



MEDICAL SUPPLIES NEWSLETTER

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Within the frame work of Continuing Professional Development Program in Ministry of Health, the Directorate General of Medical Supplies has conducted The 3rd International pharmaceutical conference on 20th and 21st February 2013 at Al Bustan Palace Hotel, Muscat with the theme “Empowering Hospital Pharmacy Practice”. The conference was inaugurated by His Excellency Ahmed Bin Mohammed Bin Obeid Al Saidi, The Minister of Health in the presence of HE The Under Secretary for Health Affairs, Director Generals of Health Services from various Governorates and was addressed by Ph. Nussaiba Habib Mohd., Director General of Medical Supplies.

The two-day event accredited by Oman Medical Specialty Board, was attended by more than 500 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, Ireland, United Arab Emirates, Qatar, Egypt & national speakers from Sultanate of Oman.

Contributors In this issue

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Empowering Hospital Pharmacy Practice

20-21st Feb 2013

The 3rd Pharmaceutical Care Conference highlighted the importance of Empowering Pharmacy Practice by sharing the experience of expert professionals in the various aspects of Hospital Pharmacy practice from different parts of the world to achieve higher standards and to ensure patient safety.

The conference had a faculty of distinguished international speakers from highly-recognized organizations such as Saudi Food & Drug Authority, Indiana University in USA, Royal pharmaceutical Society of great Britain (RPS, UK), Ireland, Qatar University, Alexandria University Egypt and also national speakers to provide delegates with up-to-date research and strategies to both increase delegates' awareness of critical safety issues and share top-quality scientific material on different aspect of care planning and new perspective in pharmacy practice. This event was accredited by Oman Medical Specialty Board (OMSB).

Some of the topics covered were:-

- Future of the Medicines Uses process
- Role of Clinical Pharmacists in Drug Safety
- Medication Safety consideration in paediatric population
- Pharmaceutical care of critically ill patients
- Competency based practice
- Improving Research skills among hospital pharmacists
- Medication discrepancy at discharge and the benefits of reconciliation
- Improving the care of patients with Heart disease
- Hospital Pharmacy "Needs & Challenges in the Middle East"

Conference Key Objectives

- Empower Hospital pharmacists to become agents of change through a thoughtful understand of the impact of the new perspectives practice model 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 the attitudes required for good patient-focused pharmacy practice.
- Describe some new roles that pharmacists can assume in the multidisciplinary team.
- Describe the change in education and policy necessary to implement patient focused pharmacy practice.
- Know list of essential requirements for clinical pharmacy services to move forward in Oman and the Middle East. And the most serious challenges that hold back the application of clinical pharmacy.

Conference Recommendations

- Introduction of Pharmacy fellowship professional program in order to raise the standards of both pharmaceutical and healthcare provided to patients.
- Adoption of Clinical Pharmacy residency programs by OMSB to qualify pharmacists in different fields of Clinical Pharmacy specializations.
- Standardization of Clinical Pharmacy Practice groundwork and keep on developing such practice to achieve its expected role within the healthcare team.
- To introduce programs for training and evaluation of competency for all care providers who are dealing with medications in Hospitals to ensure the role of pharmacists in safe medication use practices and education of patients & other healthcare providers as well.
- Encouraging scientific pharmaceutical research and to highlight its role in patient care, cost minimization and in academic education and teaching.
- To amend the pharmacy curriculum in Oman to meet the requirements of modern clinical practices in Pharmacy through introducing Pharm D program etc.
- Executing Continuing Professional Education activities for Pharmacy staff based on the competency required.
- To introduce automated solution and modern technologies for drug transactions in Health units.

Medication Safety Workshop

3rd -4th December 2013



Organizer: Ph. Sara Mohiballah Al Balushi

The Directorate General of Medical Supplies conducted its second medication safety workshop on the 3-4th of December gathering 30 pharmacists from different hospitals in the Governorates. The workshop was conducted by Dr. Christian Hartman from the United States, the founder of the medication safety society. The main objectives of the workshop were as follows:

- Describe the difference between medication errors, adverse drug events, and adverse drug reactions
- Explain the difference between potential adverse drug events and preventable adverse drug events
- Provide examples of patient cases related to medication errors, adverse drug events, and adverse drug reactions.
- Describe criteria for medications to be classified as a high risk medication
- Explain management strategies to prevent, reduce, and mitigate harm associated with high risk medications
- Analyze a medication error and provide examples of preventive measures and corrective actions
- Describe the role of the National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) in healthcare
- Explain the NCC MERP medication error classification and algorithm
- Provide examples of medication errors for each classification level
- Explain the difference between rules based, skills based, and knowledge based errors
- Describe a culture of safety and just culture in Healthcare
- Describe the steps of a root cause analysis (RCA)
- Explain the goals and outcomes of a root cause analysis (RCA)
- Given an example, perform a simulation root cause analysis (RCA)
- Describe the steps of a failure modes and effects analysis (FMEA)
- Explain the goals and outcomes of a failure modes and effects analysis (FMEA)
- Given an example, perform a simulation root cause analysis (RCA)
- Describe medication safety guidelines and accreditation standards
- Explain the concept of a medication safety officer
- Provide examples of technology to improve the safe use of medications

Research Methodology

Organizer: Ph. Sara Al Balushi

The Directorate General of Medical Supplies conducted a three days workshop on introduction to research methodology on 14th-16th November 2013. The workshop gathered 30 clinical pharmacists from various tertiary care hospitals in MoH, Armed Force Hospital and from MoH Kuwait & Qatar. The workshop was conducted by Associate Professor Dr. Mohamed Azmi Ahmad Hassali, Dr. Fahad Salim from Universiti Sains Malaysia and Dr. Ahmed Awaisu from College of Pharmacy Qatar University.

The course aim was to impart basic skills in research methods and biostatistics to novice researchers especially in pharmacy related areas. These skills will be needed to design and conduct good quality pharmacy practice and clinical research.

The workshop focused on the following areas in research:

- Introduction and ethics in research
- Writing up research proposal
- Research planning (developing questions and objectives)
- Literature search
- Literature appraisal
- Research design
- Introduction to qualitative research
- Basic statistic concepts
- Sampling and sample size calculation
- Data collection
- Questionnaire development
- Disseminating research findings



Prospective of Adaptation of Pharmacoeconomics in MOH Oman

Article by : Ph. Alia Abdullah Al Shueily, Section Head, Drug Purchase, DGMS

Speciality: Msc.International Pharmacoeconomics & Health Economics

Pharmacoeconomics is simply about evaluating clinical and economical aspects of treatments, drugs & procedures in relation to efficient allocation of resources.

The introduction of Pharmacoeconomics in public-funded healthcare system with constraint budget as in Oman healthcare system is faced with political criteria which mean that concerned sector purchases and uses the available resources to achieve the best health outcome subject to the budget assigned to it (cannot influence the size of budget).

The underlying alarming reasons behind the significant role of pharmacoeconomics adaptation are socioeconomic changes including population growth, ageing of population and lifestyle changes that result in increased burden of chronic diseases and rise healthcare forecasts over the years. In addition, healthcare system in Oman is mainly financed by government with a gradual increase in the penetration of health insurance in the private sector. As a result, more burdens clinically and financially is on public healthcare decision makers to facilitate equal access to healthcare services, in view of continuing rise in pharmaceutical spending along with new developed technologies and pharmaceutical products. Cost controls, clear generic substitute policy and evidence based National formulary list decisions are of important value.

A favored decision cannot be determined only on the basis of various health economic analyses (cost effectiveness, cost minimization, cost benefit or cost utility). As a start, setting threshold values should be introduced to carry out the concept into practice. Threshold value or the benchmark is the cutoff where the value of the medical intervention is considered only when the net benefits outweigh the costs. This can be implied by the maximum budget per health gain that can be used or maximum willingness to pay per health gain for groups of interventions.

Establishment of independent expert advisory bodies and the requirement for pharmacoeconomic studies is necessary to support rational healthcare decision-making and control the rapid acceleration of healthcare costs by applying economic health evaluations and providing evidence-based recommendations on the cost effectiveness of an intervention by showing the consequence of adopting new medical intervention & guides the use of available resources. This will support having well-controlled formularies and ensure the quality of developed medical technologies.

On the other hand, adaptation of pharmacoeconomic as an assisting tool is not an easy task, taken into consideration that only limited information is available on the costs of existing medical interventions at this stage (i.e limited data on usable societal costs) with no agreed criteria neither for health gain values nor making choices criteria. On the basis that Clinical effectiveness evidence for new drugs but little cost-effectiveness data is readily available, rationing in decision making is made without systematic evaluation.

Conclusion:

In general, there is rise in all health indicators among the Gulf States. However, Oman expenditures on Health are high in comparison to its population. Scarcity of resources with the pharmaceuticals costs raises the need for informed decisions that are based on clinical evidence as well as economic evidence; pharmacoeconomic principles. In turn, there is lack of formal Omani guidelines on pharmacoeconomic evaluations thus, it is recommended to establish independent expert advisory bodies for commissioning pharmacoeconomic evaluation. Cooperation with an advisory body with an experience history in performing pharmacoeconomic studies such as National Institute for Health & Care Excellence is vital. Training and education of pharmacists in pharmacoeconomics is also required.

Quality Management System

By Ph. Hassan Ali Mohd., Head, Quality Assurance



Introduction

DGMS has acquired and implemented The ISO 9001:2008 quality management system since February 2011 to provide a comprehensive, and a continually improving the services provided in a manner that aims at customer satisfaction. The procedures of this QMS applied at DGMS are designed to accurately understand and meet the customer needs and to enhance the Directorate to exceed customer's expectations.

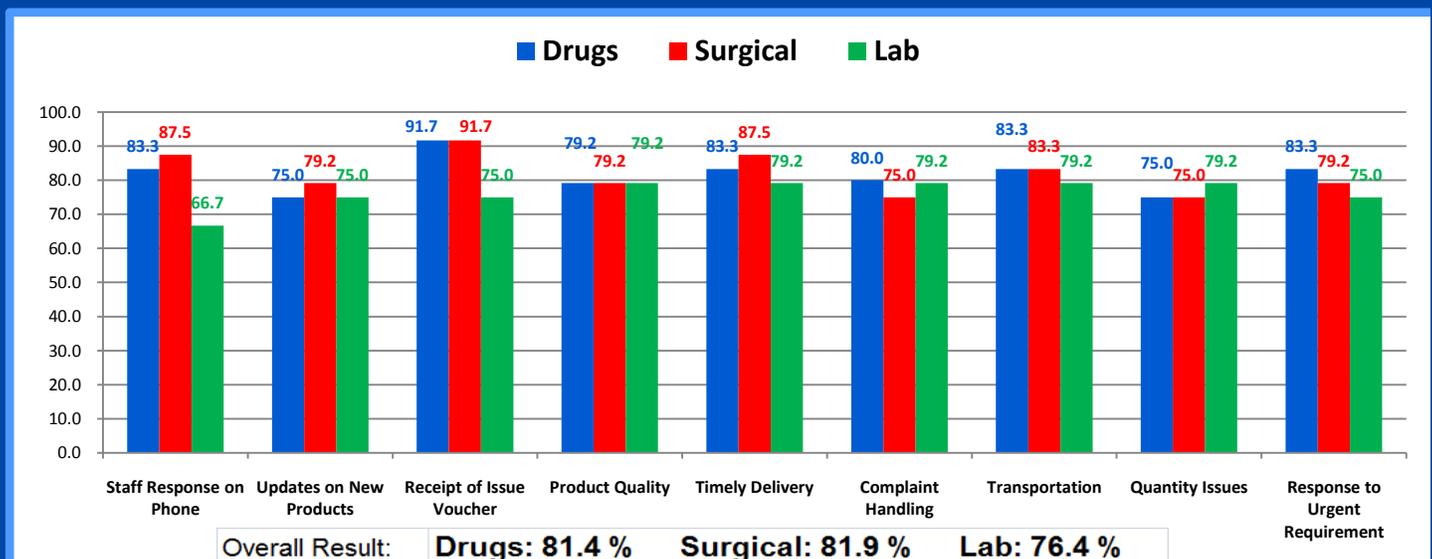
The management has established its Quality Objectives (KPI'S) which have specific time frame based on the Quality Policy considering the customer requirements, current service and accordingly the following Key Performance Indicators have been adopted in line with Guidelines of Good Management Practices for medical supplies as recommended by WHO. The results of DGMS KPI's from the 3rd quarter 2013 is illustrated in the table below.

Key Performance Indicators

Sr.	KPI Description	Target	Result Q3 2013
1	Percentage availability of Vital 30 Medicines	95%	97%
2	Percentage of Procurement through Open Tenders	95%	99.4%
3	Percentage of Procurement of Formulary Drugs	95%	98.9%
4	Value of Expired / Spoiled Supplies Quarterly in RO	<30,000	11,676/-
5	Average Percentage of 40 key drugs with International Price Indicators	50%	65%
6	Percentage of batches passed QCL Analysis	95%	99%
7	Competence Development (Trainings Planned Vs Achieved)	5	3

DGMS Customer Satisfaction Survey November 2013.

The 2nd Customer Satisfaction Survey for 2013 was conducted for 08 Customers. Feedback was received from 6 Health Units namely Nizwa Hospital, Al Buraimi Hospital, Dibba Hospital, Salah Polyclinic, Sohar Polyclinic and Musannah Polyclinic. The Overall results are as shown in the graph below. A plan of action based on the feedbacks have been discussed by the Management with the concerned stores, for improvement.



Moving the non moving Inventory

By Mr. Martin Dasari, Section Head, Inventory Control



The inventory once procured becomes a “Valueless” in terms of money, all though having a value in the market, yet your money is moved out from your possession. This phenomenon can be compared to the purchase of Shares in a company, where the securities have got only “Paper” value, but no real money visible. And the value can be seen only when they are sold and converted back into cash, likewise the inventories also becomes valueless once they are bought.

The longer you hold onto the inventories, the value diminishes. Relocating the inventories to a location where it is valued in terms of usage is the only option left and is the best alternative through which at least these supplies can be put to use. Usually the attention is paid towards the slow moving inventories only when they become visible burden and options for consuming becomes bleak.

Obsolescence is something that increases your costs and decreases your total net income. Obsolescence is a fact when inventory holding is huge. A common phenomenon is that the inventories are emotionally tied up to the organization and it is often believed that, one day, someone will use it and in the processes, the carrying cost is incurred, which is an economical loss.

The goal of inventory liquidation is to dispose of unwanted inventory at the best possible price or the least possible expense. Here are some ways you can accomplish this task.

Relocation: Transfer the non-moving inventory to another health unit where it is needed. A product may be “dead” in one location, but still active in another location. This option is particularly attractive if the cost of transporting the product between locations is a small fraction of the value of the item. This process is called as Inventory Balancing.

To make this workable, the list of supplies those are non-moving to be circulated in the entire sister concerned. Also a common web site can be developed, where the list of supplies can be stored in a data bank and is accessible to all other users within the health care chain of the organization where one can find what they want from the surplus.

Substitution: Substitution is one of the best options in liquidating non-moving inventories without incurring much expense, to make it possible a continuous effort in finding alternative uses of the same product helps in equipping with solutions. An art of diplomacy is required in carrying out this, explaining the user about the financial losses that the organization is going to incur, involving all the stake holders in the chain in decision making, is the best approach in making therapeutic Substitution and switch therapy . This exercise needs to be done with care and in coordination and approval from the treating doctors.

Action Plan for Liquidation of Inventories

Most of the organizations worry about liquidating the non-moving supplies, once after completing the annual stock taking and this pronouncement is a routine and unfortunately, it is forgotten five days after the end of the fiscal year, and twelve months later, the warehouse is adding with even more inventory. Hence Inventory liquidation must be on a perpetual basis, which must be coordinated by a specific department in an organization.

Suggestions:

Obsolescence is a thing that every organization tries to shun because it increases the costs and decreases the income and every individual tries to hide because of fear of unfavorable actions from the superiors.

- Determine the period how long an item can be in the shelf without moving and when it can be listed as Non-Moving.
- Determine different parameters for different inventories such as items having shelf life needs to be listed early as compared to the items with no shelf life.
- Reduce Inventory duplication.
- Improve demand forecasting.
- Standardization of equivalents’ and alternatives.
- Categorization of the non-moving inventories by value, where the high value items are to be disposed of on priority.
- Exchange of information in regard to non-moving among the consumer’s within and outside the organization.
- Initiating buy back scheme with the supplier’s at the time tendering.
- To encourage the vendor stocking or consignment basis procurement for low turnover items.
- Creating a channel of up-ward and down-ward communication between the user and warehouse in dealing with slow and non-moving supplies.
- Encourage the staff to highlight the non-moving items and make them a part in the exercise.
- Involve all the stake holders in the exercise.
- Create awareness among the consumer’s that every non-moving inventory results in dead and cost the exchequer.

Summary of CDC Decisions in 2013

Sr	Item	CDC Remarks
1	Hydroxychloroquine 200mg tablet	Approved also for Systemic & Discoid Lupus
2	Cyclopentolate eye drops 1% & 0.5%	Approved - As a replacement for Homatropine eye drops
3	Cinacalcet 30mg tablets	Approved for Oncology & Nephrology
4	Cox-2 Inhibitors	Approved for Rheumatology Dept
5	Tocilizumab 8mg/Kg IV injection	Approved for Rheumatology
6	Bicalutamide 150mg tablet	Approved for Urology
7	Pirfenidone 200mg tablet	Approved for Chest Medicine
8	Bendamustine injection	Approved for Haemat-Oncology
9	Risperidone 25mg & 50mg inj (Depot) (01/519) (01/66648)	Approved (To be prescribed by specialist Psychiatrist)
10	Azacytidine 100mg injection (01/2631)	Approved for Haematology Department
11	Vitamin D3 Drops	Approved for Child Health Department
12	Fentanyl 12.5mg Transdermal patches	Approved in addition to already approved 25mg & 50mg patches
13	Calcium 100mg/5ml syrup	Approved as per request of the Child Health Dept
14	Motelukast 4mg sachets	Approved for paediatric cases
15	Budesonide/Formaterol 160/4.5mcg Dry powder Turbohaler (Symbicort)09EN/79	Approved in addition to the Fluticasone/ Salmeterol (Seretide)
16	High Potency multivitamin tablets and suspension	Approved for Cystic fibrosis patients To replace Ketovite tablets and syrup
17	Clofarabine 20mg inj	Approved for Oncology Dept
18	Valganciclovir 450mg tablets (03/48058)	Approved as extended indication : prophylaxis for CMV in kidney Transplant
19	Lorazepam inj	Approved for Emergency Department only
20	Vitamin K (Phytomenadione) 10mg tablet (03/9800)	Omitted from the MOH Formulary Injection Vitamin K 2mg/0.2ml is available and can be taken orally

Narrow Therapeutic Index Drugs

Ph. Al Hassan Abdul Ghaffer,
Incharge of Reserve Stores



Therapeutic index is the ratio = TD50/ED50 where TD50 represent lethal dose that kills 50% of population but ED50 represents therapeutic dose that cures 50 % of population so by this concept narrow therapeutic index means the effective dose is close to therapeutic dose or as FDA states “minimum toxic level equals two folds or less of minimum therapeutic level”.

What is the impact of drug interactions on effect of NTI?

Actually many drug interactions can affect the therapeutic effect of NTI either to toxicity side or therapeutic ineffectiveness as the permitted therapeutic range of this group is very narrow so the clinical pharmacist should much care to drug interaction factor while working with NTI .herewith a summary chart of famous possible interacting agents:



What is TDM & why is important for NTI?

TDM stands for “Therapeutic Drug Monitoring” and it is carried out by taking various blood samples of patient prior to oral administration of drugs till reaching of steady state “ stabilized plasma level “ to ensure the adherence plasma level to required therapeutic range. Actually it is particularly required for NTI due to its range therapeutic range.

The following are the NTIs as classified by USFDA

Aminophylline	Procainamide
Carbamazepine	Phenytoin
Clindamycin	Quinidine
Clonidine	Prazosin
Cyclosporine	Procainamide
Levothyroxine	Theophylline
Ethosuximide	Valproic Acid
Digoxin	Warfarin
Lithium carbonate	Tacrolimus
Minoxidil	Mycophenolate

Staff Honored

During the 3rd Pharmaceutical Care Conference 2013, the following staff, had been honored for their longstanding exemplary service in the Ministry of Health.

Sr.Ph. Amal El Said, Royal Hospital	Sr.Ph. Hassan Ali Mohd., DGMS
Asst.Ph. Raya Abdalla Al Alawiya, DGHS, S.Sharqiya	Asst.Ph. Mariam Juma Al Habsia, DGMS
Asst.Ph. Fatma Al Shekaria, Al Massarah Hospital	Asst. Ph. Nadia Al Shezawia, DGHS, N.Batinah
Asst. Ph. Lilly Jacob, DGMS	Staff Nurse Ammukutty Vijayakumar, DGMS



CPD Events held in 2013

Event	Date	Speaker
3 rd Pharmaceutical Care Conference	20 th – 21 st February 2013	International Speakers
Asthma Management Workshop	23 rd May 2013	Dr. Yaqub, Royal Hospital
Total Parenteral Nutrition	3 rd – 4 th July 2013	Dr. Osama Tabbara
Research Methodology	10 th – 12 th Sep 2013	Dr. Azmi Hazzali
Total Quality Management Workshop	30 th – 31 st October 2013	Mr. Simon Joseph
Communication skills & Team Works	24 th – 26 th November 2013	Ms. Samira Al Bimani
Advance Medication Safety Workshop	3 rd -4 th December 2013	Dr. Christian Hartman
Cold Chain Management	30 th December 2013	Ph. Khalid Al Farsi



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