Sultanate of Oman
Ministry of Health

MEDICAL SUPPLIES NEWSLETTER

VOLUME 2, DECEMBER 2012

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Launching the Medication Safety Program

The 2nd international pharmaceutical conference was organized by the Directorate General of Medical Supplies on 22nd and 23rd February 2012 at Al Bustan Palace Hotel, Muscat launching the Medication Safety Program with the theme "Towards Medication Safety & Quality". The conference was inaugurated under the auspices of His Excellency Ali Bin Khalfan Al-Qutaiti, The member of Al Shura Council and Chairman of Health Committee and addressed by Ph. Nussaiba Habib, Director General of Medical Supplies.

The two-day event accredited by Oman Medical Specialty Board, was attended by more than 530 delegates including Pharmacists, Assistant pharmacists, Pharmacy students and other healthcare professionals from Oman and other GCC Countries, and international speakers from the United Kingdom, United States of America, Kingdom of Saudi Arabia, United Arab Emirates & Sultanate of Oman.

Some of the staff were honored by the Director General of Medical Supplies in recognition of their long distinguished service and efforts in the field of Pharmacy & Medical Supplies in Ministry of Health.

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Medication Safety Conference

22-24th Feb 2012

Article by Ph. Osama Babikar

The conference highlighted the evolution of Medication Safety Program, the Education and training of Safety Officers and use of Technologies and Automation in supply System.

Medication safety scientific program focused on identifying, designing and evaluating practices that eliminate or mitigate the effects of medication error, and system-related risks and hazards. Multiple perspectives including those of the patient, the physician and the health authorities, based on the importance of this program and its expected benefits for system and the patient safety, this program was included, in the current five year health plan (2011-2015), under the Pharmaceutical Care Domain as the 3rd direct objective: (To Enhance the medication safety programs), for which a set of the objective measuring indicators, had been defined to assess the current medication safety situation at health institutions within the specified target and time frame. This includes:

- Percentage of health institutions where medication safety programs are applied.
- Number of Adverse Drug Reaction (ADR) reports received and analysed.
- Number of referral hospitals having guidelines manual, for safe handling of dangerous drugs (cytotoxic & radiated isomers).

At the same time a set of strategies are being established to promote the medication safety culture and to achieve its set goals, those strategies comprise the followings;

- Conduct conferences, symposiums & orientation meetings and training programs on medication safety.
- Promotion of patient medication safety culture among the health care providers.
- Formation of Medication safety committees at hospitals & regions level.

The conference was instrumental to the healthcare community as patient safety had begun to emerge as a serious global public health issue and medication errors proved the most fundamental challenge facing the healthcare sector.

Conference Key Objectives

- Develop advanced knowledge and skills in medication safety practice.
- Highlight the importance of medication safety officers post and their responsibilities towards medication safety.
- Describe methods and sources to internally capture medication errors data.
- Encourage participants to continue learning and practice the ways to improve the culture of medication safety use.
- Describe the international standards and guidelines for safe medication use.

Conference Recommendations

- The implementation of new technologies is of crucial role in medication safety program.
- Automation of dispensing of medicines inside the hospitals minimize medication errors and ensure patient safety.
- To train and qualify selected pharmacists at tertiary care level as medication safety officers.
- Promote medication safety programs through strategies, guidelines and clear indicators to be followed by health units.
- Disseminate the culture of medication safety among the pharmacists and other health professionals.
- Implement the international coding system for all the medicines in the Ministry of Health through the central stores and all the distribution centers in the hospitals to minimize medication errors.
- Centralize the preparation service of certain medication such as cytotoxic and sterile intravenous fluids to ensure the cost effectiveness and quality & safety of these medications.
- Gain Accreditation from international organizations in the field of medication safety.

Medication Safety Officer Preparatory Workshop

22nd -24th May 2012

Organizer: Ph. Sara Al Balushi

The medication safety preparatory training course was held from 22nd -24th May 2012 at Oman assistant pharmacy institute. Around 25 pharmacists who are in direct contact with patient care were nominated to participate in the workshop.

One of the main focuses of the medication safety conference was to develop advanced knowledge and skills in the medication safety practice, the importance of medication safety officer's post and their responsibilities towards medication safety, therefore the outcome and the recommendations of the conference emphasized on training and qualify selected pharmacists at tertiary care level as medication safety officers.

At the end of the workshop participants were given an exam and those who achieved 60% and above were chosen to be given a series of training courses on the responsibilities of medication safety officers.

Workshop Objectives

The workshop focused on:

- General medication safety concept and culture of safety.
- The role of Medication safety officers in promoting safe medication practice.
- Medication error reporting system.
- Medication errors, types, categories & preventive measures.
- Strategies to avoid medication errors.
- Root cause analysis techniques.
- Define the job description components of the medication safety officers.
- Describe the health care failure mode and effect analysis (HFMEA) and describe its role in improving healthcare system and medication safety. This method analyzes current practices that contribute to medication errors and take proactive steps for prevention.

Establishing Competence Assessment Program for Pharmacy Staff in MOH

9th October 2012

Organizer: Ph. Hassan Ali

A professional competence assessment program in pharmacy practice has been included in the 8th five year plan of Ministry of Health (2011-2015) in the domain of pharmaceutical care to ensure that Staff competence to perform job responsibilities is assessed, demonstrated, and maintained, and their knowledge, skills, and ability to perform jobs is strengthened.

A workshop was conducted by WHO Consultant, Dr. Khaled Al Haidari on 09.10.2012 at Majan Continental Hotel in collaboration with WHO with the objectives to disseminate the concept of Competence Assessment Program in Pharmacy Practice and defining methods for competence assessment, for 30 key persons representing Heads of Pharmacy & Medical Stores, Clinical Pharmacists, Pharmacists (Outpatient & Inpatient) and Assistant Pharmacists from various MOH institutions. The program will be implemented according the structured plan of action.

Competence Assessment Objectives

Competent pharmacy staffs are required to:

- prepare and dispense medications accurately, e.g., preparing IV Admixtures
- counsel patients and their families about medications effectively
- understand the unique needs of various patient types and age groups
- operate equipment properly. e.g., laminar airflow hoods
- handle hazardous materials safely
- minimize opportunities for contamination and transfer of infection, i.e. Infection Control
- respond promptly and properly to medical emergencies and disasters
- monitor drug therapy for inappropriate prescribing, allergies, interactions, and contraindications.
- Reporting and prevention of Medication errors.

Generic Procurement

MOH Generic Procurement Policy

Generic Procurement Policy had been adopted by MOH and included in Oman National Drug Policy since 2000, to provide safe and cost effective drugs of acceptable quality as per the guidelines of WHO Good Procurement Practices. The criteria for selection is based on the fact that the registered generic manufacturers have acquired much experience in good manufacturing practices for those drugs which do not require advanced manufacturing techniques. Purchase of sensitive drugs like drugs with narrow therapeutic index or highly specialized drugs and biological products are being purchased from the Original manufacturers. Most of these generic drugs are being purchased jointly through Gulf tenders with other GCC Countries. The statistical analysis shows that in 2012, the total cost of 52 generic drugs procured by Ministry of Health was 1.2 million RO compared to 19.3 million RO offered from Research companies with the savings of 18.1 million RO. However, still the purchase of specialized medicines from research companies is consuming the major portion of MOH Budget for drugs, as shown below:

Institution	Purchase from Research Mfrs in 2012	Purchase from Generic Mfrs in 2012
DGMS	14,238,872 RO (66 %)	7,370,836 RO (34 %)
Royal Hospital	6,790,875 RO (85 %)	1,199,577 RO (15 %)

Generic Drugs

- A generic drug is identical or bioequivalent to a brand name drug in dosage form, safety, strength, route of administration, quality, performance characteristics and intended use.
- Generic prescribing is cost effective, as generic products are always cheaper than branded products.
- It reduces the potential for confusion as only one name for a drug is used. Errors have occurred with products of similar Trade names.

Same Quality & Performance

Facts about Generic Drugs

FACT: Research shows that generics work just as well as brand name drugs.

A recent study evaluated the results of 38 published clinical trials that compared cardiovascular generic drugs to their brand-name counterparts. There was no evidence that brand-name heart drugs worked any better than generic cardiac drugs.

(Ref: JAMA. 2008;300(21)2514-2526)

FACT: The claim that generic drugs differ from the brand name counterpart by up to 45 percent is false.

The average difference in absorption into the body between the generic and the brand name was only 3.5 percent .
[Ref: Davit et al. Comparing generic and innovator drugs: a review of 12 years of bioequivalence data from the United States Food and Drug Administration. Ann Pharmacother. 2009;43(10):1583-97].

FACT: There is no evidence for the claim that people who are switched to a generic drug are risking treatment failure.

Treatment failures can occur when taking generic or brand name drugs. If someone is switched to a generic drug around the time they are relapsing, they may attribute the problem to the switch.

FACT: Brand name drugs are not safer than generic drugs.

FDA receives very few reports of adverse events about specific generic drugs. Most reports of adverse events are related to side effects of the drug ingredient itself. The monitoring of post market adverse events for all drug products, including generic drugs, is one aspect of the overall FDA effort to evaluate the safety of drugs after approval. In most cases, reports of adverse events generally describe a known reaction to the active drug ingredient.

FACT: Generic drugs cost less because they are not inferior to brand name drugs.

Generic manufacturers are able to sell their products for lower prices, not because the products are of lesser quality, but because generic manufacturers generally do not engage in costly advertising, or significant research and development.

MOH General Dispensing Guidelines and Procedures

As per the directives of H.E. The Under Secretary for Health Affairs, the Directorate General of Medical Supplies had issued a circular on 18.11.2012 to all Health Institutions in Ministry of Health setting the General Guidelines and Procedures for Drug Dispensing system in MOH, in order to streamline the dispensing procedures and preventing dispensing errors and to provide guidance to the Pharmacists and Assistant pharmacists in relation to their professional practice through describing the Dispensing responsibilities of pharmacy staff to ensure better patient compliance and safety.

DISPENSING PROCEDURES

- **The full details of patient on the sticker including his name, family name, nationality and age should be cross checked with the Hospital registration card and confirmed further with the patient/relative/ caregiver before processing the issue of the prescription to avoid mix up and dispensing errors.**
- **In case of electronic prescribing, the ID number of the patient appearing on the sticker/prescription should be entered in the system to view the details of medicines prescribed, the prescriber and clinic.**
- **Dispensing must be made only against a manual prescription or a dispensing sheet retrieved from electronic prescription issued by an authorized prescriber.**
- **Medicines prepared by a Pharmacy staff should be checked and dispensed by another senior pharmacy staff and the prescription/dispensing sheet should be duly signed by both.**
- **When the dispenser is the sole person working in the Pharmacy, Self double checking must be carried out.**
- **Prescription/dispensing sheet should be checked to ensure that the prescription includes an appropriate dosage form and duration and appropriate route of administration, compatibility with other medication; Consistency with formularies, clinical guidelines and protocols, before working out the calculations and preparing.**
- **In case of incomplete prescription, or in case of any errors, the dispenser should contact the prescriber before dispensing the items, for amendments, if required.**
- **More care to be taken while dispensing high alert and look alike products.**
- **Expired drugs should not be dispensed. The remaining shelf life should not be less than the duration of treatment in the prescription.**
- **In case of non availability of any drug or less quantities issued, the patient should be given a Balance Medication Sheet (BMS) indicating details of non-issued quantity and date of collection.**
- **Patients to be counselled to understand the direction for use, storage and special precautions, if any.**

Un-official Inventory

By Mr. Martin Dasari

The Un-Official Inventory are those items within a department which have no formal inventory control and are expensed and not an asset of the facility, such as Wards, ICU's, Operation Theater and Diagnostic areas such as Laboratory and Radiography and etc. Mostly the Medical stores and the finance departments presume that the supplies issued to the user ends as consumption and thereby makes no intervention in verifying the stocks at the user end.

Some of the vulnerable areas in the hospital are the Operation Theater and the Laboratory where most of the stocks get piled-up, and these supplies are obviously of high value. Identifying these unused supplies at the user end and evaluating them in terms of value is a valuable exercise in finding the total closing balance value of an organization.

As per the financial parlance the closing balance value is the asset of an organization and is reflected on the Balance sheet at the end of the year as Stock on Hand Value, which falls under Current Assets, and thus along with the Inventory value at stores, the Unofficial inventory value also to be included in the overall closing value to illustrate a true picture of the overall Inventory Holding value. An effective system is one that controls both Official and Unofficial Inventories and projects the actual inventory holdings.

At Regional Hospital's for the year (2011) the Official Closing balance value is at the Medical Stores & Pharmacies is RO (3,224,101) and the Unofficial Closing Balance value at the user end is RO (2,572,195). This illustrates that out of the total value (55%) is held by Stores and (45%) by the user end, Khoula Hospital official inventory shows only 397,124 RO, where as unofficial inventory shows 1,966,206 RO which requires intervention for better recording and control.

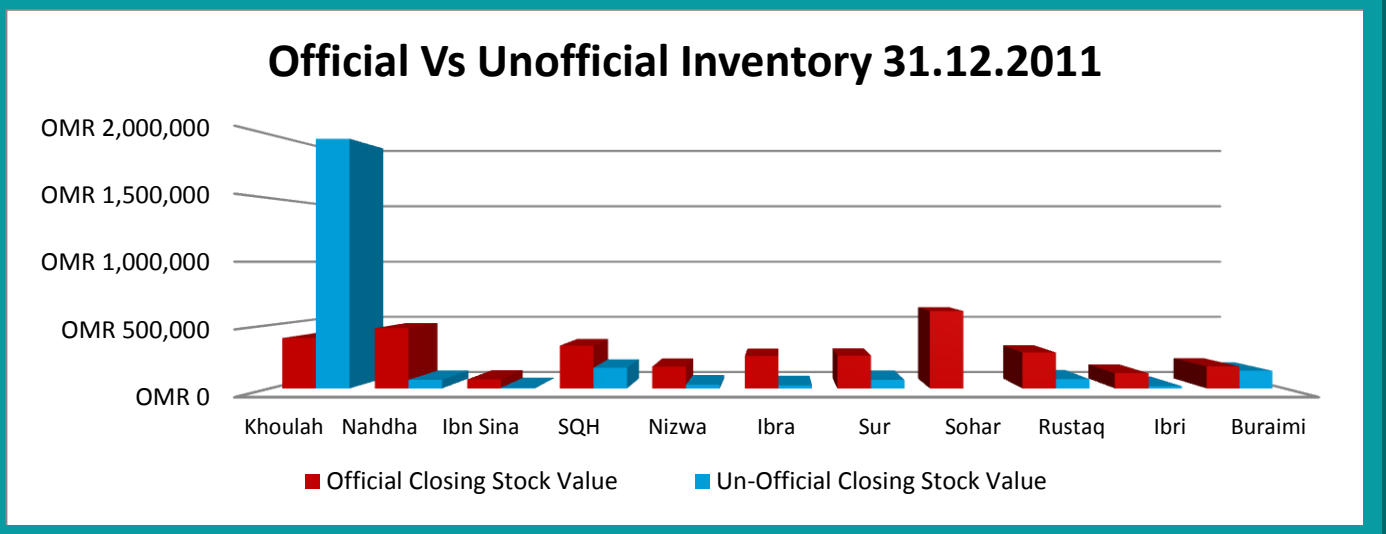
Advantages of the Exercise:

By monitoring of un-official inventory:

- The correct value of the closing stock is established.
- The utilizations of the supplies are documented and can be accounted.
- Monitoring mechanisms will helps in eliminating the non-moving and avoid items ending obsolete.
- Accurate consumption is identified.
- These stocks also can be insured.
- The value of the current assets in the balance sheet of the organization is rightly established.
- Non-Moving items can be identified and necessary action can be taken.

Recommendations:

- Meet with the Department Head's and agree on what is to be accomplished through monitoring unofficial Inventories.
- Sell the concept of Inventory Management rather than Inventory reduction and this will avoid conflicts in promoting the idea.
- Regular stock checking and monitoring should be performed due to the huge value of unofficial stock.
- A scan type stock entry of Un-official stocks in the ICU, wards etc may be considered in the plan of action to facilitate traceability and reduce wastage. This practice of records and control makes unofficial inventory official.



Drug News : By Newsletter Editorial Team

CDC Decisions in 2012

Sr	Medicine / code	Remarks
1	Etanercept 50 mg prefilled syringe	Approved besides 25mg in. To be prescribed by Senior Consultant. Convenient (once weekly with no extra cost)
2	Mycophenolate mofetil 500mg & 250mg tablets	Approved indication extended for Lupus nephritis. To be prescribed by Senior Specialists and above (Nephro & Rheumatology) in Royal Hospital & SQH-Salalah.
3	Midazolam 2.5mg/ml 100ml syrup	Approved for Anaesthesia Dept.- ICU as Premedication for Children undergoing surgery
4	Dexmedetomidine injection	Approved for ICU in all Hospitals
5	Risperidone 25mg & 50mg injection	Approved. Protocol to be submitted To be prescribed by Senior Psychiatry Consultant.
6	Ivabradine 5mg tablet	Approved for Cardiology. Protocol to be approved
7	Barium Sulphate 0.1% - 750ml (VoLumen®)	Approved (diluted solution) for Radiology Dept.
8	Oxandrolone 2.5mg tablet	Approved for Khoula Hospital for modifying hypermetabolic response in burns patients

FDA safety control on LABA's

- The use of LABAs is contraindicated without the use of an asthma controller medication such as an inhaled corticosteroid. Single-ingredient LABAs should only be used in combination with an asthma controller medication; they should not be used alone.
- LABAs should be used for the shortest duration of time required to achieve control of asthma symptoms and discontinued, if possible, once asthma control is achieved. Patients should then be maintained on an asthma controller medication.

LABAs do not relieve sudden-onset asthma symptoms. A rescue inhaler, such as Salbutamol inhaler, should be prescribed to treat sudden asthma symptoms.

Grape Fruits - Drug Interactions can be deadly

Researchers are now finding an increasing number of instances of dangerous drug interactions between various medications and grapefruit. The more serious side effects range from internal bleeding to kidney failure, heart abnormalities and sudden death.

In a paper published recently in the Canadian Medical Association Journal, three Ontario-based researchers review recent case studies and articles examining grapefruit-drug interactions and call upon doctors to be aware of the potentially dangerous mixture of certain drugs and citrus fruits. Between 2008 and 2012, the introduction of new medications increased the number of substances with the potential for seriously dangerous interactions with grapefruit from 17 to 43. Overall, more than 85 drugs in circulation have the potential to interact with the fruit.

Mechanism of the interaction

The isoform of cytochrome P450 - CYP3A4 is located in both the liver and the enterocytes. Many oral drugs undergo first-pass (presystemic) metabolism by the enzyme. Several organic compounds found in grapefruit and specifically in grapefruit juice exert inhibitory action on drug metabolism by the enzyme. It has been established that a group of compounds called furanocoumarins are responsible for this interaction and not flavonoids as was previously reported. This interaction is particularly dangerous with low therapeutic index drugs. Another mechanism of interaction is possibly through the P-glycoprotein (Pgp) that is localized in the apical brush border of the enterocytes. The interaction lasts for up to 24 hours and its effect is the greatest when the juice is ingested with the drug or up to 4 hours before the drug. Interactions with MOH approved drugs are mainly;

Drug class	Major interactions	Minor interactions
Antiarrhythmic Agents	Amiodarone	
Antihistamines	Diphenhydramine	
Ca+ channel Antagonists		Nifedipine, Nimodipine
Statins	Simvastatin	Atorvastatin
Erectile dysfunction		Sildenafil, Tadalafil
HIV drugs		Ritonavir, Nelfinavir
Hormones		Ethinyl Estradiol, Methylprednisolone
Immunosuppressants		Cyclosporine, Tacrolimus,Sirolimus, Mercaptopurine
Hypnotics & Anxiolytics	Buspirone	Midazolam, Diazepam
Other Psychotropics		Carbamazepine

Announcement

3rd Pharmaceutical care conference

"Empowering Hospital Pharmacy Practices"

20 - 21 Feb 2013 - Al Bustan Palace Hotel

Directorate General of Medical Supplies announces the 3rd Pharmaceutical conference under the slogan "Empowering Hospital Pharmacy Practices" which will go on board to Advance Hospital Pharmacy Practices in MOH Oman.

OBJECTIVES

- Empower the Hospital Pharmacists to become agents of change through a thoughtful understanding of the impact of the new perspectives on the future of their profession.
- Elaborate on the role of the Hospital pharmacist as a member of a health care team.
- Describe the knowledge, skills and attitude required for good patient-focused pharmacy practice.
- Describe some new roles that pharmacists can assume in the multidisciplinary team.
- Describe the changes in education and policy necessary to implement patient-focused pharmacy practice.

Registration through
www.pharmaceuticalcareconference.com

CPD Events held in 2012

International Medication Safety Conference	22nd - 23rd February 2012
Forecasting models & Inventory procedures	28th - 29th February 2012
Medication Safety Officers Preparatory Course	22nd – 24th May 2012
Role of Pharmacist in Diabetes Management	18th – 19th June 2012
Asthma Management Workshop	3rd - 4th July 2012
Pharmaceutical Supply Chain Management	1st -5th September 2012
QMS Workshop – Customer Satisfaction	7th November 2012
Myers Briggs Type Indicator (MBTI)	21st November 2012
Cold Chain Management Workshop	8th December 2012
Safe preparation & Handling of Cytotoxics	19 – 20th December 2012

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