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

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GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI - 110011

Dated 27th January 2017

MESSAGE

Non-Communicable conditions constitute the largest global share of death and disability, accounting for more than 60% of all deaths worldwide. The situation is alarming in India as 60% deaths are attributed to NCDs. 55% of these deaths are premature in persons below 70 years of age. Burden of NCDs is on the rise putting heavy load on health care system in India.

Government of India launched National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS) in 2010 to prevent and control NCDs. From the Government side, in every possible way, efforts are on for prevention, early detection and effective management of the NCDs. Private sector is an equally important player in this endeavour. Some innovative projects are being undertaken on public private partnership mode to tackle NCDs. Pharmacists, who are located right in the community and are in regular contact with persons are in a key position and can contribute in NCD Control.

I understand that the pharmacists are already engaged in Revised National Tuberculosis Control Programme (RNTCP) On a similar line, pharmacists can play a key role in NPCDCS. There are approximately 7 lakh chemist shops in India, which are spread across the nook and corner of the country. Some of the roles that Pharmacists could undertake include:

- Community awareness by way of informative posters and leaflets
- Screening services and referral of the symptomatic to physicians
- Counselling and providing tools for medication adherence, monitoring of the treatment and side-effects of medicines
- Counselling patients and persons-at-risk on lifestyle modifications,
- Counselling of TB patients for diabetes checks

While pharmacists receive basic training about non-communicable diseases and related pharmacology, short refresher training can strengthen their capacity for active contribution in addressing common NCDs like diabetes and hypertension. This will definitely be a good support to the fight against NCDs in our country.

(DR. DAMODAR BACHANI)

Message IPA CPD Chairperson



To support the pharmacy profession in India, FIP came forward and has written a letter to the Government of India .You can read this brilliantly drafted advocacy letter on page 19-21 in this issue. On behalf of IPA and the pharmacy professionals in India, I profusely thank FIP for such a timely and strong support.

Dear Pharmacists,

At the onset, let me wish you all a very happy new year and wish the year ahead is filled with plenty of positive happenings.

We had a successful 68th IPC (Indian Pharmaceutical Congress) at Visakhapatnam, Andhra Pradesh from 16th to 18th December, 2016. Pharmacy Practice sessions were very well attended and thanks to the speakers from Commonwealth Pharmacists Association and academicians from USA for making the sessions an enriching and interesting experience.

The first National Advisory Committee meeting to engage community pharmacists in Pharmacovigilance Programme of India (PvPI) was held in December 2016 and the meeting was successful in deciding the roadmap for this initiative. IPA is very much part of the committee and we will fully work with PvPI for implementation of the roadmap.

Since last year, IPA is focusing its work in the area of NCDs and the theme for the 55th National Pharmacy Week 2016 was on diabetes and the role of the pharmacist.

In this issue, it is a pleasure to bring you the guest message from Deputy Commissioner of the NCD Programme of the Government of India. He has endorsed the need of involving community pharmacists in the fight against the epidemic of diabetes. Another NCD where IPA plans to initiate work is Cancer. IPA will be working closely with the Indian Cancer Society (ICS) for awareness about cancer prevention in the society through pharmacists and pharmacy students.

As mentioned in the last issue of eTimes, there have been demands from trade associations to permit non pharmacists in the pharmacies to be pharmacists by giving them short training. From all over India, there has been a strong opposition to this demand and you can read IPA's opposition letter on www.ipapharma.org, under "Advocacy Corner". To support the pharmacy profession in India, the International Pharmaceutical Federation (FIP) came forward and has written a letter to the Government of India emphasizing the need of a pharmacist in the pharmacy and the importance of pharmacist's role for the society. You can read this brilliantly drafted advocacy letter on page 19-21 in this issue. On behalf of IPA and the pharmacy professionals in India I profusely thank FIP for such a timely and strong support.

From this issue of eTimes, we bring you a new column **Drug Watch** which will briefly discuss the adverse drug reactions of some commonly used drugs. I am sure you will also enjoy reading an excellent article on **Healthcare and Community pharmacies in Sweden** written by FIP CPS ExCo colleague Mr Lars-Ake Sodurlund.

77th FIP Congress will be in Seoul, Republic of Korea in mid-September later this year. Please go through the Congress information on page 22 and I request you to start planning right away for the same. The abstract submission deadline is 1st April 2017.

Happy Reading and again a humble request to circulate the issue to your colleagues and please do send us your comments, suggestions and contributions.

Mrs Manjiri Gharat

Email: manjirigharat@ipapharma.org

Editorial: India and the antibiotic scourge



All the stakeholders have to work together on a war footing. If not, it is next to impossible to bring down the menace of antibiotic resistance in our country.

The Drugs Controller General of India issued a Notice on 16th January 2017, asking stakeholders to take policy measures including stringent regulatory action on sale of high end antibiotics (included in the Schedule H1) without a prescription. And to raise awareness through consumer associations about the side effects of taking antibiotics without a prescription so that microbial resistance to antibiotics could be avoided for patient safety, well being and protection of their health. The notice is a reaction (it says so too) to a report in the press that antimicrobial resistance has resulted in the death of a patient.

The title of the press report screams “ US woman killed by superbug resistant to every available antibiotic”. As per the report, the CDC (Centre for Disease Control, USA) said that the woman was killed by a superbug (bacteria) that proved resistant to every antibiotic available in the USA. She was in her 70's and had recently returned to the US after an extended holiday in India where she had been hospitalised multiple times before returning to the US. The superbug contained the NDM1 (New Delhi metallo-beta-lactamase) gene that makes the bacteria produce an enzyme carbapenemase which makes the bacteria (enterobacteriaceae like E.coli and Klebsiella pneumoniae) resistant to nearly every antibiotic including the very powerful carbapenems (e.g. Imipenem, Carbapenem). The DNA code for NDM-1 can jump from one bacterial strain to another, thus propagating the resistance.

The previous time a bigger knee-jerk reaction from India was seen when a study published by the Lancet in 2010 warned that there was a threat of spread of superbug around the world and advised people against travelling to India for medical treatment, because some patients in Europe who had taken medical treatment in India were found to have the superbug. There was a furor because the gene was named after New Delhi and a hot debate about the significance of the study findings, bias, etc..

The Government did get into some action, like releasing the long pending antibiotic policy in 2011, and trying to put restrictions on the supply of antibiotics by notifying the Schedule H1 (which took more than 3 years to notify). Schedule H1 contains 24 high end antibiotics and 12 anti-TB, anti-Leprosy drugs, and the only practical change in the supply system is that the pharmacy has to maintain a record of the medicines supplied along with the name of the patient and the doctor.

But has there been any improvement from the bad situation ? We have not seen much of reports, figures or studies showing any impact or improvement in the scenario in India.

Will the present notice be followed by a strict implementation of the law, ? The serious problem of misuse of antibiotics in India needs to be tackled with a multi-pronged strategy and missionary zeal. In the Indian context, some of these would include :

Strict implementation of the law :	Education/training/awareness amongst health providers (including veterinarians):
Tackling unqualified prescribers of antibiotics	STGs to be formulated, popularized. Rational prescribing of antibiotics.
Ensure antibiotics are sold strictly on the proper prescription of a qualified doctor, and under the supervision of a pharmacist	Prescribing in proper format, avoiding recommending antibiotics without seeing the patient/on the telephone/sms/whatsapp.
Veterinary and agricultural use of antibiotics to be curbed.	Following hygiene procedures in clinics/hospitals
Awareness amongst the public and pet/cattle owners:	Others:
About the compulsion for a doctor's prescription to buy antibiotics and the dangers of self-medication to self as well as the public	Ban irrational FDCs of antibiotics
Importance of completing the prescribed course	Regulate trade schemes/incentives/price fixing on antibiotics to hospitals/doctors/pharmacies – which lure/tempt into over-promoting them.

All the stakeholders have to work together on a war footing. If not, it is next to impossible to bring down the menace of antibiotic resistance in our country.

Raj Vaidya
Email: rajxvaidya@gmail.com

A green, torn-edge sticker with the text "Voglibose - 0.2mg, 0.3mg" in white.

Drug Information: Voglibose

Common Brands: *Vobose, Voglimac, Starvog, etc*

Pharmacological Class of drug: *Anti-diabetic, alpha glucosidase inhibitor*

Indications: Diabetes mellitus, It is specifically used for lowering post-prandial blood glucose levels thereby reducing the risk of macrovascular complications.

Pregnancy : Category C

Contraindications:

- Contraindicated in patients with inflammatory bowel disease, gastrointestinal obstruction, hernia, severe ketosis, diabetic hypersensitivity, pregnancy, lactation. Not to be used as single therapy in Insulin-dependent diabetes mellitus (IDDM).
- **Pregnancy:** C.

Counseling the patient :

- Should be taken by mouth at the start of a meal/along with the first bite of the meal.
- Before using this drug, inform your doctor about your current list of medications, over the counter products (e.g. vitamins, herbal supplements, etc.), allergies, pre-existing diseases, and current health conditions (e.g. pregnancy, upcoming surgery, etc.).
- Some health conditions may make you more susceptible to the side effects of the drug.
- Take as directed by your doctor or follow the direction printed on the product insert.
- Tell your doctor if your condition persists or worsens
- Importance of adhering to a specific diet, reducing weight, exercising and following personal hygiene programs should be stressed.
- Do not miss a dose. If you happen to miss a dose then do not take in between. Take only the next dose. Do not double the dose.
- Regularly monitor blood sugar level
- You might experience symptoms of Hypoglycaemia such as shaking, sweating, anxiety, dizziness, hunger, rapid heartbeat, impaired vision, weakness & fatigue, headache & irritability. If you experience any of these symptoms drink half cup of juice, or chew 3-4 hard candies.
- Store the medicine below 30° C

Dose: 0.2 – 0.3mg (200-300 mcg) tid.

Elderly: Initiate at lower doses

Auxiliary label:



Drug Watch: NSAID Induced Peptic Ulcers

Background

NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) are commonly used in inflammation and pain. NSAIDs are proven to cause gastro-duodenal erosions (superficial ulcers involving mucosa of stomach) and peptic ulcers (deeper ulcers extending to muscular layer of stomach wall).

Etiology and Risk factors

Non-selective NSAIDs like indomethacin, piroxicam, ibuprofen and naproxen have high risk of causing GI complications compared to selective or partially selective NSAIDs (celecoxib, diclofenac). Risk factors associated with NSAID-induced ulcers are age >65 years, history of peptic ulcer, use of high-dose NSAIDs, multiple NSAID use and concomitant use of NSAIDs with other drugs that irritate the GI mucosa (e.g.aspirin, corticosteroids etc.)

Pathogenesis and Clinical presentation

NSAIDs cause gastric irritation by their topical irritant properties. The enzyme cyclooxygenase produces protective prostaglandins that maintain GI mucosal integrity. NSAIDs inhibit this enzyme, and thus cause gastric irritation. Prolonged use of NSAIDs can lead to GI bleeding and perforations. Misoprostol is used to prevent NSAID induced stomach ulcer. It is contraindicated in pregnancy.

Symptoms of NSAID induced gastric ulcer include burning epigastric pain (pain in the upper abdominal region), nocturnal pain (pain at night) that disturbs the sleep, indigestion, heart burn, belching and bloating.

Prevention and Management

Use of Proton Pump Inhibitors (PPIs:Omeprazole, Pantoprazole etc) in combination with NSAIDs, use of selective NSAIDs instead of nonselective NSAIDs can reduce the risk of GI complications. Topical irritant properties of NSAIDs can be overcome by using NSAID prodrugs, enteric coated and rectal preparations.

Role of Pharmacist

If a community pharmacist suspects peptic ulcer, the patient should be referred to a physician. Patients should be counseled to take NSAIDs after food and with plenty of water to reduce the risk of GI irritation. Community pharmacists should discourage the indiscriminate use of NSAIDs and suggest patients to take safer alternatives like paracetamol if needed for pain relief.

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1. Dipiro JT et.al. Pharmacotherapy A Pathophysiologic Approach. 8th ed. The McGraw-Hill; 2011. Chapter 40, peptic ulcer disease; pp.563-82.
2. Chan FKL, Graham DY. Review article: Prevention of non-steroidal anti-inflammatory drug gastrointestinal complications—Review and recommendations based on risk assessment. Aliment Pharmacol Ther 2004;19:1051–1061.
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Contributed by:

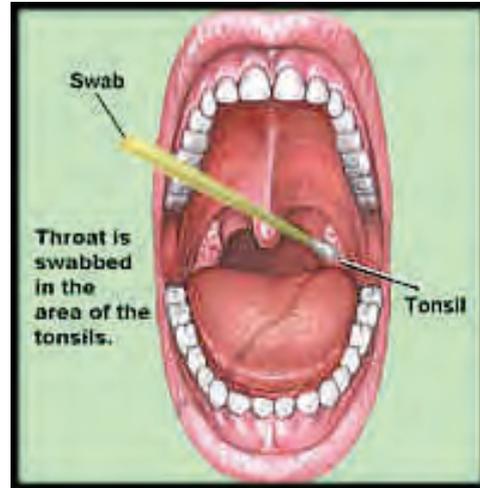
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Lab Information: Throat Swab test

A throat swab culture is a laboratory test that is done to identify germs that may cause infection in the throat. It is most often used to diagnose a strep throat. A sterile cotton swab is rubbed along back of the throat near the tonsils. Then it is cultured in a growth plate to see any growth of bacteria.



A rapid strep test can be done to detect group A streptococcal antigens. Results are available in 10-20 minutes. However, the test may be negative, even if strep is present. If the rapid strep test is negative and the doctor still suspects that the strep bacteria is causing the sore throat, a throat swab can be tested (cultured) to see if strep grows from it. Results will take 24 to 48 hours.

Most sore throats are caused by a virus and will resolve without treatment within a few days, but some people with sore throats have strep throat. It is important to diagnose and treat strep infections promptly with antibiotics because they are very contagious and secondary complications can develop, especially in children. The bacteria can also be studied for antimicrobial sensitivity and resistance.

Antiseptic mouthwashes should not be used before the test. They may decrease the chance of detecting bacteria.

An abnormal or positive result means bacteria or other germs that can cause a sore throat were seen on the throat swab. Strep throat is most common in children between ages 5 and 15, although anyone can get it. Strep throat is spread by person-to-person contact with fluids from the nose or saliva. It commonly spreads among family or household members. Symptoms appear about 2 to 5 days after coming in contact with the strep germ. They may be mild or severe.

References

- Medline Plus, <https://medlineplus.gov/ency/article/003746.htm>
- Lab tests online <https://labtestsonline.org/understanding/analytes/strep/tab/test/>

Consumer Dialogue: Strep Throat

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 from sudden onset of throat pain and difficulty swallowing, Could you suggest some medicines for me.

Pharmacist: Sir, the symptoms show that you may be infected with a strep throat and it is better to visit your doctor.

Patient: What is strep throat? What are the signs of strep throat?

Pharmacist: Strep throat is an infection caused by bacteria called group A streptococcus. Adults with strep throat may have a sore throat, a fever and swollen neck glands. They usually don't have a cough or a runny nose. Children with strep throat have a sore throat and may have tummy pain or a red rash with small spots. The rash is worse under the arms and in skin creases.

Common symptoms include:

- Fever that may begin suddenly and is often the highest on the second day
- Chills
- Red, sore throat that may have white patches
- Pain when swallowing
- Swollen, tender neck glands

If strep throat is untreated, it may result in complications;

Complications may include:

- Kidney disease caused by strep
- A skin condition in which small, red, and scaly teardrop-shaped spots appear on the arms, legs, and middle of the body, called guttate psoriasis
- Abscess in the area around the tonsils
- Rheumatic fever
- Scarlet fever

Patient: How is strep throat treated?

Pharmacist: If the doctor diagnosis it as a bacterial infection, he may give you an antibiotic. This medicine kills the bacteria causing the infection can help the sore throat go away a little faster. It can also help prevent a few rare but serious conditions that people with strep throat might get. It is important to take all of the medicine your doctor gives you.

Patient: Should all sore throats be treated with antibiotics?

Pharmacist: No. Not every sore throat is a strep throat. Bacteria only cause about 5 to 10 percent of sore throats. The rest are caused by viruses or other problems, and antibiotics will not help. Your doctor can do a test to make sure it is strep throat.

Patient: Can other people catch my strep throat?

Pharmacist: Yes. You can give the infection to other people until you have been treated with an antibiotic for 1 to 3 days. Children with strep throat should not go back to school or day care until their fever has gone away and they have taken an antibiotic for at least 24 hours.

Patient: What can make my sore throat feel better?

Pharmacist: Here are some things that might help:

- Gargling with warm salt water (¼ teaspoon of salt in 1 cup [8 ounces] of warm water)
- For adults and older children, sucking on throat lozenges, hard candy or pieces of ice
- Soft foods, cool drinks or warm liquids, or popsicles

- Paracetamol (acetaminophen) or Ibuprofen. Children should not take aspirin

Patient: Can people get strep throat from their pets?

Pharmacist: This could happen, but it is very rare.

Patient: which are the preventive measures against this disease?

Pharmacist: While it's very hard to prevent all infections, you can help to decrease exposure and spreading:

- Wash your hands frequently, especially after blowing your nose or after caring for a child with a sore throat.
- If someone in your home has pharyngitis, keep his or her eating utensils and drinking glasses separate from those of other family members. Wash these objects thoroughly in hot, soapy water.

- If a toddler with pharyngitis has been chewing or sucking on toys, wash these objects thoroughly in water and disinfectant soap, then rinse well.
- Promptly dispose of any dirty tissues from runny noses and sneezes, and then wash your hands.
- Do not allow a child who has been diagnosed with strep throat to return to school or day care until he or she has been taking antibiotics for at least 24 hours and symptoms have improved.

Patient: Ok, thank you for providing me all the valuable information and I will contact you further if any other information is required.

Pharmacist: Thank you for spending your valuable time. And I will be always at your service to provide information. Our pharmacy phone number is on the medicines cover, you can call me if you have a doubt.

FIP releases new report “Medicines information: Strategic development”

International Pharmaceutical Federation (FIP) released the new publication “Medicines information: Strategic development” on 31st January 2017, it is the first time that the implementation of medicines information, which is key to the safe and effective use of medicines, has been explored at a global level. Strategies for medicines information should be included in national medicines policies, say the authors of the report. Medicines information can be inaccurate, overwhelming, biased, unhelpful or simply not well understood. This publication sets out a vision for collaboration and action towards ensuring high quality medicines information around the world, through the use of strategies.

A survey conducted by an FIP working group indicates that not all countries have national medicines information strategies. The core elements of medicines information strategies and how these strategies can be developed are explained in the document, which also contains experiences of three countries (USA, UK and Finland) where medicines information strategies exist. There is also a section on the development of medicines information as a part of medicines management policies in low-resource settings. Importantly, “Medicines information: Strategic development” also highlights the important contribution of pharmacists.

“Medicines information: Strategic development” is available at <https://fip.org/files/fip/publications/2017-01-Medicines-information-strategic-development.pdf>

Good Pharmacy Practice (GPP) Instructions: Case 18

Prescription received at community pharmacy:

Patient name: H.Q

Age: 61 Years

Gender: Female,

Diagnosis: Hyperuricemia, isolated HTN, dyslipidemia, arthritis,

NOTE: Patient allergic to sulfa drugs

Reg. no.: xxxx

	Drug	Dose	Frequency
1	Rosuvastatin	20mg	(0-0-1)
2	Allopurinol	100mg	(0-0-1)
3	Bisoprolol fumarate	5mg	(1-0-0)
4	Exforge HCT (amlodipine/valsartan/hydrochlorothiazide)	5/160/12.5mg	(1-0-0)
5	Meloxicam	15 mg	(0-1-0)

Original Prescription	Error found	Intervention made
Exforge HCT 5/160/12.5mg	<ul style="list-style-type: none"> - Hydrochlorothiazide is a sulfa-containing drug and patient is allergic to sulfa - Patient had past experience of peripheral edema with amlodipine 	Drug changed to Perindopril 5 mg BID

Drug Interactions:

[Perindopril & Allopurinol] Severity: Major. Risk of anaphylaxis, if reported by the patient; drug should be changed.

[Meloxicam & Bisoprolol / Perindopril] Severity: Moderate. Antihypertensive effect may be reduced by meloxicam. Monitor therapy.¹

Instructions to Patient:

Rosuvastatin 20mg- this drug is used to lower the lipid levels in the blood²

Allopurinol 100mg- this drug reduces the levels of uric acid in the blood and thus reduce the pain resulted in the joints due to this accumulation³

Bisoprolol fumarate 5mg- it helps controlling blood pressure⁴

Perindopril 5mg- it helps controlling blood pressure and protects kidney from high blood pressure⁵

Meloxicam 15mg- this is for reducing joint pain and treats arthritis⁶

NOTES:

- Monitor your blood pressure and note down the readings for the next clinic visit.
- In case you experience any side effects do not hesitate to contact your physician or pharmacist.

Medication Schedule

	Drug	Take it:	Notes
1	Rosuvastatin 20mg	Once daily at bedtime	-
2	Allopurinol 100mg	Once daily at night	Maintain adequate hydration & increase fluid intake
3	Bisoprolol fumarate 5mg	Once daily in the morning	DON'T discontinue the drug suddenly
4	Perindopril 5mg	Once in the morning and once at evening	-
5	Meloxicam 15mg	Once daily after lunch	DON'T take it other pain killers without consulting your doctor

Common Side Effects might be associated with the prescribed medications:⁷**Rosuvastatin 20mg-** abdominal pain, nausea, and muscle pain**Allopurinol 100mg-** nausea and vomiting**Bisoprolol fumarate 5mg-** reduced heart rate, fatigue, and diarrhoea**Perindopril 5mg-** headache, dizziness and cough**Meloxicam 15mg-** abdominal pain, diarrhoea, flatulence and nausea**References:**

1. Lexicomp Drug Interactions available at: https://www.uptodate.com/drug-interactions/?source=responsive_home#di-druglist,
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4. Bisoprolol: patient drug information https://www.uptodate.com/contents/bisoprolol-patient-drug-information?source=search_result&search=bisoprolol&selectedTitle=2-39,
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Organized By:



Indian Pharmacopoeia Commission (IPC)
National Coordination Centre-Pharmacovigilance Programme of India (NCC-PvPI)
Ministry of Health & Family Welfare (MoHFW), Govt. of India (GoI), Ghaziabad

Duration of Training Programme

Duration of the training programme is 10 days and the training is available round the year as per training calendar.

Training Calendar

State/Union Territory	Training Schedule 2017	Last Date for Application
• Uttar Pradesh • Uttarakhand • Manipur • Chandigarh • Delhi	16 th -25 th Jan	20 th Dec 2016
• Himachal Pradesh • Tripura • Arunachal Pradesh • Bihar • Jammu & Kashmir	01 st -10 th Mar	31 st Jan 2017
• Madhya Pradesh • Haryana • Tamil Nadu • Odisha • Meghalaya • Nagaland • Puducherry	01 st -10 th May	31 st Mar 2017
• Chhattisgarh • Karnataka • Andhra Pradesh • Dadra and Nagar Haveli • Assam • Lakshadweep • Goa	03 rd -12 th Jul	31 st May 2017
• Maharashtra • Kerala • Telangana • Mizoram • Sikkim • Rajasthan	04 th -13 th Sep	31 st Jul 2017
• Punjab • West Bengal • Gujarat • Jharkhand • Daman and Diu • Andaman & Nicobar	06 th -15 th Nov	30 th Sep 2017

Note: Aspirants are encouraged to apply as per the schedule of their respective States/UTs however the request may be considered in the other slots depending on the availability of seats.

Venue:

Indian Pharmacopoeia Commission
National Coordination Centre-Pharmacovigilance Programme of India
Ministry of Health & Family Welfare, Govt. of India
Sector-23, Rajnagar, Ghaziabad-201 002, Email: pvpi.ipcindia@gmail.com, pvpi.ipc@gov.in
Tel.: 0120-2783400, 2783401, 2783392, Fax: 0120-2783311

Brain Ticklers

(Please find answers in page 16)

- Q1. For which antihypertensive agent does the side effect profile include impaired glucose tolerance, hypokalemia, increased serum lipids and increased renin secretion:**
- Methyldopa
 - Hydrochlorothiazide
 - Nifedipine
 - Nitroprusside sodium
 - Diazoxide
- Q2. By what mechanism, blood-pressure may be reduced?**
- Reduced cardiac output
 - Increased vagus nerve activity
 - Decreased central sympathetic outflow
 - Reduced angiotensin II levels
 - All the above
- Q3. Which drug is associated with orthostatic hypotension?**
- Minoxidil
 - Imipramine
 - Hydralazine
 - Methyldopa
 - All the above
- Q4. Which antihypertensive drug is least likely to cause orthostatic hypotension?**
- Minoxidil
 - Enalapril
 - Guanethidine
 - Hydralazine
 - Terazosin

Know the Abbreviations and Clinical terms

Abbreviations	Meaning
AKA	Above the knee amputation
BKA	Below the knee amputation.
BMP	Basic metabolic panel
COPD	Chronic obstructive pulmonary disease
ACL	Anterior cruciate ligament
DOE	Dyspnea on exertion
DTR	Deep tendon reflexes
DVT	Deep venous thrombosis
HTN	Hypertension
I&D	Incision and drainage
In vitro	In the laboratory
In vivo	In the body
IU	International units
KCL	Potassium chloride

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Community Pharmacy Practice in Sweden



Equal access – the key to keeping Sweden healthy

People in Sweden are living increasingly longer. The average life span is now 83.7 years for women and 80.1 years for men. This can be attributed in part to falling mortality rates from heart attacks and strokes. In 2016, 20 per cent of the country's population was 65 or older. That means Sweden proportionally has one of Europe's largest elderly populations. On the other hand, the number of children born in Sweden has been increasing each year since the late 1990s.

Shared responsibility

The responsibility for health and medical care in Sweden is shared by the central Government, county councils and municipalities. The Health and Medical Service Act regulates the responsibilities of county councils and municipalities, and gives local Governments more freedom in this area. The role of the central Government is to establish principles and guidelines, and to set the political agenda for health and medical care. It does this through laws and ordinances or by reaching agreements with the Swedish Association of Local Authorities and Regions (SALAR), which represents the county councils and municipalities.

Decentralized health care

Responsibility for providing health care is devolved to the county councils and, in some cases, municipal Governments. County councils are political bodies whose representatives are elected by county residents every four years on the same day as national general elections. Swedish policy states that every county council must provide residents with good-quality health and medical care, and work to promote good health for the entire population. County councils are also responsible for dental care for local residents up to the age of 20.

Patient fees

The fee for a hospital stay is maximum SEK 100 per day. Patient fees for primary care vary between SEK 100 and 250 depending on the county council. For specialist visits, there is a maximum fee of SEK 350. 10 SEK is approximately 1 Euro or Rs. 80.

High-cost ceiling

After a patient has paid a total of between SEK 900 and 1,100 (depending on the county council) in the course of a year, medical consultations within 12 months of the first consultation are free of charge. There is a similar ceiling for prescription medication, so nobody pays more than SEK 2,200 in a given 12-month period.

Shared medical care

Sweden is divided into 290 municipalities and 20 county councils. Three of the county councils: Halland, Skåne and Västra Götaland – as well as Gotland municipality – are called regional councils and have assumed responsibility for regional development from the state.

There is no hierarchical relation between municipalities, county councils and regions. Around 90 per cent of the work of Swedish county councils concerns health care, but they also deal with other areas such as culture and infrastructure.

Sweden's municipalities are responsible for care for the elderly in the home or in special accommodation. Their duties also include care for people with physical disabilities or psychological disorders and providing support and services for people released from hospital care as well as for school health care. Chronic diseases that require monitoring and treatment, and often life-long medication, place significant demands on the system.

Many of the challenges confronting Swedish health care can also be seen in other countries, and include issues of access, quality, efficiency and funding.

One priority area is patient safety. In early 2011, Sweden enacted a new patient safety law which provides everyone affected by health care – patients, consumers and family members – new opportunities to influence health care content. The aim is to make it easier to report cases of wrong treatment.

Basic facts about community pharmacies;

- Pharmacies in Sweden have yearly around 110 million customer visits (approximately 300 000 visits/day)
- Sweden has around 1400 pharmacies, an increase with approx. 40% after the re-regulation of the pharmacy market, and where new pharmacies have opened in new areas of the country.
- Today there are approximately 25 different players in the market – bigger and smaller pharmacy chains, entrepreneurs, small groups of pharmacies, private owners as well as Government owned.
- More than 10 000 people are employed at Swedish pharmacies, where the majority are pharmacists and pharmacy technicians.
- The standard Good Pharmacy Practice (GPP), developed by FIP and WHO, is applied at all pharmacies. The focus of GPP in Sweden is to highlight pharmacy as an integrated actor of the health care system, and where counselling has to have a high quality, and needs to be based upon the needs from the individual customer. The advice from the pharmacist plays a very important role in optimizing the value of the medicines.



The pharmacy market in Sweden has a number of different players, and clinical pharmacy is to be found both at community- and hospital pharmacy. As such, community pharmacy in Sweden is an integral part of the comprehensive Swedish welfare state and its high quality health care system. Hospital pharmacy is integrated into clinics and wards.

The re-regulation of the pharmacy market



After 40 years of state monopoly of medication distribution, the Swedish pharmacy system has undergone a radical change. After 40 years of monopoly the pharmacy system was re-regulated in 2010, and the number of pharmacies has increased approximately by 46% or around 460 pharmacies. Expectations of higher efficiency, increased diversity, lower prices and higher availability for pharmacy services were some of the objectives with the

re-regulation of the market.

Sweden now has 13.8 pharmacies/100 000 inhabitants. In 2016, four pharmacy chains and approximately 210 independent pharmacies operated the Swedish pharmacy market, with 10 million inhabitants. The four chain pharmacies have a market share around 91%. Apoteket (the Government owned pharmacy chain) is still the market leader and seen as a 'Lovemark' by the customers.



Opening hours have increased since the re-regulation and is today 55 hours/week, and 36% of the pharmacies are open on Sundays.

96% of all customers get all their prescriptions directly from the pharmacy at the first visit, signifying a high service degree. In 2016, the proportion of customers who were satisfied with their most recent pharmacy visit was more than 97 percent.

The most obvious benefits of the re-regulation of the pharmacy market is a greater focus on the customer, more choice of pharmacy models, development of pharmacy services and a greater access to pharmacies – simply because there are more of them and the ratio of inhabitants/pharmacy has decreased. The majority of pharmacies inherited from Apoteket, as well as all new pharmacies, have also extended their opening hours since the re-regulation of the market. In addition new jobs have been created due to the increase in pharmacy outlets, while liberalisation has created downward pressure on prices as more providers enter the market. Since November 2009, some OTC products have been available from 7000 retail outlets like grocery stores and gasoline stations in addition to pharmacies, thus opening doors to reach a wider market.

“There is a strong focus on how we can assist patients to help drive adherence and improve outcomes”
Lark-Åke Söderlund, Apoteket AB

The competition on the market is very high, demanding actors to be innovative for new services and concepts, as well as differentiating them on the market. Health and wellness are central objectives for all actors, including medicines optimization.

The Swedish Hospital pharmacy market was also re-regulated in 2008, leading to free competition among different players to provide hospital pharmacy services to hospitals. Players were chosen according to a bid management process in open tenders. Today there are three main players in the market. Clinical pharmacy services are mostly provided by in-house pharmacists at hospitals.

The high-cost threshold system for patient fees and medicines

The high-cost threshold for pharmaceutical products includes numerous types of medicines as well as medical devices, contraceptives, and other products. Certain over-the-counter medicinal products are also included. The high-cost threshold refers to the system where a medicine is tax-subsidized, and the State pays a portion of the costs. The Dental and Pharmaceutical Benefits Agency, TLV, is the Government body which determines which medicines are eligible for reimbursement status and included in the high-cost threshold. The high-cost threshold incrementally reduces patient costs for prescription medicines. The maximum cost for a patient for prescription medicines in the high cost threshold system is SEK 2,200 during a 12-month period (approximately 200 Euros or 220 USD).



TLV also determines retail margins for all pharmacies in Sweden and publishes the lists of substitutable medicines where pharmacies must choose the **cheapest** available one when appropriate. Pharmacies are responsible for offering customers the most **inexpensive** medicinal product when different versions of equal effect exist.

Sweden applies generic substitution at pharmacies which substitute prescription medicines included in the high-cost threshold whenever lower-cost medicines with the same formula exist. The prices are valid for one month at a time, so patients may be offered different medicines each time they refill a prescription. The Swedish Medical Products Agency reviews all substitutable medicines. Substitution of medicines at the pharmacy is part of the high-cost threshold system and the goal is to keep medicine costs down.



100% of prescriptions are electronically transmitted to the pharmacies, and all pharmacies can get access to the prescriptions from the E-health Agency.

E-services

During 2015, e-trade within the pharmacy market was established by all the players in the market. E-trade increases the availability and accessibility to products and services provided by the pharmacy. Even if the majority of customers visit the pharmacy in their neighbourhood, the services on the internet create both convenience and new possibilities for customers, for example in the rural areas of the country.

Much has happened in the care sector within a short space of time. We have gone from paper prescriptions to e-prescriptions, medical record systems are now electronic, and appointments are booked online. These are all examples of e-health.

Opportunities for community pharmacy in Sweden

As we all know, the nature of healthcare is rapidly changing and community pharmacy is facing accelerated change and development. Sweden, like all EU countries faces similar challenges when it comes to future healthcare:

- Populations are ageing
- The burden of chronic diseases is rising
- Public healthcare expenditure growth is unsustainable
- In many countries the number of healthcare professionals is not sufficient
- Digital technologies are changing patient behaviour
- Patients' needs are changing, with many requiring more support in their homes.
- Poor adherence to medicines contributes to further healthcare demands.

A Governmental inquiry is now developing the future role of pharmacy in Sweden, with the aim to support an expanded role for community pharmacies beyond their current core role of dispensing medicines, which the overall goal to create an even more sustainable health care system.



With an average of five years of professional training, a qualified pharmacist is an ideal first point of contact for any patient seeking primary care, triage or minor ailment support. They are an expert in self-care and medicines (e.g. compliance, storage, multi-pharma). A pharmacist advises customers how to use medicines correctly and



prevent diseases and may organise dedicated days for certain themes such as pain, diet or skin care. Community pharmacies are highly affordable and accessible healthcare hubs, offering their medical expertise at a relatively low cost and without an appointment. This can reduce pressure on doctors and Accident and Emergency hospitals units, allowing those professionals to focus on patients in the most need, thereby saving public money.

Pharmacies in Sweden already today play an expanded role by:

- Supervising and managing patient adherence to medication regimes, e.g. Medicines Use Reviews, inhalation, diabetes equipment etc.
- Supporting independent living and self-care
- Playing an active role in disease prevention, e.g. epidemiological screening
- Supporting long-term condition management through the delivery of medicines optimization
- Participating in public health awareness campaigns and medication programmes, e.g. flu vaccinations or immunization programs.
- Contributing to a digital ecosystem that interconnects the digital and physical worlds and enables the development of national eHealth systems
- Supporting and collaborating with other primary healthcare professionals for better outcomes for patients



Despite the ever-increasing importance of technology and digital health, I believe the role that our pharmacists and pharmacies play, and the services they provide are critical to the future of healthcare. Pharmacists will be even more central to preserving the much needed “human factor” in the future as they will always be needed to explain the things that technology can't.

As such, I have an unwavering belief that community pharmacy has an important and growing role in delivering good quality healthcare in the heart of communities; and which goes beyond its well-established and trusted responsibility for dispensing medicines. Pharmacy and its enhanced services is a vital component in a sustainable health care system.

Let's continue to do what we do best: improve accessibility for pharmacy services and health outcomes for all patients!

Contributed by:

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Solution of Brain Ticklers

- Q.1) b. Hydrochlorothiazide
Q 2) e. All the above
Q 3) e. All the above
Q 4) b. Enalapril

News and training

DOTS TB Training for community pharmacists at Bangalore, Karnataka

DOTS TB training of community pharmacists was organised on 20th December, by the National Social Service (NSS) team of Krupanidhi College of Pharmacy, Bangalore, in collaboration with the Indian Pharmaceutical Association-Community Pharmacy Division, State Drugs Control Department and State TB Control authorities. A total of 140 pharmacists from Bangalore region attended the training. Mrs Manjiri Gharat and Dr. Anil, Director, State TB Training and Demonstration Center (STDC), Government of Karnataka trained the pharmacists for basics of TB-DOTS protocols, role of pharmacist in TB control and care. Mrs Rajeswari R., faculty member of Krupanidhi College successfully coordinated the programme with the support of Principal Dr Raman Dang, and the NSS team.



Trainers and Organisers at the DOTS Training

1st National Advisory Committee meeting for engaging Community Pharmacists in Pharmacovigilance at New Delhi

The 1st National Level Advisory Committee (Community Pharmacists) Meeting of PvPI was held on 28th December 2016 at Central Drugs Standard Control Organization, FDA Bhawan, New Delhi under the chairmanship of Dr. G. N. Singh, Drugs Controller General (India) to supervise and give proper direction to the Pharmacovigilance Programme of India (PvPI) with respect to the awareness about Pharmacovigilance among Community Pharmacists. Pharmacy Council of India, Indian Pharmaceutical Association, WHO India, State Drugs Control Department, SEARPharm Forum, Consumer Organisations, All India Organisation of Chemists and Druggists, senior community pharmacists and senior academics are the members of the committee. In the meeting it was decided to initiate training of community pharmacists in different parts of the country for which a training module will be finalised soon. Dr Kalaiselvan, Principal Scientific Officer of National Coordinating Center, PvPI is coordinating the work of the committee.



Advisory Committee Members at the PvPI

DOTS TB Pharmacist Project Meeting at IPC Visakhapatnam, Andhra Pradesh

At the 68th Indian Pharmaceutical Congress, Visakhapatnam, a meeting of IPA Community Pharmacy Division Executive Committee was organised. Mrs Manjiri Gharat, Mr Raj Vaidya, Dr G P Mohanta, Ms Anu Rao of the Exe Committee along with the DOTS Provider pharmacists Mr Mahadev Patel, Mr Deepak Barai, Mr Sanjay Chougule, Mr Manohar Kore and team of pharmacists discussed the progress. The future of the project and newer developments in the TB programme in the country were informed by Mrs Manjiri. Each pharmacist narrated the status of work in his area and issues if any.



IPA CPD Team at the TB Project meeting

Continuing Professional development Programme for Community Pharmacists at Annamalai, Tamilnadu

The Department of Pharmacy, Annamalai University, Tamilnadu in association with Community Pharmacy Division of Indian Pharmaceutical Association organized a continuing professional development programme for community pharmacists on 28th January 2017. The programme focussed on the topics Nutrition, Women's Health and Opioids. 30 community pharmacists from Annamalai Nagar and nearby places participated. Dr. S. Parimalakrishnanan, Dr. RT Saravanakumar, and Mr. K. Saravanan, Assistant Professors of Pharmacy, were the resources persons. Along with the sessions, a short film on Good Pharmacy Practice was shown. Dr. Guru Prasad Mohanta, Professor, while welcoming the participants briefed about IPA's efforts to bring more professionalism in retail pharmacy practice. Dr. Prabal Kumar Manna, Professor and Head, Department of Pharmacy and Dr. Mohanta were the coordinators for the programme.



Organisers and Speakers at the Annamalai Programme

Letter addressed by FIP to the Hon'ble Health Minister of India



Shri J.P. Nada
Honourable Union Minister of Health and Family Welfare
Department of Health and Family Welfare
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India
ministerhfw@nic.in

The Hague, 9 January 2017
Ref.: GEN001392/CP/GSP/RvK

Subject: Professional management of community pharmacies by persons without the appropriate competence

Dear Minister,

The International Pharmaceutical Federation (FIP) is the global federation of national associations of pharmacists and pharmaceutical scientists. Through its 139 Member Organisations, FIP represents and serves more than three million pharmacy practitioners and scientists around the world – the experts in medicines and their responsible use. The Mission of FIP is to *"to improve global health by advancing Pharmaceutical Education, Pharmaceutical Sciences and Pharmaceutical Practice thus encouraging, promoting and enabling better discovery, development, access to and responsible use of appropriate, cost-effective, quality medicines worldwide"*. FIP was founded in 1912 and has been a non-governmental organization in official relations with the World Health Organization (WHO) since its creation in 1948.

We have recently learnt about a proposal submitted to your Ministry by the All India Organization of Chemists and Druggists (AIOCD), "to conduct a short term refresher course for the unqualified persons to enable them work as pharmacists"¹ and, as such, manage pharmacies (retail pharmacies or chemist and druggists shops).

We would like to bring to your attention two important definitions of pharmacists: Our organisation defines pharmacists as *"a scientifically-trained graduate healthcare professional who is an expert in all aspects of the supply and use of medicines. Pharmacists assure access to safe, cost-effective and quality medicines and their responsible use by individual patients and healthcare systems."*

¹ "PCI firmly against AIOCD proposal to start refresher course for unqualified persons", <http://www.pharmabiz.com/NewsDetails.aspx?aid=99147&sid=1>, 12 December 2016

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Similarly, the International Labour Organisation (ILO) has defined pharmacists² in its International Standard Classification of Occupations. *“Pharmacists store, preserve, compound and dispense medicinal products and counsel on the proper use and adverse effects of drugs and medicines following prescription issued by medical doctors and other health professionals. They contribute to researching, testing, preparing, prescribing and monitoring medicinal therapies for optimizing human health”*. ILO defines 13 major tasks for pharmacists, one of which refers to *“Supervising and coordinating the work of pharmacy technicians, pharmacy interns and pharmacy sales assistants”*

Our 2013 Global Report on Pharmacy Education³ revealed that the duration of pharmacy studies range from 4 years to 6 years. This duration is a requirement to ensure that graduating pharmacists have the skills, knowledge and attitudes to fulfil their roles and missions, including those defined in the *“Joint FIP/WHO guidelines on good pharmacy practice: standards for quality of pharmacy services”*.⁴

We therefore express our grave concern for the potential impact of this measure in terms of the quality and safe use of medicines and the public health of the Indian population, as it is unlikely that any refresher courses would allow unqualified personnel to acquire the necessary knowledge to take clinical decisions that a managing pharmacist must take when running a pharmacy or offering unsupervised professional advice to a patient. There is no doubt that all pharmacies of all types should be run under the professional guidance of a fully qualified and registered pharmacist.

We believe that all Indian citizens should be able to access to the same level of competencies and skills, thus of services when entering a pharmacy. The way forward is to ensure that there are sufficient, equally competent and well-distributed pharmacists across India. Such approach aligns with the United Nations High-Level Commission on Health Employment and Economic Growth recommendations (available at: <http://www.who.int/hrh/com-heeg/en/>).

We recognise the challenges that India may currently face with regards to unmet workforce needs, as the number of pharmacists becoming available each year in the country might not be getting deployed appropriately in pharmacies and in clinical practice to meet the country's healthcare needs. This represents an important challenge for the country, which demands policies aimed at creating opportunities in public and private sectors to appropriately recruit and deploy well-trained and qualified workforce to ensure a safe access to and a responsible use of medicines. Likewise, the enforcement of policies aimed at ensuring that pharmacies are adequately supervised by a pharmacist is also critical. Notwithstanding, the solution to these challenges must not be to allow persons without the appropriate competence to fulfil that role. This would establish a dangerous precedent, which would be difficult to redress in the future.

In November 2016, FIP organised a Global Conference on Pharmacy and Pharmaceutical Sciences Education, which led to the adoption of a vision for the development of

² http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf

³ http://www.fip.org/files/fip/FIPed_Global_Education_Report_2013.pdf

⁴ http://www.fip.org/www/uploads/database_file.php?id=331&table_id=



pharmacists' workforce and education together with 13 Pharmaceutical Workforce Development Goals and 55 statements defining the international expectations of a robust pharmaceutical education system to meet local needs (www.fip.org/nanjing2016).

Our Federation (through our Member Organisations, the Indian Pharmaceutical Association and the Indian Association of Colleges of Pharmacy) is keen to engage with your Ministry to develop a strategy based on these recommendations, best practices and evidence to prepare a sustainable pharmacists workforce to support the improvement of the health of all Indian people.

Should you have any further queries, please do not hesitate to contact us.

With kind regards,

A handwritten signature in blue ink, appearing to read 'Carmen Peña'. The signature is fluid and cursive.

Carmen Peña
FIP President

Fédération
Internationale
Pharmaceutique

International
Pharmaceutical
Federation

CC:

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77th FIP World Congress of Pharmacy and Pharmaceutical Sciences Seoul, Republic of Korea 10-14 September 2017



ABSTRACT
SUBMISSION
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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 21st century.

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.

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.

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



World Health Days

29th January
World Leprosy Day

4th February
World Cancer Day

10th February
National Deworming Day

12th February
Sexual Reproductive Health Day

Upcoming Events

21 - 24 May 2017
6th FIP Pharmaceutical Sciences
World Congress (PSWC) 2017,
Stockholm, Sweden
website: www.fip.org/pswc2017

10 -14 September, 2017
77th FIP World Congress of Pharmacy
and Pharmaceutical Sciences 2017
Seoul, Republic of Korea,
Website: www.fip.org/seoul2017

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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.

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