# Pharma Forum

August 2009 Volume 15 Number 1

An Independent review of Pharmaceutical News and Issues

**In this Issue**



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The Views Expressed
In this Bulletin are not
Necessarily that
of the editorial board
nor of the EPA

## MESSAGE ROM THE VICE PRESIDENT OF EPA

It gives me a great pleasure to air my views and deliver a message on behalf of myself and the executive committee of the Ethiopian Pharmaceutical Association (EPA). A number of successes that have further strengthened our association have been achieved in the last two years since the present leadership took over. I am proud to have been part of this chapter in EPA's history and would like to congratulate EPA's different committees, subcommittees, members and EPA office staff for the job well done.

Some achievements of the last year include the acquisition of a more spacious office near the Gotera Interchange and a brand new 4-wheel drive vehicle, and the initiation of the multimillion birr projects with MSH/RPM Plus/SPS and DKT Ethiopia which have well continued into the present year. At present, the continuing education (CE) training on contraception implemented in collaboration with DKT Ethiopia, is in the active implementation stage and targets pharmacy personnel all over the country. EPA of course misses no chance to arrange public lectures and those on 'adverse drug reactions', 'the value of pharmaceutical care and medication therapy management in Ethiopia's health care system', and 'pharmaco-therapeutic management of diabetes and cutaneous reactions' are such examples.

EPA is currently working to establish regional branches in different parts of the country to facilitate the activities of EPA and better serve its members. In this regard, coordinating committees have been formed for each of the six EPA regional branches and further activities are underway to enable them to be fully functional. Another issue that is of interest to EPA is the undergraduate training. It is well known that the current global and national trend in pharmaceutical practice is tilted towards a more patient oriented direction. Accordingly, the public schools of pharmacy in the country have revised their undergraduate curriculum. EPA,

cognizant of the importance of the curriculum in determining the quality of service rendered to the public has arranged a forum in collaboration with MSH/SPS, whereby different stakeholders were able to enrich the curriculum. The brief narration of important activities this year would not be complete if the telethon held by EPA to raise funds for the construction of its envisioned headquarters was left out. The telethon held in April was indeed very encouraging whereby partners and members demonstrated their strong commitment towards supporting EPA in its commitment to have its own building in the near future. Efforts to acquire a suitable plot for the building are currently underway.

The future seems bright for EPA. A reengineering process that will enable EPA to come to a position where it can effectively achieve its vision and missions and get ready for the brand new millennium is being assessed at present. Furthermore, EPA is readying itself for the possible takeover of the professional licensing and registration from the government that would definitely allow it to have more say in the service provision by way of controlling the quality of graduates as well as those who are in practice. Activities that could go in line may include setting professional standards, introduction of qualifying exams for new graduates as well as a mandatory continuing education for all practitioners. Of course, EPA would not be here today and not realize its dreams without the support and dedication of all stakeholders and especially its members. So I say, let us join hands and work steadfastly towards attaining our rightful place in the healthcare delivery system and all other places where we are needed so that our society can fully benefit and let us make EPA the tool for the achievement and much more. I wish you all the best.

Bruck Messele (BPharm, MSc)

## MESSAGE FROM EDITORS

Pharmacy like all other health professions is undergoing enormous change as the nature of health care systems and the technologies change. As a profession most concerned with drugs, pharmacy should begin examining its societal role. We, as pharmacy professionals, need to be informed with the latest news and events in the area of our profession.

Pharma forum is one way through which we get valuable information around the world about our profession. The Pharma Forum Editorial Committee is committed for continuous publication of the bulletin. In the future, we wish to see that Pharma Forum is built on the concept of partnership. The achievement of its objective to provide current pharmaceutical information cannot be fully achieved without the appropriate engagement of all potential contributors to the information relationship – dispensers, Consumers, Regulators, Manufactures and readers of the bulletin at large.

We are looking forward to hearing from you.

Yours in EPA

The Pharma forum Editorial Committee

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# NEWS

## Seminar was held on adverse drug reaction (ADR) reporting

A half-day seminar on adverse drug reaction reporting with a title of **Pharmacists and adverse drug reaction reporting: an active surveillance program in community Pharmacies** was organized by the Ethiopian Pharmaceutical Association (EPA) in collaboration with MSH/SPS and School of Pharmacy, Addis Ababa University. The session was held on April 04, 2009 at the global Hotel in presence of 136 participants drawn mainly from private community pharmacies. The lecture was given by the guest speaker, Dr Heather Boon who is an associate professor in the Leslie Dan Faculty of Pharmacy, University of Toronto. Dr Boon is affiliated to a post graduate course in Social Pharmacy at School of Pharmacy, Addis Ababa University. The lecture, among other things, covered types of ADR, ADR Surveillance and Reporting. The session was found to be highly educative and has demonstrated the need for organizing similar sessions in future.

## Fund generating Telethon session was held

Hither to the association is trying its best confined in a very small office and staffed by a very few people. The history of the association has shown that acquiring of working place is detrimental for an optimum performance. Cognizant of this, a task force (a committee) which was formed by the general assembly of the association was mandated to look for different options towards acquiring a multipurpose accommodation. The facility envisaged, among other things, will enable the association to:

- Establish a drug information unit
- Own a training and research unit
- Institute a project development and counseling service

To this end the first phase of fund generating telethon session was held on April 25, 2009 at Global Hotel. Prior to this session groups of association members held a very intense face-to-face talk with institutions thought to take in the aim of the association. Delighted were members of the task force when they knew more than 800,000 Birr was pledged during the event.

It is to our conviction that peoples and institutions who put their money, knowledge and time to this cause should feel proud as they are enabling the association to attain its vision and mission. It is, therefore, with great pride that we let the names of the institutions and the amount they have pledged to appear on this publication. Similarly, we keep on acknowledging future contributions in subsequent editions of the

magazine. Meanwhile, we apologize for failing to include those contributions/pledges made after printing of this issue.

| S/No. | Organization | total Amt |
|---|---|---|
| 1 | EPHARM | 400,000.00 |
| 2 | DACA | 50,000.00 |
| 3 | Kefyalew Pharmaceuticals | 50,000.00 |
| 4 | Medica Pharma | 50,000.00 |
| 5 | EYASU drugs and Medical supplies | 45,000.00 |
| 6 | CAROGA Pharma | 20,000.00 |
| 7 | DANA trading | 10,000.00 |
| 8 | Pharma Union | 10,000.00 |
| 9 | Saron Pharmacame | 10,000.00 |
| 10 | Badreg Enterprize | 10,000.00 |
| 11 | Caretina Pharma International | 10,000.00 |
| 12 | Kea-Med Medical College | 5,000.00 |
| 13 | Addis Ababa Medical Colege | 5,000.00 |
| 14 | Tropical College of medicine | 5,000.00 |
| 15 | Pharma Health Science & Liben Pharmacy (Hawassa) | 5,000.00 |
| 16 | Central University College | 5,000.00 |
| 17 | Tsion Pharmacy | 5,000.00 |
| 18 | Alium Pharmacy | 5,000.00 |
| 19 | Abdi Pharmacy (Nekemete) | 5,000.00 |
| 20 | Asmi Industry | 5,000.00 |
| 21 | AB Pharma | 5,000.00 |
| 22 | Grace Trading Plc | 5,000.00 |
| 23 | Pharma Birbir | 5,000.00 |
| 24 | AMBA Pharmaceuticals | 5,000.00 |
| 25 | Ageca Eth. Co. | 5,000.00 |
| 26 | RAMADA Pharmaceuticals | 5,000.00 |
| 27 | Gishen Pharmacy | 4,000.00 |
| 28 | ALKAN Health Science College | 3,000.00 |
| 29 | MESROY International Plc | 3,000.00 |
| 30 | Meron Pharmacy | 3,000.00 |
| 31 | Seik Pharmacy | 3,000.00 |
| 32 | Merob Pharmacy (Jimma) | 3,000.00 |
| 33 | Emad Pharmacy (Jimma) | 3,000.00 |
| 34 | Endod Pharmacy | 3,000.00 |
| 35 | Afro German Chemicals | 3,000.00 |
| 36 | Wise team | 3,000.00 |
| 37 | Rift Valley Universty College | 2,000.00 |

| | | |
|---|---|---|
| 38 | Univrsal Medical College | 2,000.00 |
| 39 | St. Urael Pharmacy | 2,000.00 |
| 40 | Meskerem Pharmacy | 2,000.00 |
| 41 | Prime Pharmacy | 2,000.00 |
| 42 | Abinet Pharmacy (Shashemene) | 2,000.00 |
| 43 | T.A. Kanzen Yehia & His Sons | 2,000.00 |
| 44 | Ture Pharmaceuticals | 2,000.00 |
| 45 | Universal Pharmacy (Dire Dawa) | 1,500.00 |
| 46 | Girum Food Complex | 1,000.00 |
| 47 | Lemlem Pharmacy | 1,000.00 |
| 48 | Helina Pharmacy | 1,000.00 |
| 49 | Yomi Pharmacy | 1,000.00 |
| 50 | Brook Pharmacy | 1,000.00 |
| 51 | Yonas Pharmacy | 1,000.00 |
| 52 | Asheton Pharmacy | 1,000.00 |
| 53 | Lewi Pharmacy | 1,000.00 |
| 54 | Bisrat Pharmacy | 1,000.00 |
| 55 | Feraol Pharmacy | 1,000.00 |
| 56 | Kaliti Pharmacy | 1,000.00 |
| 57 | Sealete Meheret Pharmacy | 1,000.00 |
| 58 | Segenet Pharmacy | 1,000.00 |
| 59 | Halinas Pharmay | 1,000.00 |
| 60 | Tiru Pharmacy | 1,000.00 |
| 61 | Fetun Pharmacy | 1,000.00 |
| 62 | Bole Medhanialem Pharmacy | 1,000.00 |
| 63 | Yesak Pharmacy | 1,000.00 |
| 64 | Ethio Melinium Pharmacy | 1,000.00 |
| 65 | Ethio German Pharmacy | 1,000.00 |
| 66 | Awash Pharmacy (Dire Dawa) | 1,000.00 |
| 67 | Afal Pharmacy | 1,000.00 |
| 68 | Nile Pharmacy (Bahirdar) | 1,000.00 |
| 69 | Amanuel Pharmacy (Bahirdar) | 1,000.00 |
| 70 | Jeren Pharmacy (Jimma) | 1,000.00 |
| 71 | Goh Pharmacy | 1,000.00 |
| 72 | WWJ International | 1,000.00 |
| 73 | Conel Wholesale (Dire Dawa) | 1,000.00 |
| 74 | National Vetrinary Institute (Bishoftu) | 500.00 |
| 75 | Beteamanuel Pharmacy | 500.00 |
| 76 | Freab Pharmacy | 500.00 |
| 77 | Bilen Pharmacy | 500.00 |
| 78 | Fenot Pharmacy | 500.00 |
| 79 | Lem Pharmacy | 500.00 |
| 80 | Lidet Pharmacy | 500.00 |
| 81 | Tena Pharmacy | 500.00 |
| 82 | Dagmawit Pharmacy (Bahirdar) | 500.00 |

| | | |
|---|---|---|
| 83 | Bezahiwot Pharmacy (Bahirdar) | 500.00 |
| 84 | Sodo Pharmacy (Wolayta) | 500.00 |
| 85 | Elros Pharmacy | 500.00 |
| 86 | Abadir Pharmacy | 500.00 |
| 87 | Lyou Pharmacy | 500.00 |
| 88 | Alemtena Pharmacy | 500.00 |
| 89 | Harrar Pharmacy | 400.00 |
| 90 | Workineh Getahun - Family | 300.00 |
| 91 | Elias Pharmacy | 300.00 |
| 92 | IBN SINA Pharmacy | 20.00 |
| 93 | APF | 50, 000.00 |
| 94 | Medtech Ethiopia | 30,000.00 |

## Training on addressing challenges in pharmaceutical service to patients on ART

Training on addressing challenges in pharmaceutical service to patients on ART has been conducted on 30 March-1 April 2009 at Ras Hotel, Addis Ababa. This training was organized by the Ethiopian Pharmaceutical Association in collaboration with other partner associations with a financial assistance from the CDC. The participants were pharmacists who practice in hospital pharmacies across the nation and those that have not taken training on ART.

## A continuing Education was offered

A half day continuing Education with a title of ***the value of Pharmaceutical care and Medication Therapy Management in Ethiopia's health care system*** was offered to members of the Ethiopian Pharmaceutical Association (EPA) on July 4, 2009 at Global Hotel. The session was organized by the association in collaboration with MSH/SPS. The speaker, Mr Mesfin Tegnu (B.Pharm, MS, RPh) was a public relation officer of EPA before he moved to USA and he is currently the President of PerformRx, the pharmacy benefit management division of the AmeriHealth Mercy Family of Companies. His lecture has given insight on the evolution of patient oriented pharmaceutical care, namely, the clinical pharmacy inception to the present Medication Therapy Management (MTM) and Pharmacist Prescribing. In his lecture, Mr. Mesfin Emphasized the need for automation of community drug outlets in Ethiopia for a better pharmaceutical Care. To this effect he has volunteered to work with EPA for pilot automation of some Pharmacies in the Capital.

## Training on Family planning and contraception methods has commenced

DKT-Ethiopia has financially sponsored a nationwide Family planning and contraception training intended primarily to

private clinical and pharmacy practitioners. The training is meant to build the capacity of health care providers in the provision of family planning services while acquainting the trainees with the new products and services made available in the country. As per the proposal agreed between EPA and DKT a total of 2286 practitioners drawn from all parts of the country will have the course at cities close to their practicing premises. So far a total of 588 trainees attended the course in Diredawa, Nekemet, Mekelle, Dessie and Adama while 13 more rounds of trainings are expected to be held in Adama, Hawassa, Addis Ababa, Jimma and Bahirdar over the coming few months.

**EPA is to launch its web site soon**

It is rather unfortunate for an association of this scale without website for this long. Undoubtedly the gap has hindered smoother, cost effective and adequate flow of information between the association and its stake holders. Although the idea was there for long it was failed to materialize primarily for financial reason. MSH/SPS is now committed to provide the association with this service. Accordingly, the association will have its own website before long.

**School of Pharmacy, Addis Ababa University Opens Model Drug Information Center (DIC) at Black Lion Hospital**

With support from the US President's Emergency Plan for AIDS Relief (PEPFAR) through CDC/Ethiopia, as well as from the World Bank, HIV/AIDS Twinning Center partners from the AAU and Howard University (Washington, DC) schools of pharmacy, along with Howard's Pharmacists and Continuing Education Center, have established the DIC to serve as a center of excellence on drug information services in Addis Ababa and eventually elsewhere in Ethiopia. Staffed by trained faculty members from the AAU, School of Pharmacy, the DIC will provide comprehensive, objective, unbiased, and evidence-based information that will assist and inform healthcare professionals as they plan and provide clinical care.

The DIC will also serve as a training and research center, particularly as relates to the country-wide scaling up of antiretroviral therapy (ART) and other drug treatments for people living with HIV or AIDS. Such treatment involves increasingly complex pharmacotherapy, making pharmacists a critical member of a multidisciplinary HIV/AIDS care team. The DIC will provide experiential training for all pharmacy students to help better prepare them for their expanded role as drug information providers within all pharmacy settings. The center will also help prepare a cadre of more patient-oriented pharmacists who serve as a primary source of scientifically valid information

and advice on safe, appropriate, and cost-effective use of medications.

### Workshop on Ethiopian Pharmacy Education held

A workshop themed "Pharmacy Education in the 21st century: Strategic Vision and Direction was held for two days (May 29 and 30, 2009) at Damu Hotel, Addis Ababa. The objective of the workshop was to create a unified vision and directions for pharmacy training throughout all school of pharmacy across the nation. Dr. Teferi Gedif, Dean School of Pharmacy, Addis Ababa University was speaking at the opening of the workshop. He said that the role and functions of pharmacists and pharmacy staff needs to be reappraised and educational outcomes of the evolving pharmacy curriculum should be clearly defined. In this regard, educational outcomes should include: pharmaceutical care with the provision of both patient centered and population centered systems management of resources and medication use systems, among others.

## CURRENT ISSUES

### Health Sector Reform in Ethiopia focusing on the Pharmaceutical Sector

The Ministry of Health is responsible for the quality of health services delivery throughout the country. Although, a number of special programs have been operational, in the last few years, the Primary Health Care quality still requires due attention. Assessments have indicated that the health care services quality, health institutions, health professionals and health products had been regulated inefficiently, ineffectively and the processes were haphazardly organized in a fragmented manner.

The Ministry being cognizant of this fact has expressed its commitment to fully decentralize the services and redesign the health care delivery system, to cope with the forgoing rethinking and radical redesign of Business Processes Reengineering (BPR) for dramatic change, undergoing in all the related sectors of the public services, with the intension of satisfying customers/stakeholders needs and expectations.

To achieve this objective the ministry has identified six health sector outcomes:-

1. Community, who produced its health, served with quality preventive, curative & rehabilitative health service and protected from Emergency Health hazards.
2. Community accessing standardized health facilities.
3. Research findings that solve health problems and ensured technology transfer.

4. Quality and affordable pharmaceuticals supplied in sustainable manner.
5. Sustainable and accessible health insurance for equitable health service
6. Community protected from health risks emerging from sub standard and poor quality health and health related services and products.

The following eight Core Processes have been designed in order to meet the health sector outcomes effectively.

1. Healthcare Delivery
2. Public Health Emergency Management
3. Health Infrastructure Expansion and Rehabilitation
4. Resource Mobilization & Health Insurance
5. Pharmaceutical Supply
6. Research & Technology Transfer
7. Health & Health Related Services and Products Regulation
8. Policy Planning, Monitoring and Evaluation

It has been believed that this redesign system will assist in meeting the public demands for accountability, responsibility and help dramatically change the complex and poor quality services. Based on this principle, the previous Drug Administration and control Authority, DACA, is provided with a mandate to regulate health institutions, heath professionals, food and food establishments and pharmaceuticals. Hence, a core process that is feasible, cross functional and customer focused has been identified to replace the old and fragmented regulatory processes. This core process is named **"Health and Health Related Services and Products Quality Regulation Core Process".** The core process comprises of four sub-processes and one version. These are:-

a) Regulatory Standards Setting Sub-Process.

b) Inspection and Licensing Sub-Process

c) Product Quality Assessment & Registration Sub-Process

d) Regulatory Information Delivery System Sub-Process

e) Medico Legal Version

Objetives Of the new Authority are:

- To establish and maintain an effective and efficient quality assurance, market authorization, inspection and licensing system.
- To ensure safety, efficacy and quality of medicines including complimentary and traditional medicines
- To ensure that food consumed are safe, quality, sanitary and free of contaminants

- To standardize health services and protect the public from unqualified and unethical professionals and substandard health institutions
- To ensure an uninterrupted regulatory information provision and promote Rational Medicines use

Source: DACA PR office

## Swine Flu

### *What is it?*

Swine flu refers to a respiratory infection caused by influenza A viruses that ordinarily cause illness in pigs. Humans can catch swine flu from infected pigs, but pig-to-human transmission is unusual. Human-to-human transmission of true swine flu is also possible but infrequent.

The recent outbreak of what is being called swine flu involves a new H1N1 type A influenza strain that's a genetic combination of swine, avian and human influenza viruses. It's capable of spreading from human to human.

In June 2009, based on its wide spread to many nations, the World Health Organization declared the swine flu outbreak a global pandemic. According to the WHO situation update as of July 6 2009 there are 94512 laboratory confirmed cases so far with 429 deaths. In Ethiopia, currently there are only 3 confirmed cases with no death associated with the condition.

This new swine flu strain is being called by a number of names, including: swine-origin influenza A, swine influenza A (H1N1), influenza A/California/H1N1, swine origin influenza virus, North American flu and influenza A (H1N1).

The best approach one can take is to try to avoid infection. If one develops symptoms of swine flu, it is important to seek prompt medical attention so that one has the best chance of antiviral drugs providing oneself with successful treatment.

**Symptoms**

The symptoms of swine flu in humans are similar to those of infection with other flu strains. The most common include:

- Fever
- Cough
- Sore throat
- Body aches
- Headache
- Chills
- Fatigue
- Diarrhea
- Vomiting

Symptoms develop three to five days after you're exposed to the virus and continue for about another week. You can pass the virus to other people for about eight days, starting one day before you get sick and continuing until you've recovered.

**When to see a doctor**

See your doctor immediately if you develop flu symptoms, such as fever, cough and body aches, and you have recently traveled to an area where H1N1 swine flu has been reported. Be sure to let your doctor know when and where you traveled.

Also see your doctor if you develop respiratory symptoms after you've been in close contact with someone who may have been exposed to H1N1 swine flu.

**Causes**

Influenza viruses infect the cells lining the nose, throat and lungs. One can be exposed to swine flu virus if there is contact with infected pigs. The virus enters the body during inhalation of contaminated droplets or during transfer of live virus from a contaminated surface to the eyes, nose or mouth on the hand.

**Risk factors**

Swine farmers and veterinarians have the highest swine flu risk because of their exposure to pigs. Travel to an affected area may lead to exposure to human swine influenza A H1N1, risk increases if one spends time in large crowds.

**Complications**

Influenza complications include:

- Worsening of chronic conditions, such as heart disease, diabetes and asthma
- Pneumonia
- Respiratory failure

Severe complications of human swine flu H1N1 seem to develop and progress rapidly.

**Treatments and drugs**

Most cases of flu, including human swine flu, need no treatment other than symptom relief. If you have a chronic respiratory disease, your doctor may prescribe additional medication to decrease inflammation, open your airways and help clear lung secretions.

Antiviral drugs can reduce the severity of symptoms. There are two classes of antiviral medication used to reduce symptoms and duration of the flu — adamantane antivirals and neuraminidase inhibitors — but flu viruses can develop resistance to them.

Human swine flu H1N1 is sensitive to oseltamivir (Tamiflu) and zanamivir

(Relenza), both of which are neuraminidase inhibitors. It's important to start treatment as soon as possible after you become ill. These antiviral medications are most effective if treatment begins within 48 hours of developing symptoms.

The adult dose of Oseltamivir is 75 mg orally twice daily for 5 days while Zanamivir is doses as 2 oral inhalations (one-5 mg blister per inhalation for a total dose of 10 mg) twice per day (roughly 12 hours apart, AM and PM) for 5 days.

**Lifestyle and home remedies**

If you come down with any type of flu, these measures may help ease your symptoms:

- **Drink plenty of liquids.** Choose water, juice and warm soups to prevent dehydration. Drink enough so that your urine is clear or pale yellow.
- **Rest.** Get more sleep to help your immune system fight infection.
- **Consider pain relievers.** Use an over-the-counter pain reliever such as acetaminophen or ibuprofen cautiously, as needed.

Remember, pain relievers may make you more comfortable, but they won't make your symptoms go away any faster and may have side effects. Ibuprofen may cause stomach pain, bleeding and ulcers. If taken for a long period or in higher than recommended doses, acetaminophen can be toxic to your liver.

Talk to your doctor before giving acetaminophen to children. And don't give aspirin to children or teens because of the risk of Reye's syndrome, a rare but potentially fatal disease.

**Prevention**

These measures may help prevent flu:

Stay home if you're sick. If you do have swine flu, you can give it to others starting about 24 hours before you develop symptoms and ending about seven days later.

Wash your hands thoroughly and frequently. Use soap and water, or if they're unavailable, use an alcohol-based hand sanitizer. Flu viruses can survive for two hours or longer on surfaces, such as doorknobs and countertops.

Avoid contact. Stay away from crowds if possible.

Reduce exposure within your household. If a member of your household has swine flu, designate one other household member to be responsible for the ill person's close personal care.

**References:**

Swine flu. Available from: http://www.mayoclinic.com/health/swine-flu/DS01144 [Cited 2009 June 17]
Pandemic (H1N1) 2009 - update 58. Available from:http://www.who.int/csr/don/2009_07_06/en/index.html [Cited 2009 July 16]

# PHARMACY PRACTICE

## New Opportunities in Medication Therapy Management

Medication Therapy Management (MTM) is separate from dispensing, although there can be some overlap, 5 core elements of an MTM service have been identified:

- Review of a patient's medications.
- Creation of a portable personal medication record (PMR) for the patient. Several organizations have created useful PMR templates.
- Development of a medication action plan identifying necessary steps to improve the patient's health, including nonmedication aspects, such as physical activity and diet.
- Intervention and/or referral: Pharmacists may make informal referrals to a physician, or other healthcare professionals; this is different from a formal referral used by insurance companies.
- Documentation and follow-up: Pharmacists should collect and record appropriate lab values, track patients' progress, and record charges and billing. Over-the-counter medications and complementary or alternative therapies also should be documented, as these may represent a large component of a pain management routine.

## Diabetes Care Represents Golden Opportunity for MTM:

A clinical area that is particularly suited for MTM is diabetes. Nonadherence is a significant problem, and the costs of poor treatment are substantial for the patient and for society. Most patients have significant knowledge deficits and simply do not know how dangerous it is to let their blood glucose run high. Correcting the knowledge deficit can increase medication adherence and help reach therapeutic goals.

Diabetes is a great example of how proper care can result in huge cost savings. A patient may need multiple oral medications or require insulin therapy; however, many choose to start with only a single medication and they may view insulin as a "punishment" for bad behavior. Pharmacists should promote insulin as a valuable tool, rather than as a desperate last-ditch measure. Pharmacists providing MTM services can help change this picture, as they are the ones

who see the patients most often. When pharmacists are involved in diabetes care, they improve health outcomes and cut costs. Pharmacist-run MTM programs can help patients titrate to goal without unnecessary hypoglycemia, a common concern of patients and prescribers. This will benefit both the patient and society overall, through lower short-term costs as well as long-term costs associated with complications. Thus, diabetes, MTM, and pharmacy can be a winning combination for all.

## Good Pharmacy Practice

The International Pharmaceutical Federation first adopted the guidelines for Good Pharmaceutical Practice in 1993. These guidelines were developed as a reference to be used by national pharmaceutical organisations, governments, and international pharmaceutical organizations to set up nationally accepted standards of Good Pharmacy Practice.

The revised version of this document was endorsed by WHO in 1997 and subsequently approved by the FIP Council in 1997. The GPP Guidelines are based on the pharmaceutical care given by pharmacists. The guidelines recommend for national standards to be set:

- The promotion of health;
- The supply of medicines, medical devices, patient self-care;
- Improving prescribing and medicine use by pharmacists' activities.

These guidelines have been subsequently adapted and adopted in a wide number of developed countries. In certain cases, the national professional body has strived to adapt the guidelines and developed, in collaboration with the government, specific regulation/legislation on this matter.

Conscious of the need to help developing countries achieve GPP, the FIP Community Pharmacy Section Executive Committee established a working group to produce guidelines in this area in 1992. The paper, entitled "GPP in Developing Countries – Guidelines for Implementation", was endorsed by the FIP CPS Executive Committee in September 1998.

Having realized the importance of continuing to increase awareness of GPP and stimulating its implementation, the FIP Bureau decided to request the BPP to focus on the theme and to develop a specific activity.

In addition to the FIP involvement in Good Pharmacy Practice through these Guidelines, FIP together with WHO has published a joint handbook entitled "Developing pharmacy practice - A focus on patient care". This handbook sets out a new paradigm for pharmacy practice. Its aim is to guide pharmacy educators in pharmacy practice, to educate pharmacy students and to guide pharmacists in practice to update

their skills. The handbook, which brings together practical tools and knowledge, has been written in response to a need to define, develop and generate global understanding of pharmaceutical care at all levels.

Available from http://fip.org/www/?page=menu_goodpharmacypractice [Cited 2009 June 17]
These handbooks can be downloaded from the FIP website for free. (www.fip.org)

### FIP and Counterfeit Medicines

FIP is seriously concerned about the continuing, even increasing risk to public health represented by counterfeiting of medicines. The massive circulation of poor quality, harmful and counterfeit active ingredients and finished products in international commerce can seriously reduce the quality of patient care. FIP is assisting its Member Organizations in the implementation of its policy document on Counterfeit Medicines.

The Working Group on Counterfeit Medicines was established in 2003 as a joint initiative of the FIP Board of Pharmaceutical Practice and the World Health Organization (WHO) in response to the increasing problem of counterfeit medicines, particularly in developing countries. The aim is to implement the updated FIP Policy Statement on Counterfeit Medicines.

The members of the Working Group are pharmacists who come from different countries and contribute to the combat against counterfeit medicines from their individual professional background in the laboratories of professional organizations, in Universities, in the pharmaceutical industry and in community pharmacy.

The Working Group is supporting activities to combat counterfeit medicines. These include raising public awareness about counterfeits and the dangers of purchasing medicines over the internet, collecting and providing data through collaboration with patients and consumers, encouraging the reporting of counterfeits, involving quality control laboratories and improving training in the area of counterfeit medicines.

FIP and counterfeit medicines. Available from http://www.fip.org/www/?page=menu_counterfeitmedicines [Cited 2009 June 16]

## DRUG UPDATES

### Propylthiouracil linked with serious liver injury

The United States Food and Drug Administration (FDA) notified healthcare professionals of the risk of serious liver injury, including liver failure and death, with the use of propylthiouracil in adult and pediatric patients. Reports to FDA's Adverse Event Reporting System (AERS) suggest there is an increased risk of hepatotoxicity with proplythiouracil when compared to methimazole. FDA has identified 32 (AERS) cases (22 adult and 10 pediatric) of serious liver injury associated with propylthiouracil use. Although both

proplythiouracil and methimazole are indicated for the treatment of hyperthyroidism due to Graves' disease, healthcare professionals should carefully consider which drug to initiate in a patient recently diagnosed with Graves' disease. Physicians should closely monitor patients on propylthiouracil therapy for symptoms and signs of liver injury, especially during the first six months after initiation of therapy. Propylthiouracil should not be used in pediatric patients unless the patient is allergic to or intolerant of methimazole, and there are no other treatment options available.

Propylthiouracil and risk of serious liver injury. Available from: http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/DrugSafetyInformationforHeathcareProfessionals/ucm162701.htm [Cited 2009 June 15]

### New Drugs included in Ethiopian drug list (as of April 2009)

| Ser. No. | GENERIC NAME | DESCRIPTION |
|---|---|---|
| 1 | Alfacalcidol | Capsule, 0.25mcg |
| 2 | Bicalutamide | Tablet, 50mg, 150mg |
| 3 | Bromhexine HCl | Elixir, 4mg/5ml |
| 4 | Budesonide | Nasal spray, 32mcg,64mcg |
| 5 | Gemifloxacin | Tablet, 320 mg |
| 6 | Diclofenac | Injection, 75mg/ml |
| 7 | Diclofenac | Capsule (S/R), 75mg |
| 8 | Erythromycin | Solution, 1.5% |
| 9 | Nimesulide | Tablet,200mg |
| 10 | Temozolomide | Capsule, 5mg,20mg,100mg,140 mg,180mg,250mg |
| 11 | Betametasone + Clioquinol + Gentamycin + Tolnaftate | Cream, 0.5 mg + 10 mg + 1 mg + 10 mg /gm |
| 12 | Ursodeoxycholic acid | Capsule, 250 mg |
| 13 | Dexcholorpheniramine + Guainefesin + Pseudoephedrine | Syrup, 2 mg + 100 mg + 20 mg / 5ml |

## CONTINUING EDUCATION

### Management of asthma

#### Definition

Asthma is a disease of the airways characterized by chronic airway inflammation and increased responsiveness (hyperreactivity) to a wide variety of stimuli (triggers). This hyperreactivity leads to obstruction of the airways, the severity of which may be widely variable in the same individual. As a consequence, patients have paroxysms of cough, dyspnea, chest tightness, and wheezing. Asthma is a chronic disease, with episodic acute exacerbations that are interspersed with symptom-free periods. Other conditions may present with wheezing and must be considered, especially in patients who are not responsive to therapy.

**Table 1: Classification of asthma**

| Components of severity | Mild Intermittent | Mild Persistent | Moderate Persistent | Severe Persistent |
|---|---|---|---|---|
| Symptoms | ≤2 days/week | >2 days/week but not daily | Daily | Throughout the day |
| Night time awakenings | ≤2 x/month | 3-4x/month | >1x/week but not nightly | Often 7x/week |
| Short acting b2 agonist use for symptom control not for EIB | ≤2 days/week | > 2 days/week but not daily, and not more than 1x on any day | Daily | Several times per day |
| Interference with normal activity | None | Minor limitation | Some limitation | Extremely limited |
| Lung function | • Normal FEV1 between exacerbations<br>• FEV1 >80% predicted<br>• FEV1/FVC normal | • FEV1> 80% predicted<br>• FEV1/FVC normal | • FEV1>60% but <80% predicted<br>• FEV1/FVC reduced 5% | • FEV1<60% predicted<br>• FEV1/FVC reduced >5% |

EIB, exercise-induced bronchospasm; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity

**Normal FEV1/FVC:**

| | |
|---|---|
| 8-19 yr | 85% |
| 20-39 yr | 80% |
| 40-59 yr | 75% |
| 60-80 yr | 70% |

## Pathophysiology

- Asthma results from multiple processes. The combination of these processes results in airway obstruction, hyperinflation and airflow limitation.
- Chronic airway inflammation characterized by infiltration of the airway wall, mucosa, and lumen by activated eosinophils, mast cells, macrophages, and T lymphocytes.
- Bronchial smooth muscle contraction resulting from mediators released by a variety of cell types including inflammatory, local neural, and epithelial cells.
- Epithelial damage manifested by denudation and desquamation of the epithelium leading to mucous plugs that obstruct the airway.
- Airway remodeling characterized by the following findings:
    - Subepithelial fibrosis, specifically thickening of

the lamina reticularis from collagen deposition
  - Smooth muscle hypertrophy and hyperplasia
  - Goblet cell and submucosal gland hypertrophy and hyperplasia resulting in mucus hypersecretion
  - Possible airway wall thickening due to acute edema and cellular infiltration during asthma exacerbations

## Etiology

- Asthma attacks are episodes of shortness of breath or wheezing that last minutes to hours. Patients may be completely symptom-free between attacks. Typically, attacks are triggered by acute exposure to irritants (e.g., smoke) or allergens.
- Exacerbations occur when airway reactivity is increased and lung function becomes unstable. During an exacerbation, attacks occur more easily and are more severe and persistent. Exacerbations are associated with factors that increase airway hyperreactivity, such as viral infections, allergens, and occupational exposures.
- A number of factors increase airway hyperresponsiveness and cause an acute and chronic increase in the severity of the disease. Such factors include: allergens, viral upper respiratory tract infections and sinusitis, gastroesophageal reflux, cold air and exercise, aspirin and nonsteroidal anti-inflammatory drugs.

## Diagnosis

**Signs and Symptoms:** such as Wheezing, Cough, Chest tightness, Chest pain and Exercise-induced wheezing or cough

Variation in pattern of symptoms: Paroxysmal, versus constant,

**History:** Pattern, Triggers, Exposures (pets, tobacco smoke) , Comorbidities, Severity, Medications, Family history of asthma and allergy

**Physical Exam:** Focus on general appearance; upper, middle, and lower airway; and skin

## Tests

- Pulmonary function tests with methacholine challenge: Reversible airway obstruction (increased airway resistance, decreased airflow rates).

- Allergy testing
- CBC: Peripheral eosinophilia in atopic patients
- Arterial blood gases may be helpful in status asthmaticus.

**Imaging:**

Chest radiograph: Valuable at time of initial diagnosis to rule out other serious intrathoracic pathology, but should not be routine with each exacerbation

**Diagnostic Procedures/Surgery**

- Spirometry: Decreased FEV1
- Bronchoscopy: Rarely indicated

**Pathological findings:** Smooth-muscle hyperplasia, Mucosal edema, Thickened basement membrane, Inflammatory response, Hyperinflated lungs, Mucus plugging

**Treatment**

***Medications***

- Medical management involves chronic management and a plan for acute exacerbations. Most often it includes the daily use of an anti-inflammatory, disease-modifying medication (long-term-control medications such as steroids and as-needed use of a short-acting bronchodilator (quick-relief medications such as salbutamol).

- Supplemental oxygen should be administered to the patient who is awaiting an assessment of arterial oxygen tension and should be continued to maintain an oxygen saturation of >90% (95% in patients with coexisting cardiac disease or pregnancy).

- Bronchodilators are first-line therapy in an asthma attack. Reversal of airflow obstruction is achieved most effectively by frequent administration of inhaled $\beta_2$-adrenergic agonists.

**Table 2:** Long-term control medications for asthma

| Medication | Dosage Form | Adult Dose | Comments |
|---|---|---|---|
| **Systemic Corticosteroids** | | | |
| Prednisolone | 5 mg tablets, 5 mg/5 mL, 15 mg/5 mL | Short-course "burst": to achieve control, 40-60 mg per day as single or 2 divided doses for 3-10 days | For long-term treatment of severe persistent asthma, administer single dose in a.m. either daily or on alternate days (alternate-day therapy may produce less adrenal suppression). Short courses or "bursts" are effective for establishing control when initiating therapy or during a period of gradual deterioration. |
| Prednisone | 1, 2.5, 5, 10, 20, 50 mg tablets; 5 mg/mL, 5 mg/mL | | There is no evidence that tapering the dose following improvement in symptom control and pulmonary function prevents relapse. |
| **Inhaled Long-Acting $\beta_2$-Agonists** | | | **Should not be used for symptom relief or exacerbations. Use with inhaled corticosteroids.** |
| Salmeterol | DPI 50 mcg/blister | 1 blister every 12 hours | Decreased duration of protection against EIB may occur with regular use. |
| Formoterol | DPI 12 mcg/single-use capsule | 1 capsule every 12 hours | Each capsule is for single use only; additional doses should not be administered for at least 12 hours. |
| **Combined Medication** | | | |
| Fluticasone/Salmeterol | DPI<br>100 mcg/50 mcg, 250 mcg/50 mcg, or 500 mcg/50 mcg<br><br>HFA<br>45 mcg/21 mcg 115 mcg/21 mcg 230 mcg/21 mcg 160 mcg/4.5 mcg | 1 inhalation twice daily; dose depends on severity of asthma | 100/50 DPI or 45/21 HFA for patient not controlled on low- to medium-dose inhaled corticosteroids<br><br>250/50 DPI or 115/21 HFA for patients not controlled on medium- to high-dose inhaled corticosteroids |
| **Methylxanthines** | | | |
| Theophylline | Liquids, sustained-release tablets, and capsules | Starting dose 10 mg/kg/d up to 300 mg maximum; usual maximum 800 mg/d | Adjust dosage to achieve serum concentration of 5-15 mcg/mL at steady-state (at least 48 hours on same dosage). |

DPI, dry powder inhaler; EIB, exercise-induced bronchospasm; HFA, hydrofluoroalkane; IgE, immunoglobulin E; MDI, metered-dose inhaler; SABA, short-acting β2-agonist.

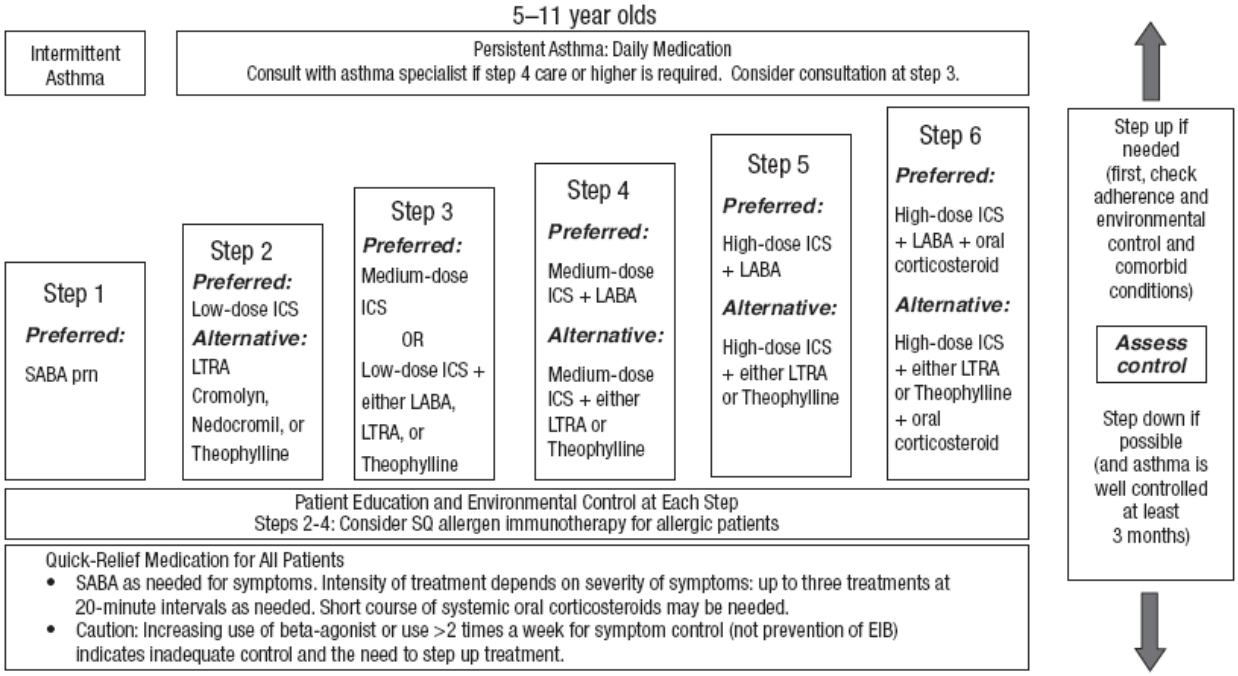


Figure. Stepwise approach for managing asthma in adults and children age 5 years and older. (EIB, exercise-induced bronchospasm; ICS, inhaled corticosteroid; LABA, long-acting β-agonist; LTRA, leukotriene receptor antagonist; SABA, short-acting β-agonist.) (Adapted from National Institutes of Health, National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. Full Report of the Expert Panel: Guidelines for the diagnosis and management of asthma [EPR-3] 2007. 2007, http://www.nhlbi.nih.gov/guidelines/asthma.)

## Referrals

Patients should be referred to a specialist in asthma care if they have life-threatening asthma; atypical signs or symptoms; comorbidities such as sinusitis, nasal polyps, aspergillosis, vocal cord dysfunction, gastroesophageal reflux, severe rhinitis; additional diagnostic testing is needed, such as rhinoscopy or bronchoscopy, bronchoprovocation testing, allergy skin testing; severe persistent asthma not responding to standard care, requirement of chronic oral corticosteroids; and a need for allergen immunotherapy.

## Patient Education

Patient education should focus on the chronic and inflammatory nature of asthma, with identification of factors that contribute to increased inflammation.

The consequences of ongoing exposure to chronic irritants or allergens and the rationale for therapy should be explained. Patients should be instructed to avoid factors that aggravate their disease, how to manage their daily medications, and how to recognize and deal with acute exacerbations (known as an asthma action plan).

The use of a written daily management plan as part of the education strategy is recommended for all patients with persistent asthma.

It is important for patients to recognize signs of poorly controlled disease. These signs include an increased or daily need for bronchodilators, limitation of activity, waking at night because of asthma symptoms, and variability in the PEF.

Poorly controlled asthma is characterized by a greater need for bronchodilator therapy and by an increase in the circadian variation in PEF.

Specific instructions about handling these symptoms, including criteria for seeking emergency care, should be provided.

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## Humor

### *Beautiful*

There was a lawyer and he was just waking up from anesthesia after surgery, and his wife was sitting by his side. His eyes fluttered open and he said, "You're beautiful!" and then he fell asleep again. His wife had never heard him say that so she stayed by his side. A couple minutes later his eyes fluttered open and he said "You're cute!" Well, the wife was disappointed because instead of "beautiful" it was "cute." She said "What happened to 'beautiful'?" His reply was "The drugs are wearing off!"

## Obituary

**Mr. Lemmu Mossisa** was born in 1943 E.C. and did his primary and secondary education at Mendi and Nekemt towns respectively. Mr Lemmu graduated with B.Pharm from AAU in 1971 E.C. and obtained MSc degree in Pharmaceutics from the same institution. He had worked in Gambella Hospital and Red Cross Pharmacies. He was also staff of Ethiopian Pharmaceutical Manufacturing firm (EPHARM) from 1977 to 1999 E.C. From 1999 E.C. till his death Mr. Lemmu was head to Quality control section of East African Pharmaceuticals manufacturing Plc.

The association extends its condolence to his family and colleagues. May his soul rest in Peace.

**Mrs Tigist Sharew**

Mrs Tigist Sharew was born in Huruta and died at the age of 30. Tigist was a B.Pharm graduate from AAU in 1997 E.C. She had served at Rhobot college in Assela, Yekatit 12 and Landmark Hospitals. EPA extends its condolence to her family and colleagues. May her soul rests in Peace.

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