Aims, Present Situation and Future Policy

Recommendations

4 July 2000
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### ABBREVIATIONS

<table>
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ADR</td>
<td>Adverse Drug Reaction</td>
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<tr>
<td>CDC</td>
<td>Central Drug Committee</td>
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<td>DFA</td>
<td>Directorate of Finance and Administration</td>
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<tr>
<td>DG</td>
<td>Directorate General</td>
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<td>DGPA&amp;DC</td>
<td>Directorate General of Pharmaceutical Affairs and Drug Control</td>
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<td>DP</td>
<td>Directorate of Pharmacy</td>
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<td>DDC</td>
<td>Directorate of Drug Control</td>
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<td>CLDA</td>
<td>Control Laboratory for Drug Analysis</td>
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<td>DGS</td>
<td>Directorate General of Stores</td>
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<td>DDS</td>
<td>Directorate of Drug Stores</td>
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<td>DMSS</td>
<td>Directorate of Medical Supplies Stores</td>
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<td>DSS</td>
<td>Directorate of Specifications and Supplies</td>
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<td>GMP</td>
<td>Good Manufacturing Practice</td>
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<tr>
<td>INCB</td>
<td>International Narcotic Control Board</td>
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<td>INN</td>
<td>International Non-Proprietary Name</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>OAPI</td>
<td>Oman Assistant Pharmacy Institute</td>
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OP  Out Patient
RO  Rials Omani
SGH Gulf States Joint Tender
SQUH Sultan Qaboos University Hospital
WHO World Health Organisation
INTRODUCTION

The goal of a national drug policy is to develop, within the resources of a country, the potential that drugs have to control common diseases and alleviate suffering. This goal can only be achieved if there is an adequate and reliable supply of safe and cost effective drugs of acceptable quality, which are rationally used by prescribers, dispensers and consumers in both the government and private sectors.

A number of key components of a national drug policy are already in place within the Sultanate of Oman as a result of the actions of the Ministry of Health. These actions have concentrated on developing and implementing relevant legislation, on stabilising regulatory procedures for drugs, on selecting a list of drugs for use in government institutions, on following effective procurement practices, controlling the quality of imported products and on distributing supplies to Ministry of Health institutions.

This National Drug Policy document seeks, within the context of the National Health Policy, to unite those existing components with some additional components, to produce a comprehensive policy document with recommendations, which will enhance the achievements already, made in the pharmaceuticals area.
THE CURRENT SITUATION

THE COUNTRY

The Sultanate of Oman, situated on the east southern part of the Arabian Peninsula, has a population of 2,325,460 of whom 596,130 are foreign nationals (1999 census) and has an annual population growth rate of 2.7%. 44.4 percent of the population is under 15 years of age and 71% of the population lives in urban areas.

There has been tremendous progress in the past 30 years in all spheres of national activity. Over 90% of the national income is from crude oil. Agriculture is limited and industrial activity is beginning to develop. The social services sector has developed very quickly. In the education sector, there are more than 300 primary schools today as compared to three primary schools in 1970.

THE HEALTH SECTOR

The Health Sector has seen rapid development in the past 25 years and the number of government health centres, polyclinics and hospitals has increased substantially. In 1975 there were 24 hospitals with 1000 beds and 40 Health Centres. By the end of 1999 there were 47 hospitals, with a total of 4,444 hospital beds and 116 Health Centres /polyclinics (without beds).

The Country is administratively divided into eight Governorates /Regions although in the case of health, there are 10 regions and governorates. Three Under Secretaries, responsible for Health, Planning and Finance/Administration Affairs, are the top public service officials in the Ministry of Health. Reporting to them are a number of Director Generals and Directors. The Director General of Pharmaceutical Affairs and Drug Control reports to the Under Secretary for Health Affairs while The Director General of Stores reports to the Under Secretary for Finance and Administration Affairs.

The Ministry of Health (MOH) provides up to 80% of the health care in the Country. The Sultan of Oman’s Armed Forces, the Royal Oman Police, The Petroleum Development Oman and the Sultan Qaboos University also have Hospitals, health centres and clinics. Treatment at all government institutions is free for Omanis and for expatriates working in government services. This has resulted in high attendance rates, reaching 12.6 million visits during 1996, this number decreased to 10 million visits after introduced fees (200 Baisa/visit) in 1998. Health service employees working in the Government Sector are not permitted to undertake private medical work.
In the public sector, the availability of drugs is limited to those on the approved drug list which have been carefully selected by the Central Drug Committee (CDC). There is adequate budget for drugs which allows for a regular supply to government institutions where treatment is available free of charge to local Omani people and to all government employees. Due to the heavy demand from the general public, the prescribing is not always according to rational need, even the generous budget is not always enough to meet the demand and there are some reported fluctuations in the availability of drugs.

**The private sector** is small and caters mainly for the expatriates employed outside the government sector. There are two private hospitals and 491 Private Clinics in the Country and the Government is encouraging setting up private care provisions which could, in the long term, reduce patient load in MOH facilities. In the private sector the availability of drugs is limited to those which are registered for use within the country. There are four levels of prescribing in private sector:
- Over The Counter drugs
- Prescription only drugs
- Narcotics and Psychotropic
- Other controlled drugs, which need further control and reporting requirements

There are 302 private pharmacies in the country by end of 1999. Each must have a registered pharmacist on the premises although the professional contribution appears to be limited. The private sector supply and distribution appears to comply with regulations.

In near future Price Control System will start in the country, and hoping as a result of implementation of this system, the prices of essential drug products in the private sector will be reduced.

There is a concern about the lack of human resources. Training institutes have been established to develop human resources for the health sector. There is one Medical School and a number of paramedical and nurses training institutions. However the number of Omani Nationals working in the health sector is small at present. As a consequence, MOH is obliged to employ a large number of expatriate doctors, pharmacists, nurses and other paramedical staff from Asia and the Middle East. These health providers have differing training backgrounds and work experience which influences the quality of medical care provided by them. Small prescribing surveys have shown a tendency towards poly pharmacy and over prescription of antibiotics. In the absence of a well organised continuing education programme on the rational use of drugs, prescribers have been following the prescribing habits acquired in the country of origin. The Government’s long term policy is to employ Omani nationals in most jobs.

**The 5th Five-Year Health Plan 1996-2000** states that MOH is committed to taking actions that help in the limitation of the misuse of all types of resources within the health system (human resources-money and materials). In this plan, MOH formulated a number of policy guides on drugs. Under the programme of strengthening the Health
Management System, the following specific reference is made to essential drugs “as for essential drugs, there is need for specific studies on the adequacy of human resources, drug registration system, local storage and guidance of use of medicines. There is also a need for health education manuals and materials. The continuing education of staff system needs strengthening”.

The plan continues to state the hope that the above objectives will be achieved by carrying out the following specific activities (strategies).

1. Decentralisation of drug storage;
2. Connecting local stores with the central internet;
3. Development of a toxicology centre;
4. Development of drug control system on all levels;
5. Updating the essential drugs list;
6. Development of a national manual for the essential drugs;
7. Development of an incinerator to condemned expired medicines;
8. Supporting the central quality control laboratory for drug analysis.

THE PHARMACEUTICAL SECTOR

Pharmaceutical affairs are administered by two Directorate Generals one for Pharmaceutical Affairs and Drug Control (DGPA&DC) reporting to the Under Secretary for Health Affairs, the other for Stores (DGS) in the Ministry of Health. The DGPA&DC is subdivided into three Directorates and headed by a Director General while DGS is subdivided into five Directorates and headed by a Director General. All offices including the medical supplies stores, are on the same compound.

DGPA&DC:
The Directorate of Drug Control (DDC) is responsible for the registration of drugs and clearance of imported/exported drugs for the private Sector also they work in collaboration with the Directorate of Central Laboratory for Drug Analysis (CLDA) which is responsible for the activities of the quality control laboratory. The Directorate of Pharmacy (DP) implements regulations relating to the licensing of Pharmacists and Assistant Pharmacists; licensing and inspection of wholesale or retail premises in the Private Sector.

DGS:
The Directorate of Specifications and Supplies (DSS) procures Drugs, Medical, Laboratory supplies and Miscellaneous but is not responsible for the procurement of equipment. The Directorate of Drug Stores (DDS) and The Directorate of Medical Supplies Stores (DMSS) both directorates are distributed drugs and medical supplies directly to Hospitals, which in turn distribute to health centres. The Directorate of Miscellaneous Stores is distributed Medical Printing items, Stationary items, Office supplies and Others directly to Hospitals. The Fifth Directorate is for Finance and Administration (DFA).
Pharmacists head each of the Technical Directorates as well as the various technical sections under each Directorate.

All Pharmacists working in the country have been trained abroad. An Assistant Pharmacy Institute (OAPI) started graduating Omani assistant pharmacists in 1991 to meet the ongoing demand for assistant pharmacists in the Ministry of Health and other governmental institutions. At present there are no plans to train Pharmacists in the country.

The Oman National Drug Policy

OVERALL OBJECTIVE OF THE POLICY.

The Objective of the National Drug Policy is to develop, within the resources of a Country, the potential that drugs have to control common diseases and alleviate suffering. The Policy aims to ensure and express government commitment to this objective and to serve as a guide for action by all involved parties in government, academia, professional organizations, non-governmental organizations, industries, patients and consumers.

SPECIFIC OBJECTIVES OF THE POLICY.

1. To ensure that all legislation and related regulations are up-to-date to ensure that the general public has access to safe, effective, affordable drugs and medicines which meet approved standards and specifications and that these drugs are used rationally.

2. To ensure that all drugs and medicines imported or manufactured in the Sultanate of Oman are evaluated and registered by DGPA&DC according to the established procedures with adequate provisions for emergency registration when required with the ultimate goal that the general public obtains the maximum benefit from a particular product, accompanied by the appropriate professional device.

3. To ensure that the selection of drugs are those necessary for the health care of the nation and that they are available to communities and individuals at an appropriate level where they can be safely and effectively used.
4. To support the procurement system in making available cost-effective drugs of accepted quality at the needed time.

5. To establish a well-designed, well-managed, cost-effective drug distribution system, with the aim of maintaining a constant supply of drugs in good condition, minimising drug losses due to inadequate forecasting of needs, spoilage, expiry or theft.

6. To provide Pharmaceutical quality assurance so that the quality of any drug product manufactured in or imported for use in the Country is maintained and complies with established specifications and standards throughout its self-life.

7. To establish criteria for good manufacturing practices for any small-scale manufacturing or repackaging of drugs and to ensure that these products are of a quality appropriate for their intended use.

8. To encourage good Pharmacy practice, with the aim of ensuring that an effective form of the correct drug is delivered to the right patient, in the right dosage and quantity, with clear instructions and in a package that maintains the potency of the drug.

9. To improve the use of drugs by health providers through rational prescribing and dispensing and to promote the appropriate use of drugs by the individual and the Community.

10. To ensure the highest degree of co-operation with other Countries and International Organizations, to improve the supply, distribution and use of drugs to the benefit of the Community.

11. To ensure that the traditional medicines of Oman and the imported traditional remedies are safe and effective.
1. LEGISLATION AND REGULATION

SUMMARY AND CURRENT SITUATION

The Pharmacy laws were enacted first in 1973 by Royal Decree No. 10 which was subsequently revised by another Royal Decree No. 41/96 issued on 08-06-1996. This law controls the import, distribution and sale of drugs in the Country, controlling the activities of the Private Sector in particular. Certain provisions of the Royal Decree will be implemented through Ministerial Decisions in the near future.

The DP is responsible for licensing Pharmacists and Assistant Pharmacists and for monitoring their performances in the Private Sector. The licensing procedure for expatriate Pharmacists and Asst. Pharmacists involves written examination and an interview by a Technical Committee. The DP responsible for licensing of the premises of wholesale and private Pharmacies also carry out inspection with particular attention paid to the records of the prescriptions and supply of Psychotropic drugs. Random samples are collected for analysis by DCLDA.

OBJECTIVE OF THE POLICY

To ensure that all legislation and related regulations are up-to-date to ensure that the general public has access to safe, effective, affordable drugs and medicines which meet approved standards and specifications and that these drugs are used rationally.

Implementation of all provisions of the Royal Decree through Ministerial Decisions.

- Licensing for drug storage and dispensing within private clinics will be limited to those cases where no pharmacy services are available within a limit to be defined by the Ministry.

- A list of drugs for over-the-counter sales in Pharmacies will be developed, published and updated regularly.

- The list of drugs to be sold in supermarkets will be revised and published regularly.
2. REGISTRATION AND DRUG CONTROL

SUMMARY AND CURRENT SITUATION

Drug registration started in 1987 with a first focus on drug products circulating in the unregulated private market at that time. In the same year registration of the pharmaceutical companies and their products used by Government and private Sectors commenced. The initial collection of information revealed that 532 manufacturers had marketed 8942 products in Oman. From that time onwards, 253 pharmaceutical manufacturers had withdrawn their products and accordingly 5,292 products disappeared from the market. However, by June 2000 only 324 companies have been registered after submitting the required information while 134 are rejected. Out of a total of 4725 product submissions, 3579 have been registered while 1146 products have been rejected. The confidential records and samples are properly secured.

The Technical Committee for Registration, an internal committee of the DGPA&DC, authorizes registration of a product on the basis of information prepared by DDC and CLDA staff and after payment of 50 R.O. for each dosage form and strength. Registration of manufacturer is 100 R.O at present. One of the pre-conditions for the registration of a drug for importation is the submission of free sale certificate from the Country of Origin for two years.

The DGPA&DC is a member of WHO Collaborating Centre for Adverse Drug Reactions (ADR). ADR reports are received and analysed through Drug Information Centre in the Drug Control Dept. H.E. The Under Secretary for Health Affairs has taken action to facilitate reporting adverse drug reactions but with little response. The DDC is responsible for international communication on drug control and for drug information in the Country. The DDC is also responsible for imports, records, issuing and controlling of both Narcotic and Psychotropic drugs in Government and Private Sectors. The DDC submits annual requirements and send quarterly statistics to INCB, in Vienna.

DDC suffers from lack of adequate number of qualified and experienced staff and is still struggling to deal with a backlog of registration work. There is no attempt at post-marketing surveillance of drug products used in Oman and at present there are no plans to do so. At present there are no criteria to guide the DDC in limiting the number of brand-name products of any one particular product and there are no special requirements with regard to the generic name on labels. Checks are also made on the shelf life of stocks and compliance of stocks with lists of registered products before clearance of the imported drugs for private sector by the Customs Clearance Section.

OBJECTIVE OF THE POLICY
To ensure that all drugs and medicines imported or manufactured in the Sultanate of Oman are evaluated and registered by the DGPA&DC according to the established procedures with adequate provisions for emergency registration when required with the ultimate goal that the general public obtains the maximum benefit from a particular product, accompanied by the appropriate professional advice.

The revenue of registration fees will be collected and retained by the MOH to enable the DDC to employ enough staff to function more efficiently.

Criteria for the registration of drugs to be updated to ensure that drugs will only be registered if they meet recognised health needs, have proven effectiveness and safety profiles, meets quality standards and are being used in the country of origin. The cost of the drug will also be considered with the aim to limit the unnecessary proliferation of different brands of the same drug.

Prominent generic name labelling be a requirement for registration.

Reporting of adverse drug reactions be further supported and promoted.
3. DRUG SELECTION

SUMMARY AND CURRENT SITUATION

The Central Drug Committee (CDC) is responsible for the selection of drugs for use in Public Sector facilities and reports directly to the Ministry of Health. The CDC is chaired by H.E. The Undersecretary for Health Affairs and has nine appointed members representing the following specialisation: Cardiology, Gynaecology, Paediatrics and Surgery. The other members are Pharmacists, a Pharmacologist and the Director General of Health Affairs, Director General of Stores and the Director General of Pharmaceutical Affairs and Drug Control, but the CDC can co-opt other Specialists when required. The membership of CDC is restricted to MOH staff although there are five other Government Organizations outside the responsibility of MOH which provide health care.

The CDC remit is to:
Select drugs for use in MOH Institutions;
Revise the MOH approved list;
Receive and consider ADR reports
Specify drugs to be identified as prescription drugs in the private sector;
Make any other technical decisions on drugs when required and requested.

The MOH Approved Drug List contains more than 500 chemical entities and over 900 drug products after the most recent revision in 1995 when about 150 items were deleted and over 100 items were rejected. The preface to the list of approved drugs emphasises the commitment of the MOH to the essential drug concept and states that drugs should be prescribed by generic name. The list identifies about 200 controlled items, which are for Specialist or Consultant prescription only. A CDC Antibiotic Sub-committee has recently produced protocols as guidelines for antibiotics use.

The Sultan Qaboos University Hospital (SQUH), which is under the responsibility of Ministry of Higher Education, has a drug and therapeutic committee which has developed a hospital antibiotics policy and is considering treatment protocols. In all MOH referral hospitals and where a pharmacist is available, drug and therapeutic committees have been formed to develop and monitor local policies for drug selection and rational drug use.

OBJECTIVE OF THE POLICY

To ensure that the selection of drugs are those necessary for the health care of the nation and that they are available to communities and individuals at an appropriate level where they can be safely and effectively used through an effective national committee, institutional committees and careful implementation of clear decisions.

The CDC will continue to consult and collaborate with other Government health care institutions to develop a national list of drugs based on national need. The selection
criteria shall include evidence-based medical need as well as the principles of efficacy, safety, quality and cost effectiveness of products

The approved drug list of selected drugs will continue to serve as the basis for procurement, distribution, and use within the public sector, as well as the basis for the education of professionals and public.

Drugs will be listed according to their Generic Name or International Non-proprietary Name (INN).

Mechanisms will be established for the regular review of drug lists, taking into account experience of use, professional feedback and new information.
4. DRUG PROCUREMENT

SUMMARY AND CURRENT SITUATION

Drugs and medical supplies are procured through limited competitive tendering from locally registered companies as well as through GCC joint tenders. Preference is given to establish “research based” company products when procuring antibiotics, psychotropics and cardiovascular drugs.

The MOH budget for drugs and supplies is currently 18,646 million R.O of which 13,771 million R.O (73.85 %) is for pharmaceuticals, while medical supplies is currently 4,875 million R.O. More than 900 Pharmaceutical items are purchased for MOH, of which about 500 will be common to both the Oman and SGH tender documents. In the most recent award, more than 300 items were obtained via SGH.

The approval level depends on the total value of the goods. If the total value is less than 10,000 R.O, the DGS approves; if the value is less than 250,000 the Minister of Health approves, but for purchases valued over 250,000 R.O, only the Government Tender Board can approve.

Comparisons are always made between the quotations obtained via Gulf States joint tender (SGH), International Tender and those from local agents. Price comparison takes into account the fact that local agents’ prices include a 5% government tax which is not levied on SGH procured drugs. Regardless of which tender system is used, local agent is responsible for receiving and clearing the goods at the port of entry and its delivering to DGS. The full process takes about eight to ten months from issuing the tender until receipt of goods with a lead time of four to five months from the time of order confirmation.

If supplementary supplies are required they are also purchased on a tender basis. Such supplies are also obtained via the local agents or occasionally via Health Attaché in the appropriate Embassy for some top urgent requirements.

The DGS has, in the past, compared prices offered by producers in the countries of origin of some products with the prices offered in Oman. This has confirmed that prices are not as low as they might be if direct purchasing from manufacturers was permitted. The SGH tender also confirms this, and the DGS has demonstrated savings of 1.5 million OR on the 285 items purchased through SGH. These findings indicate that alternatives to tendering through local agents should be considered for the procurement of major expenditure items, as direct tendering with manufacturers and with generic manufacturers would reduce the procurement prices.
**OBJECTIVE OF THE POLICY**

*To support the procurement system in making available cost effective drugs of accepted quality at the needed time.*

*Tender documents will include a specification for the size of generic name to be printed on product and package labels.*

*The cost price of procured items will be monitored and their comparison with international price indicators be recorded. Potential savings will be quantified, with a view to widening the tender and increasing the value for money.*

*Pharmacists will devise computerised systems of indenting with an aim to reduce the amount of hand-written orders.*
5. DISTRIBUTION AND STORAGE

SUMMARY AND CURRENT SITUATION

The Directorate of Drug Stores (DDS) and Directorate of Medical Supplies Stores (DMSS) are responsible for deciding the quantities to be procured and for storage and distribution of pharmaceutical and medical supplies in coordination with inventory control section. There is only one Central Medical Store (CMS) is located in Muscat. The CMS is made up of many buildings, which are well equipped with air-conditioning and cold rooms in appropriate places. The three main sections: Medical, Laboratory and Surgical supplies, are each headed by a Pharmacist assisted by Assistant Pharmacists, Laboratory Technicians, Nurses and other supporting staff.

Both directorates are responsible for supplies to all MOH hospitals through indent forms, which are received from each institution. This form includes information on stock in hand, rate of use, and the requested supply. There are no institutional drug budgets except for the Royal Hospital. Supplies are made as per the storage capacities and facilities in every Health unit. Monthly distribution system is used for all Health units except for two remote regions where it is quarterly. Health centres in the regions get their drug supplies from the Regional Hospitals. The quantities issued are based on the consumption which can be increased to 10% to avoid shortages. There are, at the moment, no systems in place for the safe disposal of unwanted drugs and medicines.

OBJECTIVE OF THE POLICY

To establish a well designed, well-managed, cost-effective drug distribution system, with the aim of maintaining a constant supply of drugs in good condition, minimising drug losses due to inadequate forecasting of needs, spoilage, expiry or theft.

The functions of Central Medical Stores will be re-evaluated and strengthened by modern equipment, in-service training for the medical stores staff in material management and storage administration systems.

An incinerator system will be developed to safely dispose of expired medicines and unused pharmaceutical products.
6. DRUG QUALITY ASSURANCE

SUMMARY AND CURRENT SITUATION

The Central Laboratory for Drug Analysis started physicochemical analysis in 1981 and microbiological analysis in 1992. It has 19 professional staff, eight pharmacists, two chemists, two biologists, two-pharmacy assistant and six technicians who analysed 3213 samples from Govt. & Private facilities in 1996. In the experience of the laboratory, only a small fraction - approximately 3% of the samples have problems. Many of the problems are due to chemical and physical defects. This is a reflection of a good procurement process, which selects products by Companies already registered in the Country.

About 80% of the analysis refer to stocks from the Central Medical Store and the remaining 20% is for the Private Sector. All drugs purchased by MOH (except biological products - 7%) are analysed before distribution to Government Health units. Additional staff and resources will be required if all the supplies to private pharmacies and other government institutions are to be analysed. At the moment, the Private Sector does not pay for analysis.

OBJECTIVE OF THE POLICY

*To provide Pharmaceutical Quality Assurance so that the quality of any drug product manufactured in or imported for use in the country is maintained and complies with established specifications and standards throughout its shelf-life.*

- The number of pharmacists will be increased to match the workload in case all the supplies to private pharmacies and other government institutions are to be analysed.

- Ways of charging fees to the private sector for analysis of their imported items will be explored.

- The income from these fees will be retained by the MOH to improve and run the laboratory services to provide and maintain the human resources, training, buildings and sophisticated equipment necessary to cover the analysis of all drugs that enter into the Country.
7. GOOD MANUFACTURING PRACTICE

SUMMARY AND CURRENT SITUATION

Good Manufacturing Practice (GMP) is normally applied to industrial manufacturing. However, at present there is no manufacture of drugs in Oman. The same GMP principles can equally be applied to small scale manufacturing which includes the repackaging of bulk medicines. In a number of Hospitals, Clinics and dispensing situations in Oman, solid and liquid medicines are being repackaged for issue to patients. Practices vary with regard to labelling the repackaged medicine and also concerning the recording of such activities, including the activities in health facilities.

OBJECTIVE OF THE POLICY

To establish criteria Good Manufacturing Practices (GMP) for any small scale manufacturing or repackaging of drugs and to ensure that these products are of a quality appropriate for their intended use.

All re-packaging of bulk drugs will be recorded and the products labelled with the generic name of the item and be assigned a local batch number for identification.

All bulk extemporaneous preparations and Total Parenteral Nutrition (TPN) will be repackaged and dispensed according to a written procedure and be documented to ensure product identification.
8. GOOD PHARMACY PRACTICE

SUMMARY AND CURRENT SITUATION

Most work in the Private Sector consist of original pack dispensing of Private prescriptions on a sale basis, without the need for labelling medicines, and the sale of over-the-counter medicines. The Pharmacist has little role as a professional adviser. Any continuing education activities for the private sector are activities linked to drug promotion.

In the Government sector, most pharmacies have limited space and resources to meet the demands of outpatient dispensing, which consumes the majority of staff time and energy. In SQUH, Ibra Hospital and Samad Hospital there are additional efforts to ensure a quality of service to inpatients provided by the pharmacies. This will improve considerably if the patient numbers and demand for medicine can be reduced in a rational way. There must be serious efforts to reach agreements on treatments, specially on outpatient cases, which will allow dispensing to be more efficient and focused on those who genuinely need the medicines. The efforts to provide a 24-hour service are commendable but over stretch staffing resources. This appears to have created an impression in the population that they can use the clinic or hospital facilities any time of day or night. It may be necessary to develop a system to eliminate the casual use of emergency and accident services outside normal working hours.

OBJECTIVE OF THE POLICY

| To encourage good pharmacy practices with the aim of ensuring that an effective form of the correct drug is delivered to the right patient, in the right dosage and quantity, with clear instructions and in a package that maintains the potency of the drug. |

- Continuing education activities will be designed to encourage private sector pharmacists to be more active in patient education regarding drug use.

- The use of generic names in ordering and dispensing drugs will be encouraged for all Government pharmacy staff.

- Simple treatment protocols will be developed, discussed and implemented for use in non-essential Out Patient cases in order to discourage unnecessary use of diagnostic and treatment facilities.

- Standard issue quantities for frequently used items for outpatient will be agreed upon.

- System of out patient dispensing will be revised incorporating a system of improved quality assurance for the patient.
Current systems for in-patient drug dispensing will be evaluated and compared in terms of the quality of service and cost effectiveness.

Computerised inventory control system will be introduced in all pharmacies and medical stores in all health units.

Regional stores will be linked with CMS by means of a computerised network for storage and distribution to different health units within their geographical zone.

Each region will have a definite and limited budget for drugs and medical supplies.

An effective patient record system will be maintained in all health facilities.

Consideration will be given to adding the diagnosis to the prescription forms to enable the dispenser to review the appropriateness and accuracy of the prescription.

The role of Pharmacists in health units will be redefined.
9. RATIONAL DRUG USE AND HUMAN RESOURCES DEVELOPMENT.

SUMMARY AND CURRENT SITUATION

A large number of health providers are from outside Oman. In 1995, 87% of the 1778 Doctors, 83% of the 76 Dentists, 89% of the 61 Pharmacists and 86% of the 5048 nurses working in the Government Sector were expatriates. They have different training and working backgrounds.

In 1999, the total number of Doctors in MOH are 2,174 while 106 Dentists, 70 Pharmacists and 6438 nurses, so the total number of Health Providers are 15,907.

The only orientation given to most of the Doctors is done at the MOH’s headquarters in Muscat. It is very short, not more than a few hours and does not concentrate on rational prescribing. Pharmacists and Assistant Pharmacists are also oriented in the main Hospitals in Muscat. There is no organised follow-up support supervision, although the MOH is starting a total quality of care unit, which will look at all, aspects of health care.

The DGPA&DC organised one to two seminars/workshops per year on topical issues, some of which in collaboration with the main hospitals, WHO or OPAPI.

The seminars are sponsored by MOH. Drug representatives have uncontrolled access to prescribers in some hospitals, thus influencing prescribing patterns. The training institutions teach primary health care and mention the concept of essential drugs. The SQU College of Medicine is currently reviewing its curriculum and the teaching of Pharmacotherapy.

The Oman assistant Pharmacy Institute has started to function in 1991 and the first batch of the graduates qualified in 1994. Thirty Assistant Pharmacists were graduated annually, however, their number was increased to fifty graduates since 2000. In addition, four of the best graduates are chosen annually to utilise the degree programme as an entry qualification in the M.Pharm. degree programme in the Schools of Pharmacy of John Moores (Liverpool) and Strathclyde (Glasgow) Universities.

Accordingly, the OPI presents an active and productive mechanism for Omanization of the Pharmacy profession.

The two and half year course was evaluated in March 1996 and in 1997, a modern and demanding programme was implemented. The appropriate balance of pharmaceutical science and pharmacy practice has been achieved in the revised modern needs of a dynamic profession.

The rational use of drugs and the concept of essential drugs are included in the revised curriculum.
The Institute’s library facilities are adequate in terms of space and course text books and has a limited range of the concept of essential drugs or rational drugs use.

In addition, the needs assessment conducted by OAPI in 1995 initiated the activities of fits Continuing Education Committee. Two annual seminars are organised in some main topic areas, including rational use of drugs, patient compliance and problems of the pharmacy profession.

The only source of drug information to the Public is the Pharmacists and other Health providers. However, the pressure of work and the language barrier are serious constraints in this respect. Many patients exert pressure on prescribers which leads to polypharmacy.

DGPA&DC and DGS produce and circulate a Pharmaceutical Newsletter quarterly as part of its regular activities.

There have been no National Surveys into prescribing or dispensing habits or studies of the public’s health care expectations. Limited surveys of a few rational drugs use indicators revealed polypharmacy, almost total use of brand names, unnecessary injections and liberal prescription of antibiotics in MOH facilities. The dispensing time could only be measured in seconds.

In 1995 Antibiotics accounted for over 24% of the total expenditure and of this, cephalosporins and penicillins each consume 7. One drug alone, ceftriaxon, consumes 5.5% (548,000 OR) of the total budget. About 60% of prescriptions contain antibiotics. Analgesics (5.33%) and anti-inflammatory agents (2.61%) together account for a further 8% of the annual expenditure. Similarly the range of oral cardiovascular preparations used in out patient treatment consume about 7.5% of the total budget. Cough syrups, multivitamins, anti-dandruff shampoo and analgesic balms together constitute nearly 4% of total consumption. With an effort to teach and practice the rational use of medicines, there are potential savings of at least 10% of the budget without seriously threatening the quality of service provided.

**OBJECTIVE OF THE POLICY**

> To improve the use of drugs by health providers through rational prescribing and dispensing, and to promote the appropriate use of drugs by the individual and the community.

**IMPLEMENTATION TEAM**

A national team was established, with one clinical pharmacist and one medical officer will be appointed with experience in promoting rational drug use, to develop materials, manuals and guides on rational drug use and co-ordinate the activities mentioned below.
SURVEYS AND STUDIES

A national survey using rational drug use indicators will be carried out to provide a baseline before interventions to promote rational drug use are introduced. This survey will include both Government Institutions and Private Clinics.

The knowledge, attitudes and practices of drug consumers will be surveyed before an intervention for the public will be designed.

Methods will be devised to regularly monitor the appropriateness of treatment both in Government and Private Practice. To this end, consideration will be given to include a column for treatment in the Patient Register and to include diagnosis on the prescription.

GUIDELINES AND TRAINING MATERIALS

To monitor and promote the rational use of drugs in their establishments through Drugs and Therapeutics Committees

Standard treatment protocols will be developed for common problems in government facilities and will be used as the basis of list of approved drugs.

An Oman National Formulary will be developed for those drugs on the approved list and will be disseminated as widely as possible.

The national antibiotic policy, will regularly be reviewed and updated regularly

TRAINING ACTIVITIES

The medical school’s and paramedical institutions’ curricula be revised to incorporate the concept of essential drugs and rational drug use.

Continuing in-service education on the rational use of drugs, especially antibiotics, be conducted as widely and as quickly as possible.

Lecture notes and educational materials on rational drug use will be developed

DRUG INFORMATION

In order to ensure accuracy and good taste in drug promotional materials, ethical criteria and guidelines will be established for promotional activities. Drug promotion
through seminars and workshops will be monitored to ensure that they do not contradict the principles of rational drug use.

- The national drug information centre will be strengthened to provide accurate and unbiased drug information to health providers.

**THE ROLE OF PHARMACISTS**

- The number of pharmacists will be increased to match the workload.

- Pharmacists will be encouraged to work with prescribers to analyse prescribing habits and provide feedback.

**OTHER ACTIVITIES**

- The use of generic names in drug supply, prescribing and dispensing will be encouraged. In the long run, all drugs should be prescribed by generic name only.

- A national awareness campaign will be carried out to inform the public about the proper use of drugs including the reduction of pressure on prescribers.
10. TECHNICAL CO-OPERATION WITH OTHER COUNTRIES AND INTERNATIONAL ORGANISATIONS.

SUMMARY AND CURRENT SITUATION

Oman is a member of the Gulf Co-operation Council states and International Organisations such as the World Health Organisation. Procurement of drugs has been going on through the Saudi based SGH procurement system. The internal policy by the DGPA&DC is that if the SGH prices are higher than those offered on the Oman local tender, then the procurement is done locally.

OBJECTIVE OF THE POLICY

To ensure the highest degree of co-operation with other countries and International Organisations to improve the supply, distribution and use of drugs to the benefit of the community.

The co-operation with regional and international organisations will be extended and further encouraged in areas such as: adverse drug reaction reporting, joint inspection of pharmaceutical plants within and outside the region, harmonisation of pharmaceutical legislation and regulations covering drug registration.
11. TRADITIONAL MEDICINES

SUMMARY AND CURRENT SITUATION

The degree of use of traditional medicines indigenous to Oman is not known. A number of imported traditional medicines from the Asian subcontinent are freely available in the market.

OBJECTIVE OF THE POLICY

To ensure that the traditional medicines of Oman and the imported traditional remedies are safe and effective.

- Traditional medicines used in the country be investigated for efficacy, safety and quality
- Traditional medicines specifically imported for marketing will be controlled through registration.
- Rules and regulations for Traditional Medicine Stores and Pharmacies will be implemented and enforced.