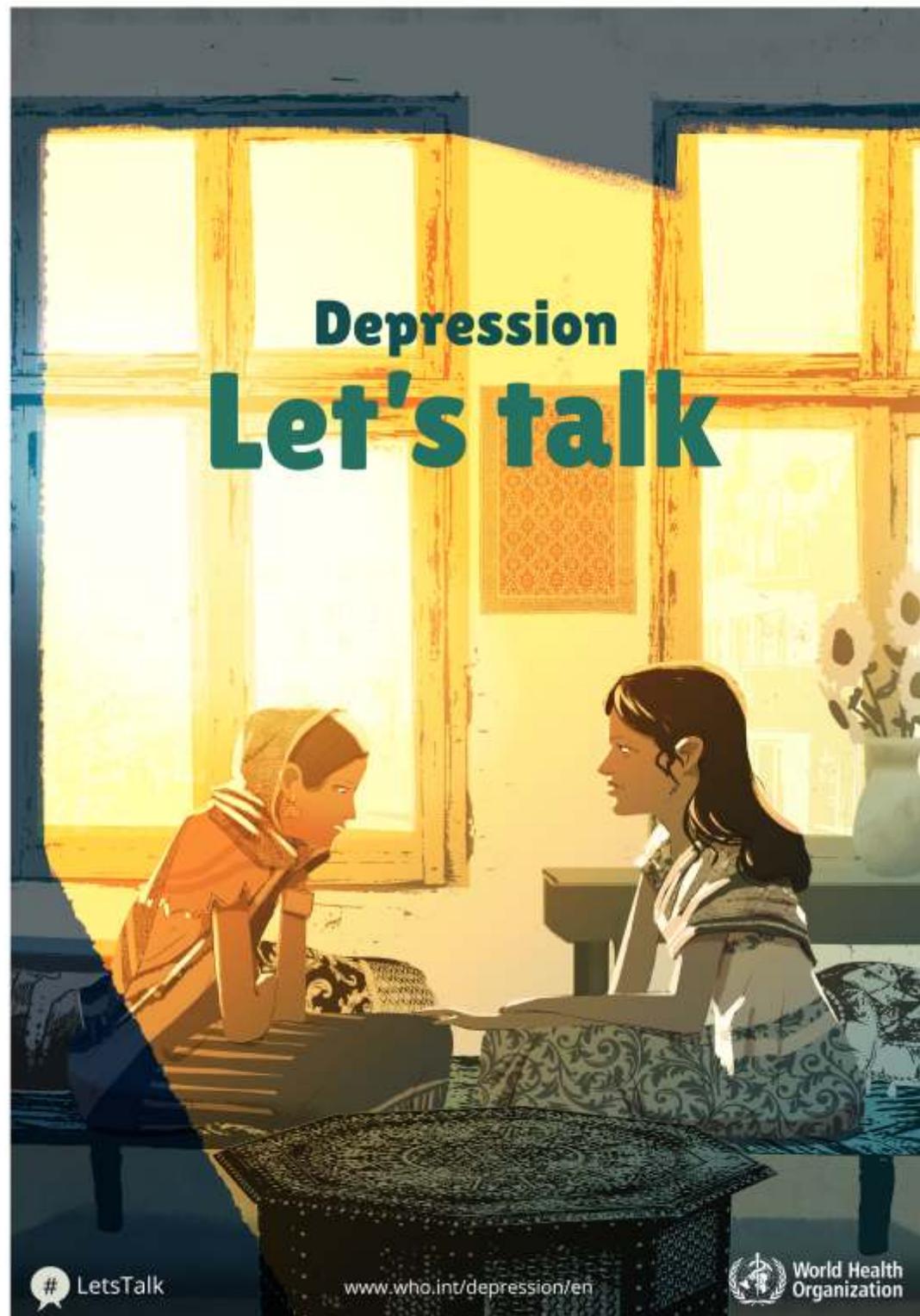
7 Abbreviations

8 GPP Instructions

9 Pharmacy practice in Nepal

12-16 News and Trainings

17 Upcoming events



World Health Day 2017

Picture Credit:

[http://www.who.int/campaigns/world-health-day/2017/posters-depression/home\\_southeast\\_asia.jpg?ua=1](http://www.who.int/campaigns/world-health-day/2017/posters-depression/home_southeast_asia.jpg?ua=1)

## Message IPA CPD Chairperson



**World Pharmacist Day 2017 theme is declared by FIP as “From research to health care: Your pharmacist is at your service” and very aptly it focuses on contribution of pharmacist at every stage of medicine’s lifecycle, right from discovery till its delivery to the patients.**

Dear Pharmacists,

World TB Day, 24th March is just over and countdown is on for World Health Day, 7th April with the theme “Depression : Lets Talk.” Both are major concerns for the country. India has been carrying the highest burden of TB since long and this is a well known fact. But what is new is the way mental health is deteriorating in the country. Statistics shows that there is a depression epidemic in the country and almost 1/3rd of the population suffers from a depressive illness some or other time in life. Changing life styles, stress, changing food habits could be some of the trigger factors. Depression is seen in all age groups and all across the society and obviously is not much talked about. Everyone easily talks about Dengue, or Diabetes or Swine flu but not about the mental health issues.

Pharmacists in India have an increasing opportunity and responsibility to deal with this epidemic. But we have to work to develop and support this role. The increasing roles that pharmacists and their national associations are taking in mental health care are illustrated in the document from the International Pharmaceutical Federation (FIP), “Focus on mental health: The contribution of the pharmacist” which was published on World Mental Health Day, 10 October, 2015. The document gives an overview of the areas in mental health care in which pharmacists are involved, including health promotion, early detection, triage, optimising treatment outcomes, education (including addiction prevention), shaping public policies, research and inter-professional practice. I recommend you to go through this report by using the link <http://www.fip.org/publications#FIP-library>.

There has been a kind of confusion, and sort of apprehension in the pharmacy community in the country. Government may declare the rules for ePharmacies soon and thus the online sale of medicines may get legal status. Another matter for discussion is the recent Government circular regarding regulation of sale of drugs. The circular says that to have stricter control, the Govt is planning to create e-Platform and all including manufacturers to retailers have to be registered on this e-Platform and should enter entire data about the sale and distribution. Government has asked for opinion of all stakeholders till April 15<sup>th</sup>, 2017. IPA will also send its viewpoints soon.

Midyear meeting of FIP CPS Executive Committee in the beautiful city of Beirut, Lebanon was a great experience. Rich discussions about the professional issues around the globe, planning for FIP Congresses, visits to pharmacies and the main highlight was the meeting with Prime Minister Mr Saad Hariri who took keen interest to know what should Lebanon do to improve pharmacy practice. Many thanks to Rabih Hassouneh, CPS ExCo Member for hosting this meeting and for the great hospitality by him and his team.

World Pharmacist Day 2017 theme is declared by FIP as “From research to health care: Your pharmacist is at your service” and very aptly focuses on contribution of pharmacists at every stage of medicine's lifecycle, right from discovery till its delivery to the patients.

A gentle reminder to all local global readers who are planning to attend the FIP Congress Seoul (10<sup>th</sup> to 14<sup>th</sup> September 2017) to register soon as first deadline for registration is May 15<sup>th</sup> 2017. Thats all for now. Please do send in your comments and contributions to eTimes. Happy Reading!

**Mrs Manjiri Gharat**

Email: [manjirigharat@ipapharma.org](mailto:manjirigharat@ipapharma.org)

## Editorial: Upgrading the Drugs Laws



**When the active ingredients of a formulation change, some companies do not change the brand name. There is no control over that. Some make minor changes, for example adding a tiny/miniscule “+, plus, AF, MF, New, etc.”, often going unnoticed. Doctors believe they are prescribing something but the patient ends up receiving something else.**

Phenomenal changes have happened over the 7 decades since the drug laws in the country were made. Many changes have been made in the past, but they have often been piecemeal changes depending on the need or development happening. Of course that is important, but what is also important is to take a complete overview of the Drugs & Cosmetics Act & Rules, the Drugs & Magic Remedies Act, and bring about a complete overhaul, especially in relation to the retail sale of medicines.

Just to give a few examples where the clarity is needed:

- When the drug Rules came into force, there were no strip packs. Now we have, and the law does not specify whether a strip can/should be cut or can't/should not be cut. This leads to chaos at the retail pharmacy. Besides, it is very difficult to keep a proper track of the details of purchase, sale of drugs when strips are cut.
- The laws nowhere specify whether drugs once sold to a patient can be accepted back by the retail pharmacy or not.
- The law nowhere specifies how the retail pharmacy should dispose off the drugs which are spoilt/expired and whether to keep a track of the records of the same or not.
- When the active ingredients of a formulation change, some companies do not change the brand name. There is no control over that. Some make minor changes, for example adding a tiny/miniscule “+, plus, AF, MF, New, etc.”, often going unnoticed. Doctors believe they are prescribing something but the patient ends up receiving something else.
- We come across on many occasions that the Brand names of 2 products manufactured by different companies are the same, but the active ingredients are completely different. There are no systematic checks in place to prevent these dangerous occurrences.
- For how long is a prescription valid from the date of prescribing ? Is a prescription valid in another state of the country ? Can medicines be dispensed against a prescription from another country ?
- Is there any limit to the quantity of non-prescriptions medicines which can be sold to a client ?
- What is the maximum duration/period that medicines can be prescribed by a doctor on one prescription ?

These and multiples of these queries come to mind when handling a retail pharmacy. It is indeed tough running a pharmacy and dealing with clients and maintaining perfect records amidst these uncertainties. The problem is that above questions are often open for interpretation, and different people interpret it differently. So much so, that drug control authorities within the same state have differing views, leave aside the interpretations across the country. It is need of the hour to do an overhauling of the drug act and rules, especially in context with retail and wholesale distribution of drugs and related aspects. This will make the laws more practical and unambiguous.

It is a long way to go. It is a good sign that the drug regulators in the country are looking into the review of the laws. And until all such things are sorted out, the E-platform for regulating sale of drugs and E-pharmacies will be a huge challenge to deal with.

**Raj Vaidya**

Email: rajxvaidya@gmail.com

## Drug Information: Piroxicam

**Brands available:** *Dolonex, Pirox, etc.*

**Pharmacological Class of drug:** Nonsteroidal anti-inflammatory drug (NSAID)

**Indications:** Rheumatoid arthritis, Osteoarthritis.

Route	Onset	Peak	Duration of action
Oral	1hr	3 - 5 hr	2-3days

### Contraindications:

- Known hypersensitivity (e.g., anaphylactic reactions and serious skin reactions) to piroxicam or any components of the drug product.
- History of asthma, urticaria, or other allergic-type reactions after taking aspirin or other NSAIDs.
- Piroxicam is contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery.
- Gastric ulcers, gastric bleeding.
- Piroxicam should be used with extreme caution in CHILDREN; safety and effectiveness in children have not been confirmed. Contraindicated in children, less than 14 years old.
- **Pregnancy:** category C : safety not established. Piroxicam may harm the fetus. Do not use it during the last 3 months of pregnancy.

### Counseling the patient :

- Take piroxicam by mouth, with food/on a full stomach. This may not lower the risk of stomach or bowel problems (eg, bleeding, ulcers). Talk with your doctor if you have persistent stomach upset.
- Take piroxicam with a full glass (8 oz [240 mL]) of water as directed by your doctor.
- If you miss a dose of piroxicam and you are taking it regularly, take it as soon as possible. If it is almost time for your next dose, skip the missed dose. Go back to your regular dosing schedule. Do not take 2 doses at once.
- Tell your doctor or dentist that you take piroxicam before you receive any medical or dental care, emergency care, or surgery.
- Serious stomach ulcers or bleeding can occur with the use of piroxicam. Taking it in high doses or for a long time, smoking, or drinking alcohol increases the risk of these side effects. Taking piroxicam with food will NOT reduce the risk of these effects. Contact your doctor or emergency room at once if you develop severe stomach or back pain; black, tarry stools; vomit that looks like blood or coffee grounds; or unusual weight gain or swelling.
- Do NOT take more than the recommended dose or use for longer than prescribed without checking with your doctor.
- Piroxicam may reduce the number of platelets in your blood. Avoid activities that may cause bruising or injury. Tell your doctor if you have unusual bruising or

bleeding. Tell your doctor if you have dark, tarry, or bloody stools.

- Piroxicam is an NSAID. Before you start taking any new medicine, read the ingredients. If it also has an NSAID (eg, ibuprofen) in it, check with your doctor. If you are not sure, check with your doctor or pharmacist.
- Do not take aspirin while you are using piroxicam unless your doctor tells you to.
- A severe skin reaction (Stevens-Johnson syndrome/toxic epidermal necrolysis) may happen. It can cause very bad health problems that may not go away, and sometimes death. Get medical help right away if you have symptoms like red, swollen, blistered, or peeling skin (with or without fever); red or irritated eyes; or sores in your mouth, throat, nose, or eyes.
- Severe and sometimes fatal liver problems have happened with this drug. Call your doctor right away if you have signs of liver problems like dark urine, feeling tired, not hungry, upset stomach or stomach pain, light-colored stools, throwing up, or yellow skin or eyes.
- Piroxicam may lead to high blood pressure. Have your blood pressure checked as you have been told by your doctor.
- Use piroxicam with caution in the elderly; they may be more sensitive to its effects, including stomach bleeding and kidney problems.
- NSAIDs like piroxicam may affect egg release (ovulation) in women. This may cause you to not be able to get pregnant. This goes back to normal when this drug is stopped. Discuss any questions or concerns with your doctor.
- Piroxicam may harm the fetus. Do not use it during the last 3 months of pregnancy. If you think you may be pregnant, contact your doctor. You will need to discuss the benefits and risks of using piroxicam while you are pregnant. Piroxicam is found in breast milk. If you are or will be breast feeding while you use piroxicam, check with your doctor

**Dose:** Dose: Adults - 20 mg/day in one or more divided doses.

Sources: <https://www.drugs.com/cdi/piroxicam.html>

<http://www.healthdigest.org/topics/category/1563-piroxicam-dosage-interactions-side-effects-how-to-use>

<http://www.rxlist.com/feldene-drug/indications-dosage.htm>

Auxiliary label:



## Drug Watch: NSAID Induced Acute Kidney Injury

### Background

NSAIDs (Nonsteroidal Antiinflammatory Drugs) are a class of medications used for analgesic and anti-inflammatory benefits. NSAIDs can induce several different forms of kidney injury including hemodynamically mediated acute kidney injury (AKI).

### Etiology and Risk factors

Greatest risk of nephrotoxicity is seen in patients older than 65 years of age, patients with CKD, hepatic disease with ascites, decompensated congestive heart failure, intravascular volume depletion and SLE. Additional risk factors include atherosclerotic cardiovascular disease and concurrent use of diuretics, ACE Inhibitors or ARBs.

### Pathogenesis and Clinical presentation

NSAIDs inhibit COX enzyme, thereby decrease the synthesis of vasodilatory prostaglandins from arachidonic acid. These vasodilatory prostaglandins have limited role in states of normal renal blood flow, but in states of decreased renal blood flow their synthesis is increased and they protect against renal ischemia and hypoxia by antagonizing renal vasoconstriction. Administration of NSAIDs in the setting of decreased blood flow alters the balance between renal vasoconstrictors and vasodilators, leaving renal vasoconstrictors unopposed and promotes renal ischemia with loss of glomerular filtration.

Patients typically present with complaints of decreased urine output, weight gain, and/or edema. Blood Urine Nitrogen, Serum Creatinine and potassium are elevated.

### Prevention and Management

NSAID induced AKI can be prevented by recognizing high-risk patients and using analgesics with less prostaglandin inhibition, such as Paracetamol and Aspirin. When NSAID therapy is essential, the minimal effective dose should be used for the shortest duration possible, along with optimal management of underlying risk factors and frequent renal function monitoring.

### Role of Pharmacist

If a community pharmacist comes across any patient with the above symptoms he should suspect AKI and ask the patient to contact the physician immediately. Pharmacist should check if the patient is concomitantly taking other drugs that alter the renal hemodynamics (e.g. Diuretics or ACE-I or ARBs). Such patients should be educated to monitor their kidney function regularly. Patients should be counseled to remain adequately hydrated and take NSAIDs with plenty of water. Indiscriminate use of NSAIDs should be discouraged and patients should be educated regarding the availability of safer alternatives like Paracetamol.

### References

1. Dipiro JT. Pharmacotherapy A Pathophysiologic Approach. 8th ed. The McGraw-Hill; 2011. chapter 40, peptic ulcer disease; p.563-82.
2. Dixit M, Doan T, Kirschner R, Dixit N. Significant Acute Kidney Injury Due to Non-steroidal Anti-inflammatory Drugs: Inpatient Setting. *Pharmaceuticals*. 2010; 3(4): 1279-1285. doi:10.3390/ph3041279. *Arthritis Research & Therapy* 15.Suppl 3 (2013).

### Contributed by:

**Dr. Karthik Rakam, Pharm. D**

Assistant Professor,

Sri Venkateshwara College of Pharmacy, Hyderabad.

Email: rakamkarthik@gmail.com

## Lab Information: Magnesium Blood Test

Magnesium is needed for nearly all chemical processes in the body. It helps maintain normal muscle and nerve function, and keeps the bones strong. Magnesium is also needed for the heart to function normally and to help regulate blood pressure. Magnesium also helps the body control blood sugar level and helps support the body's defense (immune) system.

The normal range for blood magnesium level is 1.7 to 2.2 mg/dL. Normal value ranges may vary slightly among different laboratories. Some labs use different measurements or test different samples.

Abnormal levels of magnesium are most frequently seen in conditions or diseases that cause impaired or excessive excretion of magnesium by the kidneys or that cause impaired absorption in the intestines. Magnesium levels may be checked as part of an evaluation of the severity of kidney problems and/or of uncontrolled diabetes and may help in the diagnosis of gastrointestinal disorders.

A high magnesium level may indicate:

- The adrenal glands are not producing enough hormones (Addison disease)
- Loss of kidney function (chronic renal failure)
- Loss of body fluids (dehydration)

## Brain Ticklers

(Please find answers in page 7)

**1. Which of the following is not a side effect of a Sulphonylurea?**

- Weight gain
- Hypoglycemia
- Nausea
- Weight reduction

**2. Which is not a contraindication or does not need special precautions when starting Sulphonylureas?**

- Elderly
- Pregnant or breastfeeding women
- Those having a recent MI
- People with ketoacidosis
- Those with severe liver or kidney problems

**3. For a patient on Metformin and a Sulphonylurea whose sugar is not coming in good control, if the doctor decides to introduce an insulin, which of the following needs to be done while doing so:**

- Diabetic ketoacidosis, a life-threatening problem in persons with diabetes
- Producing less urine than usual (oliguria)

A low magnesium level may indicate:

- Alcoholism or severe alcohol withdrawal (delirium tremens)
- Chronic (long-term) diarrhoea
- Treatment to remove waste from the blood (hemodialysis)
- Scarring of the liver and loss of liver function (cirrhosis)
- Adrenal gland produces too much of the hormone aldosterone (hyperaldosteronism)
- Parathyroid glands do not produce enough parathyroid hormone (hypoparathyroidism)
- Inflammation of the pancreas (pancreatitis)
- Too much insulin
- High blood pressure and protein in the urine in a pregnant woman (preeclampsia)
- Inflammation of the lining of the large intestine and rectum (ulcerative colitis).

**References:**

Medline Plus: <https://medlineplus.gov/ency/article/003487.htm>

Lab Tests Online: <https://labtestsonline.org/understanding/analytes/magnesium/tab/test/>

- Reduce the dose of the Metformin
- Reduce the dose of the Sulphonylurea
- Withdraw Metformin
- Withdraw the Sulphonylurea
- Withdraw both Metformin and Sulphonylurea
- Reduce the doses of both Metformin and Sulphonylurea

**4. Which of the following is a GLP-1 receptor agonist?**

- Glargine
- Dapagliflozin
- Saxagliptine
- Liraglutide
- Voglibose

**5. Which of the following is a SGLT2 inhibitor?**

- Teneligliptin
- Repaglinide
- Canagliflozin
- Glimiperide

## Consumer Dialogue: Irritable Bowel Syndrome (IBS)

**Pharmacist:** Good morning, my name is xxx, I am the pharmacist at your service. How can I help you?

**Patient:** Hi, myself yyy and I am suffering with irritable bowel syndrome (IBS). I would like to know more about it. Could you help me?

**Pharmacist:** sure. IBS is a common functional disorder of the gut. A functional disorder means there is a problem with the function of a part of the body, but there is no abnormality in the structure. So, in IBS, the function of the gut is upset, but all parts of the gut look normal, even when looked at under a microscope. IBS causes various symptoms (listed below). IBS can affect anyone at any age, but it commonly first develops in young adults. IBS is slightly more common in women than it is in men.

**Patient:** What are the symptoms of irritable bowel syndrome (IBS)?

**Pharmacist:** Pain and discomfort may occur in different parts of the tummy (abdomen). Pain usually comes and goes. The length of each bout of pain can vary greatly. The pain often eases when you pass stools (faeces) or wind.

Bloating and swelling of your abdomen may develop from time to time. You may pass more wind than usual.

Changes in stools: Some people have bouts of diarrhoea, and some have bouts of constipation.

Other symptoms which sometimes occur -include: Feeling sick (nausea), Headache, Belching, Poor appetite

**Patient:** Do I need any tests for irritable bowel syndrome (IBS)?

**Pharmacist:** There is no test that confirms the diagnosis of IBS. A doctor can usually diagnose IBS from the typical symptoms.

However, a blood sample or stool (faeces) test is commonly taken to do some tests to help rule out other conditions such as Crohn's disease, ulcerative colitis, coeliac disease, cancer of the ovary, gut infections, etc.

**Patient:** What causes irritable bowel syndrome (IBS)?

**Pharmacist:** The cause is not clear. It may have something to do with over activity of part or parts of the gut. The gut is a long muscular tube that goes from the mouth to the back passage (anus). The small and large bowel (also called the small and large intestine) are parts of the gut inside the tummy (abdomen). Food is passed along by

regular squeezes (contractions) of the muscles in the wall of the gut. Pain and other symptoms may develop if the contractions become abnormal or overactive. The area of over activity in the gut may determine whether constipation or diarrhoea develops.

**Patient:** What are the treatments for irritable bowel syndrome (IBS)?

**Pharmacist:** Many people are reassured that their condition is IBS, and not something more serious such as colitis. Simply understanding about IBS may help you to be less anxious about the condition, which may ease the severity of symptoms. Symptoms often settle for long periods without any treatment. In some cases, symptoms are mild and do not require treatment.

There are many different treatments that may be tried for IBS. All will have an effect on some people, but none will help in every person with IBS. No treatment is likely to take away symptoms completely, but treatment can often ease symptoms and improve your quality of life.

**Patient:** which are the life style modifications I should maintain?

**Pharmacist:** In many cases, simple changes in your diet and lifestyle can provide relief from irritable bowel syndrome.

**Eliminate triggers.** What we know is that something has disrupted the automatic functioning of the bowel in IBS patients. The trigger could be emotional stress, for example, or it could be a dietary irritant. One place to start the search is with something consumed- foods, beverages, or drugs, for example. Food allergy testing has not proved to be useful in identifying triggers.

**Eat fiber.** Adding fiber to the diet may help to increase the stool's bulk and speed its movement through the GI tract.

Try heat. For people who experience IBS intermittently, a home heating pad can be a simple and inexpensive way of soothing abdominal pain. Heat can help relax cramping muscles. Similarly, drinking a warm, non-caffeinated tea such as chamomile may help reduce discomfort.

**Patient:** Oh, I never knew this. Thank you very much for this information. I will consider this option very much. And also will keep in mind in case anyone else requires it.

**Pharmacist:** Ok, take care and let me know if you need anything.

## Know the Abbreviations and Clinical terms

<b>Abbreviations</b>	<b>Meaning</b>
ABG	Arterial Blood Gases
AFB	Acid-fast Bacilli
AKF	Acute Kidney Failure
ARF	Acute Renal Failure
AMI	Acute Myocardial Infarction
APE	Acute Pulmonary Edema Acute Pulmonary Embolism
ARDS	Acute Respiratory Distress Syndrome
BG	Blood Glucose
BSA	Body Surface Area
BUN	Blood Urea Nitrogen
BZD	BenZoDiazepine
C&S	Culture And Sensitivity
CABG	Coronary Artery Bypass Graft
CBC	Complete Blood Count
CBD	Common Bile Duct
CBI	Continuous Bladder Irrigation
CI	ContraIndications
CL	Cleft Lip
CO	Cardiac Output
COPD	Chronic Obstructive Pulmonary Disease
CPAP	Continuous Positive Airway Pressure
CSF	Cerebrospinal Fluid
CVA	Cerebral Vascular Accident
CVP	Central Venous Pressure
CXR	Chest X-ray

Contributed by:

**Dr. L. Britto Duraisingh**

Clinical Pharmacist, Ganga Medical Centre & Hospitals (P) Ltd,  
Coimbatore, Tamilnadu, Email:brittopharmaco@gmail.com

## Solution of Brain Ticklers

- Q 1. d- Weight reduction
- Q 2. c- Having a recent MI
- Q 3. d- Withdraw the sulfonylurea
- Q 4. d- Liraglutide
- Q 5. c- Canagliflozin

## Good Pharmacy Practice (GPP) Instructions: Case 19

A prescription received from a physician.

**Patient name:** yyy

**Age:** 57 Years

**Gender:** Male,

**Reg. no.:** xxxxx

**Diagnosis:** Irritable bowel syndrome without diarrhea.

**NOTE:** Patient allergic to sulfa drugs

SI	Medication	Dose	Frequency	Administration
1	Caster oil + Vit E Capsule	Take 12 capsules	One time	Orally
2	MACROGOL powder for oral solution ( <b>polyethylene glycol</b> 13.125 g, sodium chloride 350.7 mg, sodium bicarbonate 178.5 mg, potassium chloride 46.6 mg) 14 gm	8 sachets	Dissolve one sachet in one glass of water and drink at every 15 minutes intervals.	Orally
3	Sodium Phosphate Enema	Use enema at hospital	One time (at hospital)	Rectally

The patient is expected to come for a colonoscopy (to rule out cancer) the next day. The prescription was found to be legal. Castor oil + Vitamin E capsule is not available in the region. The physician agreed to change it to biscodyl. While using bisacodyl in combination, half the dose of polyethylene glycol is enough. The physician agreed to reduce the dose of polyethylene glycol to 4 sachets. The patient was complaining about spasmodic abdominal pain, the physician agreed to prescribe Buscopan (hyoscine butylbromide) 10 mg to be started with 1 tablet 3 times a day. The revised prescription dispensed was as follow;

**Drug interactions:** No drug interactions were found.

SI	Medication	Dose	Frequency	Administration
1	Dulcolax (Bisacodyl) 5 mg	Take 1 tablet	One time	Orally
2	MACROGOL powder for oral solution ( <b>polyethylene glycol</b> 13.125 g, sodium chloride 350.7 mg, sodium bicarbonate 178.5 mg, potassium chloride 46.6 mg) 14 gm	4 sachets	Dissolve one sachet in one glass of water and drink at every 15 minutes intervals.	Orally
3	Sodium Phosphate Enema	Use enema at hospital	One time (at hospital)	Rectally
4	Buscopan (hyoscine butylbromide) 10 mg	Take 1 tablet	Three times a day	Orally

Bisacodyl interacts with many other drugs, the patient should be warned to inform if he wants to take any medicines other than the prescribed.

### Validity of the prescription

Bisacodyl is commonly used in combination with polyethylene glycol as a laxative to prepare a patient for colonoscopy. Electrolytes are included along with polyethylene glycol to prevent electrolyte imbalances. Sodium phosphate enema is appropriate in a patient with normal renal function. Buscopan relieves cramps in intestinal muscles due to irritable bowel syndrome. The dose and frequency of buscopan may be increased as required in future. The prescription was approved and dispensed by the pharmacist.

### Instructions on how to take

Dulcolax normally causes a bowel movement within 6 to 12 hours. It should be taken at previous night of colonoscopy. Do not take bisacodyl within 1 hour after drinking or eating dairy products. Do not break, crush or chew the tablets. Swallow them whole.

Macrogol powder for solution in a sachet should be

dissolved in one glass of water and drink. Every next 15 minutes consume the powder in the same until all 4 sachets finished. If the patient has nausea or vomiting, give a 30 to 90 minute break, ask to rinse the mouth or brush teeth, then continue drinking the remaining. Enema will be administered at the hospital.

**Buscopan:** one tablet to be taken orally three times a day with water. Do not break, crush, or chew the tablet. Report to pharmacist if the pain worsens after taking the medicine. Patient should report if he has constipation, fever, fast heart rate, hyperthyroidism, or enlarged prostate.

### Possible adverse effects:

**Dulcolax** (bisacodyl)

Common: Stomach cramps, faintness, stomach discomfort.

Relatively rare: Rectal bleeding.

### Macrogol

Common: Nausea, diarrhea, abdominal cramps.

Relatively rare: Allergic reactions.

### Sodium phosphate enema

Common: Abdominal distention, fecal incontinence, fecal urgency and nausea.

Relatively rare: Electrolyte imbalance.

### Buscopan

 (hyoscine butyl bromide)

Common: Allergic reactions, blurred vision, dry mouth, increased heart rate.

Relatively rare: Unable to pass urine.

### References

1. Management of constipation in Adults. Hull and eat riding prescribing committee. May 2016. Available at: <http://www.hey.nhs.uk/wp/wp-content/uploads/2016/03/treatmentConstipation.pdf>.
2. Micromedex® 1.0 (Healthcare Series), (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. Available at: <http://www.micromedexsolutions.com>.
3. MedlinePlus. Bisacodyl. Available at: <https://medlineplus.gov/druginfo/meds/a601027.html>.
4. CIMS. Macrogol. Available at: <http://www.mims.com/india/drug/info/macrogol/?type=brief&mtype=generic#Indications>.
5. Drugs.com. Buscopan. Available at: <https://www.drugs.com/uk/hyoscine-butylbromide-10-mg-tablets-leaflet.html>.

### Contributed by:

**Sarah Panjwani**

Limbe, Malawi, P.O Box 5350,

E-mail: [sarah.1094@hotmail.com](mailto:sarah.1094@hotmail.com) &

**Majid Pervez Ahmed**

Al Rashidiya, UAE,

E-mail: [majidpervezahmed@gmail.com](mailto:majidpervezahmed@gmail.com)

## Community Pharmacy Practice in Nepal



The pharmaceutical sector of Nepal is at the developmental stage. Different types of activities were initiated at different points of time in the short history of this sector. Sale-distribution of medicines and use of modern medicines in the country date back to the launch of modern hospital services

somewhere around early 20th century. Other sections like academic, industrial, regulatory, hospital practice of this sector have taken several decades before their foundation formally.

### Regulation of pharmacies

Community pharmacies are registered with the Dept. of Drug Administration (DDA) as per the provision of the Drug Act 1978 and the Drug Registration Regulation 1981. Regulatory provisions are similar for wholesale and retail medicine shops. Only an indication in the common certificate differentiate wholesale from retail. Every pharmacy needs to be operated either by a pharmacist or pharmacy assistant or by a vyabasayi. Drugs categorized as abusive and toxic, and major therapeutic group require at least one of these categories of manpower to dispense the prescription issued by a doctor registered with NMC. Only medicines which are labelled as 'over the counter' can be sold and distributed in reasonable amount by people other than the above category of personnel. Medicines with abusive and toxicity potential need to be kept safely and a prescription on such items should be kept together with records in a defined format. Anything happening otherwise is defined as abuse or misuse of medicines and there is punishment and penalty for it. Every pharmacy needs to have a valid registration document at all time. Pharmacies are inspected for compliance with terms and conditions of certification as well as market authorization of products. Besides infrastructure, they are also inspected for compliance with inventory systems and standards on sale-distribution of medicines.

Community pharmacy is the platform where people attempt to visit in first attempt and seek to resolve their minor health problem and obtain health commodities on out-of-pocket (65% of total health expenses) basis.

Where public health facilities are not within communities,

people tend to attend pharmacies for primary care and referral. The government operates 5000 facilities throughout the country comprising of Primary Health facilities (Health posts, Primary Health Centres and district hospitals), Zonal, Regional, and Tertiary Hospitals as part of the healthcare system. In these facilities, the government has launched several interventions like social health security, access to health commodities supported through pooled funds and other priority interventions like IMNCI, MCH, safe abortion, family planning, renal failure, rheumatic heart disease, cancer, PEN, free essential drugs, etc. to reduce the health care burden on individuals and therefore ensure people's right to health.

Community pharmacies are registered with the DDA as per the provision of Drug Act 1978 and the Drug Registration Regulation 1981. Under this legal framework, pharmacies are licensed, renewed, inspected, or prosecuted against noncompliance.

In the public sector, a guideline establishing own pharmacy in hospital and other health care institutions (Guideline on Hospital Pharmacy 2015) has been enforced recently. Where there is lack of pharmacy care structure, government is providing seed money to establish own pharmacies inside public health care institutions. As per the Directive on Standard of Upgradation, Establishment and Operation of Health Institutions 2013, pharmacy personnel are required to operate pharmacy in the premises of health facilities.

### Infrastructural requirements

A code on Sale and Distribution of Drugs 2014 has been issued under section 28 of the Act. This code prescribes infrastructural and service requirement for a community and wholesale pharmacy.

A pharmacy should have proper means of storage of health commodities in a place, not affected by adverse environmental conditions like excessive temperature, humidity and light. Pharmacy can be operated only by personnel as authorized in the certificate. Most of the time this is where the challenges lie.

The code has been issued consistent with the provision of good pharmacy practice and specifies infrastructures and operational procedures for pharmacies, special services to be rendered by retail pharmacies and wholesalers. Through this the Government of Nepal is expecting to address serious anomalies thriving in the health sector, especially in the pharmacy care sector. Value for money on health commodities bought out of consumers' pocket is a remote goal. The code, if followed is expected to serve as a milieu for implementation of some of the pharmaceutical sector specific policies and strategies prescribed by the National Health Policy 2014 and

National Drug Policy 1995. The policy theme revolves around the framework of universal health coverage. The policy strategies for pharmacy care include rational use of health commodities, delivery of pharmacy care by pharmacy personnel as member of the health care team, ensure people's access to medicines among other things. For establishing wholesale of health commodities and for opening pharmacy in the premises of a hospital, either pharmacy assistants &/or pharmacists are required depending on the bed number. Government protection is very much enjoyed by pharmacy personnel but it has not incentivized them for their active engagement in delivering the pharmacy care to service seeker.

### Services offered

Community pharmacy, popularly known in Nepali language as Aushadhi Pasal (medicine shop), are rooted right from metropolitan cities up to rural communities. They dispense health commodities in return of payment of the cost of the medicines (and a hefty trade margin) known as Maximum Retail Price. Everyone wants to be in the medicine trade as the margin is quite attractive, and which is not justified when one can buy health commodities from anyone without adequate consultation. Wider trade margin and free goods in the name of deal and bonus allowed in medicine make it feasible to open a pharmacy even in small communities. Even though this practice has compromised quality and cost of medicines, it is instrumental in promoting medicines at the rural set up. This has been a reason for mushrooming of illegal pharmacies.



### Educational requirements

Basically, there are three categories of workforce for community pharmacy. Pharmacists can operate wholesale in any type of health commodities or a retail pharmacy in a hospital set up. This manpower undergoes a four-year bachelor in pharmacy (recognized by Nepal

Pharmacy Council (NPC) Act 2000) followed by passing pharmacy licensing examination to be a certified pharmacist. Diploma pharmacy is a three years' course of CTEVT (Council for Technical Education and Vocational Training) after high school and the graduate of this course will be recognized by NPC following a qualifying examination. Vyabasayi human resource is a basic type of work force developed by the regulatory authority (DDA) when there was no production of pharmacy personnel in the country. It is not required for this category of personnel to be registered with the Nepal Pharmacy Council but they are recognized by Drug Advisory Committee constituted under the Drug Act.

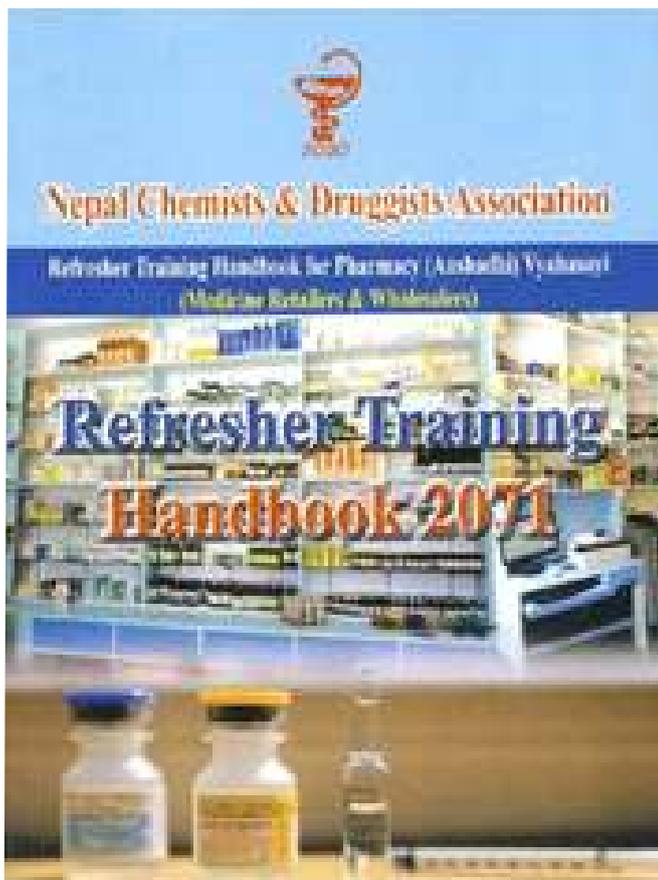
### Number of community pharmacies

From 2007 onward, Government allowed many pharmacy institutions to open colleges under different universities or training institutions under CTEVT giving diploma qualification. This has led to mushrooming. In bigger cities and the rural set up, there may be quite a significant number of unregistered units mostly run by health workers and quacks. Regulatory authority either do not have wider coverage due to lack of infrastructure or are not stopping them considering their role in bringing medicines close to communities.



Government interventions have required engagement of pharmacy personnel in delivering pharmacy care. This protection provided to pharmacy personnel resulted in production of many diploma and graduate level pharmacy personnel but they are hardly seen in pharmacies. This manpower is enjoying protective privilege rather than instituting professionalism in pharmacy care and service provision.

Currently there are about 30 CTEVT diploma institutes and 20 bachelor level pharmacy colleges. The number of pharmacy personnel under both the categories run in thousands. There are over 3,000 wholesale firms and about 18,000 registered pharmacies selling products of different systems of medicines. An absolute majority of either categories of these firms are operated by vyabasayi.



Vyabasayi are retail and wholesale human resource oriented for a limited time ranging from 48, 72 hours and lastly 450 hours' duration on newly introduced drug regulatory framework and legally recognized to deal with medicines, mostly of the allopathic system. The idea behind providing refresher training is to upgrade their knowledge and skills and orient them towards GPP and ultimately encourage them to move towards GPP certification.

Vyabasayi were trained until 2007 when the orientation course was formally stopped. There are over 15,000 personnel trained by this system and some over 12,000 are registered with the regulatory authority, DDA (Department of Drug Administration). Currently these wholesale and retail pharmacy work force are provided with 45 hours refresher training based on a syllabus entitled 'refresher training hand book for pharmacy (Aushadhi) vyabasayi (medicine retailers and wholesalers)'. Even this category of workforce also does not attend pharmacy by themselves in a way or another. This is a huge challenge facing the regulatory authority in this front.

## Special campaigns

Wholesale and retail pharmacies have a strong umbrella organization called NCDA (Nepal Chemist and Druggist Association). Many NGOs and INGOs like PSI, MSI, CRS have partnered with this organization in promoting people's access to medicine program for safe abortion, control of STD, injectable contraceptive, etc. Though not in the form of a campaign, most of the human resource (not necessarily limited to vyabasayi) perform health checkups and dispense any medicine over the counter from these retail sale pharmacies particularly based in rural communities and in urban poor communities.

## Summary

Pharmacy care and service is an interim phase. Several interventions are underway like replacement of vyabasayi by pharmacy personnel. This has been a huge challenge. Regulatory compliance is a basic issue. In lack of internship and professional socialization as an academic requirement, pharmacy personnel are not equipped with required skills and attitude. This may be a reason why they remain absent from their work place or where they have surrendered their professional certificate for opening a pharmacy. Many of them are notified by the regulatory authority not to rent their certificate. There is some amount of resistance to comply with the code on drug sale distribution 2014. Health commodities distribution network and supply chain has not been regulated properly- thus medicines are handled sub-optimally exposing them to adverse climatic conditions and ultimately rendering them unstable. Franchise in medicine promoted push sale creating health commodities related morbidity and waste of resources not only monetary but also rendering antimicrobials insensitive against pathogens. Drugs with abuse potential are dispensed illegally prompted by undue advantage. Illegal marketing strategy of pharmaceutical companies has created unholy triangular nexus of misadventure in medicine use literally in a dumping sense. Little return to pharmaceutical companies means a compromise in GMP vis-à-vis quality. It is a pity that clients of health commodities are in trap of a vicious cycle. Although combo and combi product is not a big threat like in neighboring countries, but health commodities price hike to leverage this vicious cycle is a big public health threat facing the health policy lead universal health coverage campaign.

### Contributed by:

**Balkrishna Khakurel,**  
M Pharm, MSc (Clin. Pharm),  
Former Director General,  
Dept. of Drug Administration, MoH, Govt of Nepal  
Email: bkhakurel@yahoo.com

## Pharmacist Nobel Prize Series: Science Impacts Lives - The Pride of India

Nobel Prize is the world's recognition at the highest level for creative ideas, thought and work on fundamental science. The first edition of Nobel Prize Series was inaugurated by Hon'ble Prime Minister Shri. Narendra Modi as a part of the Vibrant Gujarat 8th Global Summit at Gandhinagar from January 9 – 13, 2017; It was organized by the Department of Biotechnology (DBT) of the Ministry of Science and Technology, Government of India and in association with the Nobel Media AB.

The Nobel Prize Series and Science Exhibition aims to spread knowledge about the Nobel Prize awarded, the achievements and also share the Nobel Laureates' inspirational stories with the global audience and acts as an inspiration for young students to participate for the next five years.

As part of the Series, a Nationwide Ideathon contest was conducted with the theme "Science Impacts lives" where young students and researchers were expected to come up with innovative ideas based on science for the cause of India's development. The ideas were reviewed by a panel of experts and about 150 most outstanding students from across the country were selected and invited to showcase

and interact with the Nobel Laureates to learn the way to apply their knowledge through innovation & entrepreneurship for societal benefit. Two pharmacists **Dr. Deepak Kumar Bandari, Pharm D**

(Vaagdevi Institute of Pharmaceutical Sciences, Warangal, Andhra Pradesh) and **Ms. Rohini Prasanna** (Al-Shifa College of Pharmacy, Kerala) have won this National contest, certificates and medals were awarded to the winners. IPA CPE eTimes team congratulates both the pharmacists for their outstanding achievement.

Several Nobel laureates opined that India has a great potential to be a scientific power and should invest more in basic and fundamental researches.



Dr. Deepak Kumar Bandari,  
PharmD

**Dr Deepak Kumar says "My idea was basically on an innovative medical device that could improve compliance in chronic patients and reduce healthcare utilization costs at least by 30%, currently I'm working on it for a patent. Being addressed as the Next Generation Scientist by Honorable Prime Minister Shri. Narendra Modi Ji, interacting with 9 Nobel Laureates, meeting delegates from 110 countries and reputed entrepreneurs like Ratan Tata, Ambani**

**bothers and many others is the most memorable event of my life. I'm very much thankful to my Guide Dr. Akshaya Srikanth Bhagavathula and my mentor and Director Prof. Y. Madhusudan Rao for their strength and support all through."**

## Responsible Use of Medicines Exhibition at Ulhasnagar, Maharashtra

On 27th and 28th January, 2017, Prin. K.M. Kundnani Pharmacy Polytechnic, Ulhasnagar had organised 2 days exhibition on Medicine Awareness for general public. Main objective of this activity was to create awareness about role of pharmacist among the people and educate them for correct use of medicines, and perform blood pressure measurement as a screening activity. Posters of CARUM (Campaign for Awareness on Responsible Use of Medicines) made by IPA were displayed. Trained students explained how to use each dosage form, how to store medicines to the visitors. Blood pressure was checked for 350 visitors. Mr. Sunil Bhardwaj, Deputy Commissioner of Police, Ulhasnagar, Maharashtra State visited the Pharmacy stall and took keen interest in knowing about pharmacy and medicines.



## FIP Community Pharmacy Section Meeting at Beirut, Lebanon

Mid-year meeting of the Executive Committee of Community Pharmacy Section of FIP (FIP CPS ExCo) was organised at Beirut, Lebanon from 13th to 16th March, 2017.

The ExCo had 2 days of business meeting to discuss FIP Congress and other section matters. ExCo members visited the community pharmacies as well as visited refugee camps nearby to Beirut. Main highlight of the meeting was official meeting with Prime minister Mr Saad Hariri of Lebanon. CPS President Mr Paul Sinclair informed Mr Hariri about FIP and advancements in pharmacy practices globally. Mr Hariri took keen interest and discussed the practice situation in the home country of each ExCo Member. He welcomed all the suggestions about how pharmacy practice can be improved in Lebanon. Mr Rabih Hassouneh, CPS ExCo member from Lebanon successfully organised this mid-year meeting.



FIP CPS ExCO Team and Lebanese pharmacists with Hon'ble Prime Minister Mr Saad Hariri

## DOTS TB Training at Mahad, Maharashtra

IPA Community Pharmacy Division (IPA CPD), Maharashtra State Branch (IPA MSB) along with Chemist and Druggist Association of Raigad District (CDARD), organised DOTS TB training programme for community pharmacists at Mahad, Maharashtra on the occasion of World TB Day, 24th March, 2017. Total 54 pharmacists attended the training. Dr Bhaskar Jagtap, Superintendent, Rural Hospital Mahad along with Mr Sahebrao Salunkhe, Assistant Commissioner, FDA and Mr Santosh Ghodinde, Executive Committee Member, IPA CPD delivered the training. Pharmacists were taught basics of TB, DOTS protocols and role of pharmacists in TB control. Dr Himmatrao Baviskar, an eminent physician appealed pharmacists to be part of the DOTS programme. Mr Ghodinde, along with Mr Mohan of CDARD organized this programme successfully at Rural Hospital, Mahad.



Mr Santosh Ghodinde, Dr Himmatrao Baviskar, Mr Sahebrao Salunkhe and Mr Vithalani

## Continuing Professional development programme for community pharmacists at Pandharpur, Maharashtra

Pandharpur Chemists Association under the guidance of Solapur Chemists Association organised a One Day Continuing Professional Development programme for the community pharmacists from Pandharpur area. Mrs Manjiri Gharat delivered a talk on topics Responsible Use of Medicines, Diabetes and Role of Pharmacists and Role of Pharmacist in TB Control. Dr Atmaram Pawar discussed the pharmacist's role in patient counselling. Other topics covered were Misuse of Topical Steroids and Communication Skills. Mr Vijay Pati, President of Maharashtra State Pharmacy Council and Mr Jagannath Shinde, Member of Legislative Assembly (MLA), and President of All India Organisation of Chemists and Druggists gave detail guidance to the pharmacists. Chemist Association leaders Mr Basvraj Manure, Mr Someshwar Kharare, Mr Prashant Khalipe with their team took enormous efforts to make this mega event successful.



## Diversity of profession to be focus of World Pharmacists Day 2017

"From research to health care: Your pharmacist is at your service" is the theme of this year's World Pharmacists Day on 25 September as per the announcement made by the International Pharmaceutical Federation (FIP). "This theme was chosen to reflect the numerous contributions the pharmacy profession makes to health. From research and development of medicines, to educating future pharmacists and pharmaceutical scientists, and providing direct care, we do all this in the service of our patients and communities," said FIP President Dr Carmen Peña. "We want to emphasize that pharmacists are the backbone of health care in many different settings. But providing care does not begin in community or hospital pharmacies. Taking care of patients starts with recognizing the health issues of populations and developing medicines, policies and education to tackle them. We pharmacists are often there at the very beginning of the process - when the first molecule that effectively treats a disease is identified," Dr Peña added.

FIP has produced resources for this year's campaign in the six official United Nations languages: Arabic, Chinese, English, French, Russian and Spanish. These include an animation and other materials for print and social media. FIP is inviting pharmacists to support World Pharmacists Day by creating profile pictures for their social media accounts using the official FIP Twibbon or a specially designed "Your pharmacist is at your service" placard.

The materials are available at [www.fip.org/worldpharmacistsday](http://www.fip.org/worldpharmacistsday)

**FROM RESEARCH TO HEALTHCARE:**

**YOUR  
PHARMACIST  
IS AT YOUR  
SERVICE**

**#WORLDPHARMACISTS DAY**

# 77<sup>th</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences Seoul, Republic of Korea 10-14 September 2017



## Medicines and beyond! The soul of pharmacy *New ways*

The 2017 FIP congress in Seoul, South Korea, invites an international audience of pharmacy professionals and pharmaceutical scientists to go beyond medicines and answer patients' demand for high quality help and advice.

At this FIP congress, the professional symposia will explore the many new ways that pharmacy professionals can add the value expected by modern health care systems and services. Sessions will show that tradition and dedication to patients' health – the true soul of pharmacy – can be coupled with innovation in technology, education and practice to deliver care fit for the 21<sup>st</sup> century.

### **A > Nurturing the soul of pharmacy**

To nurture the soul of pharmacy, the profession needs to grow and be cherished. In this session, the congress will explore what is required for the profession to 'nurture' its profile, its role and its future in health care, and analyse the opportunities and challenges it will face on that journey.

### **B > Precision pharmacotherapy**

Precision medicine is an emerging model that seeks to harness shared

molecular and cellular biomarkers to customise therapy to subpopulation patient groups.

In contrast, personalised medicine refers to the tailoring of procedures and therapeutic interventions to an individual patient level.

Pharmacists and pharmaceutical scientists are experts in applied therapeutics and they are uniquely positioned to transform the theories of precision and personalised pharmacotherapy into practice.

### **WELCOME TO SEOUL**

*Seoul, the heart of the nation and home to 10 million national and foreign residents is a remarkable world-class city where contemporary lifestyle meets long-standing history.*

*This vibrant city houses 266 cultural properties against a backdrop of towering skyscrapers, and serves as the proud epicentre of the Korean Wave pop culture phenomenon or Hallyu, attracting many from all over the world.*

### **C > Pharmacy services**

Pharmacy services, or value added services, are pharmacy's future. But the process of moving pharmacy into this new world where pharmaceutical care is measured in terms of return on investment and patient outcomes is fraught with challenge. Congress delegates will learn about global variations and implement service solutions.

### **D > Smart pharmacy – medicines and beyond**

In this session, congress delegates will identify the key technologies that have transformed pharmacy and health care in recent years, describe the contribution that

these technologies have made, and understand the opportunities and challenges that are inherent in smart pharmacy and health care in the 21st century and beyond.

### **E > Targeting special interests**

This topic covers the quality and regulatory background for natural medicines, the evidence base, prevalence of use, and it will use case studies.

By the end, participants will be able to categorise natural medicines, and appreciate the customer base, understand the regulation and ethical considerations defining responsible use, and the evidence base that supports these products.



SEOUL 2017  
FIP WORLD CONGRESS  
10-14 September

Please find more  
information:  
[www.fip.org/seoul2017](http://www.fip.org/seoul2017)



### World Health Days

2nd April World Autism Day	24th to 30th April World Immunisation Week
7th April World Health Day	2nd May World Asthma Day
11th April World Parkinson's Day	8th May World Thalassaemia Day
17th April World Haemophilia Day	17th May World Hypertension Day
19th April World Liver Day	31st May World No Tobacco Day
25th April World Malaria Day	

### Upcoming Events

21 - 24 May 2017 6th FIP Pharmaceutical Sciences World Congress (PSWC) 2017, Stockholm, Sweden website: <a href="http://www.fip.org/pswc2017">www.fip.org/pswc2017</a>
10 -14 September, 2017 77th FIP World Congress of Pharmacy and Pharmaceutical Sciences 2017 Seoul, Republic of Korea, Website: <a href="http://www.fip.org/seoul2017">www.fip.org/seoul2017</a>

#### JOIN

Indian Pharmaceutical Association and select Community Pharmacy Division (IPA CPD)  
[www.ipapharma.org](http://www.ipapharma.org), [ipacpdetimes@gmail.com](mailto:ipacpdetimes@gmail.com)  
 Provide your feedback to this issue of the CPD E-Times; pass it to more pharmacists and also send in your thoughts/issues/ problems faced by you in pharmacy practice.

#### IPA CPD Editorial Team

Manjiri Gharat • Raj Vaidya • Dixon Thomas • Pradeep Mishra  
 Editorial Assistants: Amruta Deshpande, Vidya Peter, Manisha Mendon

#### For private circulation to healthcare professionals only

Disclaimer: Drug information is for health care professionals only. We try our level best to gather updated healthcare information, but it is better advised to refer and consult other relevant resources before taking a practice decision. Views of the authors are not necessarily, the views of IPA CPD, editors, and the IPA and/or editorial board members are not responsible for any damage caused due to information published in IPA CPD e-Times. Editorial board hold the right to do any corrections while publishing e-Times and committed to publish corrections on the published content when noticed in writing. Subjected to Mumbai Jurisdiction only.

#### Published by:

Indian Pharmaceutical Association—Community Pharmacy Division,  
 IPA Headquarter, Kalina, Santacruz (E), Mumbai - 400 098.

Creative Design: PMS Arts & Communications, [www.pmsarts.com](http://www.pmsarts.com)



Website: [www.ipapharma.org](http://www.ipapharma.org)

Tel :91-22-2667 1072

Fax :91-22-2667 0744

Email : [ipacpdetimes@gmail.com](mailto:ipacpdetimes@gmail.com)

<https://sites.google.com/site/ipacpdetimes/>