GET READY FOR PLAIN PACKAGING

- No logos, colours, brand images or promotional information.
- Pack surfaces in a standard colour.
- Brand and product names in a standard colour and font.
- Reduce attractiveness of tobacco packaging.
- Eliminate tobacco advertising and promotion.
- Limit deceptive tobacco packaging.
- Increase effectiveness of tobacco health warnings.

Picture Credit: http://www.who.int/campaigns/no-tobacco-day/2016/poster-foot.pdf
Message from the President of Indian Pharmaceutical Association (IPA)

April 2016 brought in a very special message to IPA through the elections of new office bearers for the term 2016-18. All the office bearers who held office during 2014-2016 have been reelected unopposed except for the Hon Gen Secretary position which had to be decided by the ballot. The message is that the IPA would like to elect those people as office bearers who actually make a difference through their contribution to the pharmacy profession. The reelection also means an immense responsibility on the office bearers to perform and continue to make the difference for another term. I am sure the team of IPA office bearers is excited to take the challenge.

Right from its inception, the IPA-CPD e-times made waves by being very innovative, carrying several features by pharmacy practice leaders from all over the world and by spreading information on the developments and achievements of IPA and Indian pharmacy practice throughout the world. I wish the editorial team of Manjiri Gharat, Raj Vaidya and Dixon Thomas who are behind the CPD e-times, all success to bring out yet another series of highly informative issues that would project IPA's good work through its community pharmacy division all over the globe.

I take this opportunity to announce the most important event that the IPA will be organising this year. The 68th Indian Pharmaceutical Congress will be hosted by IPA in December 2016, in the beautiful city of Visakhapatnam, Andhra Pradesh on December 16-18. The IPC 2016 will be presided by Mr. S. V. Veerramani, Chief Managing Director of Fourrts India Limited and the theme of the congress is ‘Pharma Vision 2020: Pharmacists for a healthy India; Quality Pharmaceuticals and Patient Welfare. This theme would enable the organisers to develop a scientific programme that would address aspects related to continuous production of quality pharmaceuticals for domestic as well as international use, constant monitoring of the outcomes of the use of the quality pharmaceuticals by patients to establish the safety of these treatments and how pharmacists would contribute to patient welfare through quality pharmaceutical care. There is a strong possibility for the Commonwealth Pharmacists Association to organise their regional conference along with the IPC. That would allow the organisers to develop a parallel track during the congress dedicated to best practices in pharmacy practice, which would be of great interest to all pharmacy practice professionals from the community and hospital settings. I request all the community pharmacists to participate in the IPC 2016 to make it a huge success.

Rao V. S. V. Vadlamudi, PhD,
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Message from IPA CPD Chairperson

Dear Pharmacists,

The new term (2016-18) has just started at IPA and we have new team at IPA CPD which is almost same as the previous term. My warm welcome to the team and we wish to work harder in this term to reach to all different corners of the country where our presence is still weak.

I am glad to inform you that as per the plan, we have signed an MoU with the Municipal Corporation of Greater Mumbai and Retail Dispensing and Chemists Association to strengthen our partnership and to scale up the work of engaging pharmacists for TB care and control. In the next one year we plan to reach all corners of this mega city to train as many pharmacists as possible.

How about pharmacist as a film maker? Mr. Amol Deshmukh from Maharashtra has been successful in this dual role. A short film Aushadh (Medicine) made by Mr. Deshmukh has fetched a National Award and he was recently given this award at the hands of Hon'ble President of India. Screenplay, production and direction of the film is by Mr. Amol. It is surprising but heartening to see a community pharmacist who is busy in daily chores of the pharmacy venturing in a totally different field of filmmaking and his efforts have met with an early achievement. The short film is based on the real life story from his own pharmacy. To err is a human. The film effectively shows the sensitivity of the human mind (the pharmacist) after dispensing a wrong medicine to an old village woman. Though the film doesn't have any preaching tone or it doesn't seem to be an intention of Mr Amol, it does make you think about the lack of safety in the healthcare environment and indirectly gives plenty of messages. I see a very strong element of the learning from the film for the pharmacists, pharmacy staff as well as for consumers. The film made me think about the overall medication errors scenario in India. With various obvious lacunae in our systems, plenty of errors are and must be happening in the community as well as hospital setting, some may be minor but some fatal too. There is no particular mechanism to keep track of these errors. Some of these go unnoticed, unattended. Ensuring presence and supervision of the pharmacists during dispensing of medicines, training of assistants, avoiding handling of medicines by unqualified staff, legible and complete prescriptions by medical professionals, consumer education are some of the measures which must be in place to prevent medication errors.

While writing this message, we received a sad news about the sudden demise of respected Dr H P Tipnis, one of the doyens of the pharmacy profession in India who has done exemplary work in every facet of the profession, from pharmacy education to sciences to pharmacy practice. He had been always very supportive and encouraging to community pharmacy and the consumer education activities. His articles on consumer medicine awareness had inspired me in my early years. He will be remembered forever.

I wish to appeal each one of you to start planning to attend the 68th Indian Pharmaceutical Congress (IPC) which will be held from 16th to 18th December, 2016 at Visakhapatnam, Andhra Pradesh. I am sure it will be a satisfying experience to be part of IPC and interact with fellow practicing pharmacists and be a part of enriching sessions. Please visit www.ipapharma.org for more details. That's all for now. Happy Reading!

Mrs Manjiri Gharat
manjirigharat@ipapharma.org

Ensuring presence and supervision of the pharmacists during dispensing of medicines, training of assistants, avoiding handling of medicines by unqualified staff, legible and complete prescriptions by medical professionals, consumer education are some of the measures which must be in place to prevent medication errors.
PHARMACY EDUCATION TO BOOST COMMUNITY PHARMACY

Pharmacy education in our country may have come a long way, but it still has a very long way to go if it has to be at par with the advanced pharmacy practice in other countries. With around 0.7 million community pharmacies in the country, no one is sure how many pharmacists actually are based in these pharmacies and present throughout the working of the pharmacy. Lax regulation has led to this disappointing scenario. In some states, the number of Pharmacists registered with the state pharmacy councils is alarmingly less than the number of pharmacies actually operating in the state! This is preposterous but has never seen serious thought and action by the concerned authorities.

A huge majority of pharmacists working in the community pharmacies in the country have a D.Pharm qualification (a 2 year course). The curriculum of this course was last updated 25 years ago, and unfortunately the teaching is largely based on this curriculum with minimal exposure to the phenomenal changes which have taken place in the pharmacy practice requirements the world over. With this, do we expect to be even minimally making attempts to improve our practice standards? No way. When are we going to change? Recently, the Pharmacy Council of India (PCI) has made it mandatory to complete 2 days of continuing education over 5 years as a pre-requisite for a pharmacist to renew his practice licence. Is only that much enough?

An alternate qualification to practice pharmacy is the 4 year B.Pharm course. The curriculum for this course is largely industry oriented with minimal pharmacy practice content and no hands on exposure. Yet, without having any such exposure, the pharmacist is eligible to be the authorized person to supervise and dispense prescriptions from day one! Secondly, these students are in the mental framework of going into the industry, and if at all some of them do join community pharmacy, it is with reluctance, with no other option left. To add to it all, there is no pre-reg compulsion for training nor any pre-reg examination.

Pharmacists with Pharm.D. (6 year practice oriented) qualifications have started passing out since the last 2 years, but how many have and are willing to work in the community pharmacy setting? Considering the present remuneration scenario and the poor professional approach and status of community pharmacies, the chances are bleak. Besides, the Pharm.D. students also barely have any hands-on exposure in community pharmacy environment, and as such will take some time to understand the genuine problems and adapt to practice in such situations (if at all they do join). With such a scenario, we are not making much headway. Public health is taking a serious beating. It is therefore important that the health authorities, the PCI, and the various professional pharmacy associations URGENTLY get down to SERIOUS thought and chalk out a time bound roadmap for the upliftment of the pharmacy profession in the country. Some food for thought:

• Upgrade and implement a more practical and knowledgeable Diploma curriculum immediately.
• Decide on a cut off date to phase out Diploma and make at least a 4 year course as the minimum qualifications to practice pharmacy.
• Increase the practice component in the B.Pharm curriculum along with practical training in community & hospital pharmacy, or allow the student to specialize in industrial pharmacy or pharmacy practice in the 3rd and 4th year, or have 2 separate courses for pharmacy – 4 year Industrial Pharmacy or 4 year Pharmacy Practice. Along with adequate hands on exposure.
• Pre-registration training and exam must be a compulsion for permission to practice pharmacy
• Simultaneously efforts should be made for stricter implementation of laws to ensure that pharmacists are always present at the pharmacy. Efforts to be made to set up pharmacy colleges in locations/states where there is shortage of pharmacists.
• The number of hours for compulsory continuing education should be increased to be equal that in the advanced countries.

Unless we have a roadmap in place and implement it seriously, we will not be heading in the right direction, and sadly, pharmacy practice will not improve.

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Dosage form Instruction: Ear drops

Before Starting:
• Read the instructions on the bottle carefully so you know how many drops to put in and whether you're putting them in one or both ears. Always follow your doctor's instructions.
• Inspect the drops and check the expiration date. If they appear contaminated or are expired, don't use them.

Steps to use:
• Wash your hands.
• Warm the drops by holding the bottle in your hands for a few minutes.
• Gently shake the bottle.
• Do not touch the tip of the bottle to your ear. Germs from your ear can spread to the medicine bottle if your ear touches the tip.
• Lie down or tilt your head to one side (Place a towel under the head because some of the ear drops may come back out of the ear).
• Gently pull and hold your ear up and back. If you are putting ear drops in your child's ear, gently pull and hold his ear down and back.
• Gently squeeze the bottle to drop the correct number of drops into your ear.
• Replace the cap on the bottle.
• Press on your ear flap and keep your head tilted for several minutes to give the medicine time to coat your ear.

Contact your caregiver if:
• You have changes in your hearing, such as ringing in your ears.
• Your ear itches, stings, or burns.
• You have a rash in or around your ear.
• You are dizzy.
• You have questions or concerns about your condition or care.

Storage:
• The ear drops, which should be at the temperatures mentioned on the label of the bottle. Ear drops that are the wrong temperature (too cold, for instance) can make you feel dizzy and disoriented.

Contributed by:
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Ganga Medical Centre and Hospital,Coimbatore, India
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Lab information: Urine protein test

Urine protein testing is used to detect protein in the urine (proteinuria). One of these proteins is called albumin. A semi-quantitative test such as a dipstick urine protein may be used to screen people for the presence of protein in the urine as part of a routine urinalysis. A urine protein test is often used to screen for, help evaluate, and monitor kidney function and to help detect and diagnose early kidney damage and/or disease.

Alternative names
- Urine protein; Albumin - urine; Urine albumin; Proteinuria; Albuminuria

Why the test is performed
- This test is most often done when the patient have kidney disease. It may be used as a screening test.

Normal results
- For a random urine sample, normal values are 0 to 20 mg/dL.
- For a 24-hour urine collection, the normal value is less than 80 mg per 24 hours.

What abnormal results mean
Usually, in healthy kidney, proteins are not filtered though. Having protein in urine is an early sign of kidney disease. High amounts of protein in urine results in foamy or bubbly-looking urine. Swelling in the hands, feet, abdomen, or face may occur due to reduced protein in blood. Larger amounts of protein in the urine may be due to:
- Heart failure
- Kidney problems, such as kidney damage, diabetic kidney disease, and kidney cysts
- Loss of body fluids (dehydration)
- Problems during pregnancy, such as seizures due to eclampsia or high blood pressure caused by preeclampsia
- Urinary tract problems, such as a bladder tumour or infection
- Multiple myeloma

References
- Lab tests online: https://labtestsonline.org/understanding/analytes/urine-protein/tab/test/
Drug Information: Gemfibrozil

Common Brands: Lopid, Normolip etc.
Pharmacological Class of drug: Fibric acid derivative, Antihyperlipidaemic
Indications: Hypertriglyceridemia (type IV & V hyperlipidaemia) in adult patients at risk of pancreatitis & unresponsive to diet; reduction of coronary heart disease in patients with low HDL & elevated LDL and triglycerides (type Iib).

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<tr>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Duration</th>
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<tr>
<td>Oral</td>
<td>2-5 days</td>
<td>4 weeks</td>
<td>Unknown</td>
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Contraindications:
- Contraindicated in patients with hypersensitivity to drug, hepatic or severe renal dysfunction including primary biliary cirrhosis and pre-existing gallbladder disease
- Use cautiously in patients with diabetes, hypothyroidism, chronic or excessive alcohol consumption, those taking oral anticoagulants or statins (atorvastatin, simvastatin etc.)
- Pregnancy: Risk Category C. Gemfibrozil should be used during pregnancy only if the potential benefit justifies the unknown but potential risk to the foetus.
- Lactation: No information available, best avoided during breastfeeding.
- Children: Safety and efficacy not established

Counselling the patient:
- Gemfibrozil is usually taken twice daily, 30 minutes before breakfast and dinner. Take the medicine at the same time each day.
- If you also take certain other drugs to lower cholesterol (bile acid-binding resins such as cholestyramine or colestipol), take gemfibrozil at least 1 hour before or at least 4 hours after taking these medications. These products can react with gemfibrozil, preventing its full absorption.
- Stress the importance of adhering to specific diet, weight reduction, exercise, and personal hygiene programs. Avoid eating foods that are high in fat or cholesterol. Gemfibrozil will not be as effective in lowering your cholesterol if you do not follow a cholesterol-lowering diet plan.
- Ensure that blood cholesterol and triglyceride levels are assessed before beginning therapy and repeated periodically during the therapy.
- Avoid drinking alcohol. It can raise triglyceride levels and may increase your risk of liver damage.
- It is most effective when taken with diet with low cholesterol and unsaturated fats and also following exercise.
- Consult your doctor immediately if you become pregnant, or plan to become pregnant.
- Report to your doctor if you experience muscle pain, weakness tenderness.
- Store below 30°C in a tightly closed container.

Dose: Adults: 600mg twice a day.
Consumer dialogue: Proteinuria

Pharmacist: Hello sir my name is Mr YYY, and I am a pharmacist. How can I help you?

Patient: Hello my name is Mr XXX, Can you give me these medications?

Pharmacist: (checks prescription) Sure we will dispense you these medicines. Meanwhile do you what to know anything about your disease and treatment?

Patient: I have diabetes and high blood pressure, I was recently diagnosed with proteinuria, what is it?

Pharmacist: Proteinuria also called albuminuria or urine albumin - is a condition in which urine contains an abnormal amount of protein. Albumin is the main protein in blood. As blood passes through healthy kidneys, they filter out the waste products and leave in the things the body needs, like albumin and other proteins. But when kidneys aren't filtering properly, proteinuria can occur, meaning that an abnormal amount of protein is present in the urine.

Patient: Why it happened to me, I don't know it clearly, but doctor says that it may be due to diabetes.

Pharmacist: Proteinuria is a sign of progressive chronic kidney disease (CKD), which can result from diabetes, high blood pressure, and diseases that cause inflammation in the kidneys. For this reason, testing for albumin in the urine is part of a routine medical assessment for everyone. Kidney disease is sometimes called renal disease. If CKD progresses, it can lead to end-stage renal disease (ESRD), when the kidneys fail completely. A person with ESRD must receive a kidney transplant or regular blood-cleansing treatments called dialysis.

Patient: What are the signs and symptoms of proteinuria?

Pharmacist: Proteinuria has no signs or symptoms in the early stages. Large amounts of protein in the urine may cause it to look foamy in the toilet. Also, because protein has left the body, the blood can no longer soak up enough fluid, so swelling in the hands, feet, abdomen, or face may occur. This swelling is called oedema. These are signs of large protein loss and indicate that kidney disease has progressed. Laboratory testing is the only way to find out whether protein is in a person's urine before extensive kidney damage occurs.

Patient: What should a person with proteinuria do?

Pharmacist: If a person has diabetes, hypertension, or both, the first goal of treatment will be to control blood glucose, also called blood sugar, and blood pressure. A person with diabetes and high blood pressure may need a medicine from a class of drugs called angiotensin-converting enzyme (ACE) inhibitors or a similar class called angiotensin receptor blockers (ARBs). These drugs have been found to protect kidney function even more than other drugs that provide the same level of blood pressure control. It will be also useful if you don't over-eat high protein foods like, meat. Excess protein in blood shall increase proteinuria.

Patient: Thank you for providing all this information.

Pharmacist: It was my pleasure, hope you feel well soon and you are always welcome on phone or in person for any query.
Good Pharmacy Practice (GPP) Instructions: Case 14

Patient name: XYZ  Age: 7 years  Gender: Male

Weight: approximately 25 kg

A child (patient) and mother visited the pharmacy after a specialist consultation, with:

- sneezing
- nasal itching
- breathing difficulty and
- low grade fever for 3 days.

History of occasional asthma and seasonal allergic rhinitis; currently on no medication.

Diagnosis: Allergic Rhinitis and Asthma

Rx
- Cetirizine syrup 1 mg/ml OD 15 days
- Montelukast 5mg tab OD 28 days
- Salbutamol/Guaifenesin syrup 1 mg/50mg/5ml QID 5 days
- Paracetamol syrup 250mg/5ml TID sos.

Prescription is valid but it was not clear how much ml of cetirizine, the patient should take every day. Doctor was contacted through phone and confirmed to take 5 ml per day.

Checked for drug interactions in www.drugs.com; no interactions were found. Cetirizine interacts with alcohol, but that is not applicable in pediatrics.

Checked for appropriate of dose/dosage form for a 7 year old child: All doses were appropriate;

- Cetirizine: 6 years or older: 5 to 10 mg orally once a day.
- Montelukast: 5 mg chewable tablet orally once a day
- Salbutamol: 2 to 6 mg orally 3 to 4 times a day. May increase stepwise to a maximum of 24 mg/day in divided doses.
- Guaifenesin: 6 to 11 years: 100 to 200 mg orally every 4 hours as needed, not to exceed 1.2 g/day
- Paracetamol: Oral: 10 to 15 mg/kg/dose every 4 to 6 hours as needed; do not exceed 5 doses in 24 hours

Dispensed and instructed as follows;

For cetirizine: 3 bottles of branded syrup with 5 mg/5ml having 30 ml was dispensed with instruction; 5 ml to be taken after food at night every day for 15 days. One bottle will finish in 5 days. Measuring cup is placed over the cap. The sleepiness with this medication is much less in children than in adults. Take this medication at night if it makes your child sleepy. If it causes lack of sleep (more common in children than adults), preferably take cetirizine in the morning. The medication can be taken before or after food but try to take at same time every day.

For Montelukast: 28 tablets with 5 mg of medicine were dispensed. Chewable tablet was dispensed on request of mother that the child has difficulty in swallowing tablets.
Montelukast shall be taken in the evening before play time every day as it can prevent exercise-induced bronchoconstriction, do not overdose, not more than one tablet per day. It can be taken with or without food.

**For Salbutamol/Guaifenesin:** Branded syrup of 120 mL was dispensed and instructed to take 5 mL with the measuring cap every 6 hours. Preferably take with or after food.

Caregiver said paracetamol is there in house, thus not dispensed. Reminded the caregiver to administer paracetamol 3 times a day with or after food, when there is fever. A thermometer was sold to the caregiver on request.

Significant and Common adverse drug reactions to monitor:
- **Cetirizine:** Headache, insomnia
- **Montelukast:** Fever, headache
- **Salbutamol:** Excitement, nervousness, upper respiratory tract infections
- **Guaifenesin:** Dizziness, drowsiness, headache, nausea
- **Paracetamol:** Increased serum alkaline phosphatase, increased serum bilirubin

**Resources used:**
- www.drugs.com
- www.uptodate.com

**Contributed by:**
Seeba Zachariah
Assoc. Professor, RIPER, India, E-mail: seebadixon@gmail.com
## Know the Abbreviations and Clinical Terms!

<table>
<thead>
<tr>
<th>Abbreviation/ ACRONYM</th>
<th>Full Form</th>
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<tr>
<td>ADH</td>
<td>Anti Diuretic Hormone</td>
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<tr>
<td>EPO</td>
<td>Erythropoeitin</td>
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<tr>
<td>UTI</td>
<td>Urinary Tract Infection</td>
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<tr>
<td>URTI</td>
<td>Upper Respiratory Tract Infection</td>
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<tr>
<td>UA</td>
<td>Urine Analysis</td>
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<tr>
<td>C &amp; S</td>
<td>Culture &amp; Sensitivity</td>
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<tr>
<td>KUB</td>
<td>Kidneys, Ureters, Bladder</td>
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<tr>
<td>RP</td>
<td>Retrograde Pyelogram</td>
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<tr>
<td>VCUG</td>
<td>Voiding Cystourethrogram</td>
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<tr>
<td>BUN</td>
<td>Blood Urea Nitrogen</td>
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<tr>
<td>GFR</td>
<td>Glomerular Filtration rate</td>
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<td>ESRD</td>
<td>End Stage Renal Disease</td>
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<tr>
<td>ARF</td>
<td>Acute Renal Failure</td>
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<tr>
<td>CRF</td>
<td>Chronic Renal Failure</td>
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<tr>
<td>AGN</td>
<td>Acute Glomerular Nephritis</td>
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<tr>
<td>CAPD</td>
<td>Continuous Ambulatory Peritoneal Dialysis</td>
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<tr>
<td>CCPD</td>
<td>Continuing Cycling Peritoneal Dialysis</td>
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<tr>
<td>ESWL</td>
<td>Extracorporeal Shock-wave Lithorypsy</td>
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<tr>
<td>LMP</td>
<td>Last Menstrual Period</td>
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<tr>
<td>IUD</td>
<td>Intrauterine Device</td>
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<tr>
<td>PID</td>
<td>Pelvic Inflammatory Disease</td>
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<td>IVF</td>
<td>In Vitro Fertilization</td>
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<tr>
<td>FSH</td>
<td>Follicle Stimulating Hormone</td>
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<tr>
<td>hCG or HCG</td>
<td>Human Chorionic Gonadotropin</td>
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<tr>
<td>HPV</td>
<td>Human Papillovirus</td>
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In Spain, a Degree in Pharmacy opens the possibility of being incorporated in the labour market in a large number of professional pathways, although the most common is within the activities carried out in the pharmacy. Currently there are more than 45,000 pharmacists working in 21,000 or more Spanish community pharmacies as owners, co-owners, associates, supervisors and substitutes.

Community pharmacies are private health establishments, open to the public, that are subject to health planning established in the various autonomous regions and where the pharmacist owner/proprietor thereof is assisted, where appropriate, by pharmaceutical assistants or auxiliary staff and must provide the following basic services to the public:

- The acquisition, safekeeping, conservation and dispensing of medicines and health products.
- Monitoring, control and safekeeping of dispensed prescriptions.
- The compounding of medicines.
- Giving information about and monitoring pharmacological treatments to patients.
- Collaboration in the control of individualized drug use in order to detect adverse reactions that may occur and communicating those to the agencies responsible for pharmacovigilance.
- Collaboration in programmes promoted by the health administrators to guarantee the quality of pharmaceutical and health care in general, promotion and protection of health, disease prevention and health education.
- Collaboration with the health authorities in training and information aimed at healthcare professionals and other users on the rational use of medicines and medical devices.
- Collaboration in teaching for the preparation of a degree in Pharmacy.

The Law incorporates the concept of pharmaceutical care in its articles, thus recognizing the work of the pharmacist as a health agent.

In Spain, the owner of a pharmacy must fundamentally be a pharmacist, either as an individual owner or in partnership with other pharmacists, but each pharmacist can only own one pharmacy. It is a mechanism that guarantees independence in the activities of pharmacists, so they are not constrained by any other interests than those that are strictly in the medical and health fields. In addition, it avoids conflicts of interest with other health professionals, prescribers or pharmaceutical laboratories and also facilitates independent advice for the public.

The Spanish model of population based modules and organizing pharmacies by introducing mandatory distances between them, allows for 99% of the Spanish population to have a pharmacy within their municipality, ensuring access to the same medications and at the same prices, guaranteeing equality throughout the geographical region of Spain. In this way, a homogenous distribution of pharmacies has been achieved, with the average ratio of inhabitants per pharmacy among the lowest in Europe (2,186 inhabitants/pharmacy: December 31, 2013) which means that 99% of the population have a pharmacy at their disposal in their residential area, whether it be a rural, urban or tourist region. This circumstance means that in many populations the pharmacist is the only health care professional present.
Virtually all Spanish pharmacies participate in the System of Management and Collection of Packaging of Medicinal Products (SIGRE) with the aim of preserving the environment from unused or expired medicines.

Every day in Spain there is a sufficient number of Pharmacies on 24 hour call to meet the urgent needs of the entire Spanish population.

The Pharmacy is one of the services best valued by society. Complaints about pharmacies received by consumer organizations represent only 0.27%, while other services represent 14%.

Every year pharmacists offer health care recommendations 182 million times, as well as dispensing medicine. This means that one Spanish person in every three who enter a pharmacy, will not receive a drug, but will receive health advice instead.

The value of equivalent activities, measured by the savings produced for the healthcare system, reaches an annual level that exceeds 1,700 million Euros.

Spain, in comparison to other countries in the European Union, has the second lowest average drug prices and in the average sales figures per pharmacy, it is one of the lowest in Europe.

The price of drugs is set by a regulated pricing system that establishes a fixed price for these, to be dispensed through the national health system with a personal prescription and this regulated price includes unfunded drugs or those that do not require prescription for their distribution. (In some cases for these, a double price is established, the cheapest for when they are particularly dispensed with a prescription from the public system).

The retributive system for pharmacies is also regulated, establishing a margin for drug dispensing (27.9% gross, which after expenses and mandatory administration discounts is approximately 9% before tax).

A subsidized payment system exists for patients who are dispensed medication with a public system prescription which ranges from exemption from part payment up to 60% of the price of the medical product with a monthly limit on subsidized payments of 10% for pensioners. (Usually set at €8 per month).
The average cost for a prescription from the social system is €10.75 per medicine.

Spanish regulations mean that, in practice, all Bioequivalent or Biosimilar products (brand and generic) have the same price in Spain. At end of 2015, reference price-regulated medicines reached almost 80% of the whole prescription market, in terms of units (number of packages of drugs dispensed) and exceeded 50% of the total turnover of prescriptions in pharmacies.

Pharmaceutical activities in Spain are based on dispensing of drugs and there are very few paid pharmaceutical services performed here, even though it is common for pharmacists to also provide services related to optics, orthopaedics and dietetics.

The pharmaceutical service that is traditionally most widespread is probably the medicine compounding. Also, the dispensing of methadone and the determination of HIV (Basque country and Catalonia), screening for colon cancer (Catalonia), management of medication, attended to by social services in the different municipalities in the Basque country, development of customized dosing systems (dose dispensing) and the measurement of height and weight, blood pressure measurement and determination of certain biological parameters such as blood glucose and total cholesterol are carried out.

References:

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Community Pharmacy Section, International Pharmaceutical Federation
Email: j.acostapharm@gmail.com
Pharmacists Making the Difference (Pharmacist Day 2015 Competition Winner Entry)

Here is a case of Mrs YY, a 28 year old female patient with HIV, who presented to the hospital with complaints of shortness of breath, decreased appetite. Her height was 163cm and weight 45kg. The following lab investigations were done:

**CD4 count:** 4 (Normal: 350 – 1000 cells/mm³). Viral load: 6, 47,350 iu/mL (Normal: < 50).

Patient presented with Pneumocystis pneumonia (PCP), culture report of tracheal secretion showed Aspergillus flavus. MRI brain showed TB Meningitis and Toxoplasmic encephalitis (TE).

<table>
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<tr>
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<th>Generic name</th>
<th>Dose/route/frequency</th>
<th>Indication</th>
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<td>Sulfamethaxazole Trimethoprim</td>
<td>1200mg 240mg IV TID</td>
<td>Pneumocystis pneumonia</td>
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<td>Clarithromycin</td>
<td>500mg IV BD</td>
<td>MAC Prophylaxis</td>
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<td>Tab Azithra</td>
<td>Azithromycin</td>
<td>1.2g RT once weekly</td>
<td>MAC Prophylaxis</td>
</tr>
<tr>
<td>Tab Pyralfin</td>
<td>Pyrimethamine</td>
<td>200mg RT loading dose</td>
<td>Toxoplasma encephalitis</td>
</tr>
<tr>
<td>Tab Leucovorin</td>
<td>Folinic acid</td>
<td>10mg RT OD</td>
<td>Prevent hematologic toxicity with Pyrimethamine</td>
</tr>
<tr>
<td>Tab Folvite</td>
<td>Folic acid</td>
<td>5mg RT Twice weekly</td>
<td>Prevent hematologic toxicity</td>
</tr>
<tr>
<td>Inj Dexa</td>
<td>Dexamethasone</td>
<td>8mg IV TID</td>
<td>Adjunctive corticosteroid</td>
</tr>
<tr>
<td>Inj Fungizone</td>
<td>Amphotericin B deoxycholate</td>
<td>50mg IV OD</td>
<td>Aspergillus flavus</td>
</tr>
</tbody>
</table>

1) Patient was prescribed co-trimoxazole for PCP. For dilution of 80mg Trimethoprim 125mL of 0.9% NaCl or 75ml of 5% dextrose should be used. In this case 80mg of TMP was diluted in 80ml of 0.9% NaCl. This increases the risk of developing crystalluria - one of the major ADRs of Sulfonamides. This was brought to the notice of doctor and later proper dilution was done. This prevented the patient form developing crystalluria.

2) Patient was getting co-trimoxazole for PCP, which works for Toxoplasma encephalitis as well. So no additional treatment is required for Toxoplasma encephalitis. But in this case pyrimethamine and folic acid were prescribed for Toxoplasma encephalitis which could lead to drug interaction with co-trimoxazole (Folinic acid decreases the efficacy of co-trimoxazole by pharmacologic antagonism). This interaction was brought to the notice of the doctor and pyrimethamine and folic acid was immediately discontinued. This intervention prevented the treatment failure and saved the patient from life threatening interaction.
3) Patient was prescribed Amphotericin B for Aspergillus flavus. Amphotericin B should be diluted in dextrose 5%. But in this case Normal saline was prescribed as diluting fluid by duty doctor. Amphotericin is incompatible with normal saline. This incompatibility was brought to the notice of primary consultant and it was changed to Dextrose 5%. This intervention prevented the treatment failure that would have occurred if normal saline was used for diluting amphotericin B.

4) Azithromycin (1.2g once weekly) and Clarithromycin (500mg twice daily) are the preferred prophylactic agents for MAC. In this case Clarithromycin 500mg twice daily was prescribed for MAC prophylaxis. I suggested the doctor to change it to Azithromycin because, once weekly dosing of azithromycin reduces the pill count and promotes adherence in the patient.

On the whole 4 significant pharmacist interventions were made by me (Karthik Rakam) during my ward rounds as a part of internship in my Pharm D (Doctor of Pharmacy). All the four interventions were accepted by the doctor. These interventions made a big contribution to patient recovery, saved her from treatment failure, decreased the incidence of adverse reactions and promoted the adherence.

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Municipal Corporation of Greater Mumbai signs MoU with IPA and Chemist Association

To strengthen the engagement of community pharmacists in TB care and control programme, Municipal Corporation of Greater Mumbai (MCGM) signed a MoU with IPA and Retail Dispensing and Chemist Association (RDCA) on 30th April 2016. Dr Daksha Shah, Mumbai City TB Officer, Mr Prasad Danave, President of RDCA and Mrs Manjiri Gharat, Vice-President and Chairperson, IPA CPD signed the MoU in a programme organised at Bombay College of Pharmacy, IPA Head Quarters in Mumbai. The poster featuring the celebrity Bollywood actor Mr Amitabh Bachchan describing symptoms of TB was released during the programme. These posters will be displayed in each and every pharmacy of Mumbai and will help further to create community awareness. Following this MoU, DOTS TB trainings will be carried out in each and every zone of Mumbai. Pharmacy students will also help in this task. Dr Sapna Surendran, Public-Private mix specialist, MCGM explained the purpose of MoU to all. Mr Nitin Maniar, RDCA Secretary, Chairman, BCP welcomed and thanked all the delegates.

DOT provider pharmacists of Mumbai and Navi Mumbai, Mr Sagar Kulkarni (IPA CPD Exe Member), Mr Mahadev Patel, Mr Prasad Mule, and Mr Vijay Ghatge were felicitated at this occasion at the hands of Dr Daksha Shah and Dr N Shiv Prasad (President of IPA Maharashtra State Branch). These pharmacists also shared their experiences.

Telefilm “Aushadh” (Medicine) made by a Pharmacist wins National Award

Aushadh (Medicine) a telefilm won 63rd National award in the telefilm category. This 16 minute telefilm is about a dispensing error in the pharmacy and the efforts of the sensitive pharmacist to search for the patient to see if she is affected by taking the wrongly given medicine. The film is made by the pharmacist Mr Amol Deshmuh, Faltan, Maharashtra who runs pharmacy in Faltan and is based on the true story which had happened in his own pharmacy.
Participation in a Meeting on “Drug Shops and Pharmacies as Point of Care” at Washington DC, USA

Mrs Manjiri Gharat represented IPA and FIP in the 2 days planning meeting on “Impact Modelling and Business Case Development for Engaging Drug Shop/Pharmacy Workers as a Point of Care” held on 3rd and 4th May 2016, at Washington DC. The meeting was organised by Alliance for Health System and Research Policy (WHO), PATH, FHI 360 and USAID. Mrs Manjiri shared in detail the DOTS TB Pharmacist model developed in India. There were detail discussions on the role of pharmacies in the delivery of primary care in low and middle income countries. Experts also discussed how the modelling exercise could fill existing gaps in knowledge and evidence at the national and international level.

Training Programme for community pharmacists at Alibag, Maharashtra

On 24th April 2016, Indian Pharmaceutical Association Community Pharmacy Division (IPA CPD) and IPA Maharashtra State Branch (IPA MSB) along with Alibag Chemist and Druggist Association arranged “Sanvadmala” (a series of dialogues) for community pharmacists of Alibag city. Total 100 Pharmacists attended this program. Mr Santosh Ghodinde, Convener of the Program and Council member of IPA-MSB & IPA-CPD explained the agenda for the meet. He also added the importance of Sanvadmala and how this will help the pharmacists learn and grow in their field. The first interactive session was held by Mrs Manjiri Gharat, Vice President and Chairperson, IPA-CPD on Responsible use of Medicines: Role of Pharmacist. Mr Sahebrao Salunkhe, Assistant Commissioner, Food and Drug Administration M.S & IPA Member addressed the participants about “Who am I?” and “How to become a family pharmacist”. Mr K G Gadewar, Drug Inspector, FDA discussed various Drug Laws. Participants enjoyed all the sessions and there was extensive interaction at the end of the programme.

To make this program a success, along with Convener Mr Santosh Ghodinde, Mr Suraj Patil, Mr Milind Mhatre and other office bearers of Alibag Taluka Chemist Association worked for the success of this programme.
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