

## **INTRODUCTION TO ESSENTIAL MEDICINES**

From the WHO website <http://www.who.int/medicines/>:

### **The Concept of Essential Medicines**

Essential medicines are those that satisfy the priority health care needs of the population. Essential medicines are selected with due regard to disease prevalence, evidence on efficacy and safety, and comparative cost-effectiveness. Essential medicines are intended to be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality, and at a price the individual and the community can afford.

Essential medicines are one of the most cost-effective elements in modern health care and their potential health impact is remarkable. This year alone, there will be over 40 million deaths in developing countries, one-third among children under age five. Ten million will be due to acute respiratory infections, diarrhoeal diseases, tuberculosis, and malaria -- all conditions for which safe, inexpensive, essential drugs can be life-saving. Simple iron-folate preparations can reduce maternal and child mortality from anaemia of pregnancy; treatment of sexually transmitted diseases reduces transmission of the AIDS virus; and treatment of hypertension reduces heart attacks and strokes.

The concept of essential medicines is forward-looking. It incorporates the need to regularly update medicines selections to reflect new therapeutic options and changing therapeutic needs; the need to ensure drug quality; and the need for continued development of better medicines, medicines for emerging diseases, and medicines to meet changing resistance patterns.

### **Access, Quality and Rational Use of Medicines and Essential Medicines**

The economic impact of pharmaceuticals is substantial -- especially in developing countries. While spending on pharmaceuticals represents less than one-fifth of total public and private health spending in most developed countries, it represents 15 to 30% of health spending in transitional economies and 25 to 66% in developing countries. In most low income countries pharmaceuticals are the largest public expenditure on health after personnel costs and the largest household health expenditure. And the expense of serious family illness, including drugs, is a major cause of household impoverishment. Despite the potential health impact of essential drugs and despite substantial spending on drugs, lack of access to essential drugs, irrational use of drugs, and poor drug quality remain serious global public health problems.

Lists of Essential Medicines also guide the procurement and supply of medicines in the public sector, schemes that reimburse medicine costs, medicine donations, and local medicine production. Many international organizations, including UNICEF and UNHCR, as well as nongovernmental organizations and international non-profit supply agencies, have adopted the essential medicines concept and base their medicine supply system mainly on the Model List.

### **The WHO Model List of Essential Medicines**

When WHO published the first Model List of Essential Drugs in 1977, it identified 208 individual medicines which together could provide safe, effective treatment for the majority of communicable and non-communicable diseases.

The Model List is a guide for the development of national and institutional essential medicine lists. It was not designed as a global standard. However, for the past 28 years the Model List has led to a global acceptance of the concept of essential medicines as a powerful means to promote health equity. By the end of 1999, 156 Member States had official essential medicines lists, of which 127 had been updated in the previous five years. Most countries have national lists and some have provincial or state lists as well. National lists of essential medicines usually relate closely to national guidelines for clinical health care practice which are used for the training and supervision of health workers.

### **Current List**

The 14th is the current Model List of Essential Medicines, prepared by the WHO Expert committee in March 2005. It contains 312 individual medicines, including antiretroviral medicines for the prevention and treatment of HIV-AIDS. **The Mercy Ships Formulary 2006-2007 is based on this list, and medicines from the Model List are noted in the Ships Formulary by the abbreviation 'EML'.**

### **Advantages**

Careful selection of a limited range of essential medicines results in a higher quality of care, better management of medicines (including improved quality of prescribed medicines), and more cost-effective use of health resources. Numerous studies have documented the impact of clinical guidelines and lists of essential medicines on the availability and proper use of medicines within health care systems. All of this is even more important in resource-poor settings where the availability of drugs in the public sector is often erratic. Under such circumstances measures to ensure a regular supply of essential medicines will result in real health gains and in increased public confidence in the health services.

### **Selection Criteria for Essential Medicines**

Which treatment is recommended and which medicines are selected depend on many factors, such as the pattern of prevalent diseases, treatment facilities, the training and experience of available personnel, financial resources, and genetic, demographic and environmental factors. The following criteria are used by the WHO Expert Committee on the Selection and Use of Essential Medicines:

- Only medicines for which sound and adequate evidence of efficacy and safety in a variety of settings is available should be selected.
- Relative cost-effectiveness is a major consideration for choosing medicines within the same therapeutic category. In comparisons between medicines, the total cost of the treatment – not only the unit cost of the medicine – must be considered, and be compared with its efficacy.
- In some cases, the choice may also be influenced by other factors such as pharmacokinetic properties or by local considerations such as the availability of facilities for manufacture and storage.
- Each medicine selected must be available in a form in which adequate quality, including bioavailability, can be ensured; its stability under the anticipated conditions of storage and use must be determined.
- Most essential medicines should be formulated as single compounds. Fixed dose combination products are selected only when the combination has a proven advantage in therapeutic effect, safety, and adherence; or in decreasing the emergence of drug resistance in malaria, tuberculosis and HIV/AIDS.

### **Introduction from the WHO Model Formulary 2004:**

In 1995 the WHO Expert Committee on the Use of Essential Drugs recommended that WHO develop a Model Formulary which would complement the *WHO Model List of Essential Drugs* (the 'Model List'). It was considered that such a Model Formulary would be a useful resource for countries wishing to develop their own national formulary. The first edition of the Model Formulary was issued in August 2002; it was based on the 12th Model List (revised 2002).

It has proved difficult in practice to maintain in the Model Formulary the section headings and numbering system of the Model List. The main reason was that the sections of the Model List are not always useful as therapeutic categories, and do not easily lend themselves to introductory evaluative statements. Small changes were therefore introduced. The Model Formulary has also been relatively generous in repeating information about essential medicines under other relevant therapeutic categories. The small differences between the classification system of the Model List and the Model Formulary should not be a major problem for users who can access information through the contents list or through the main index, which includes both drug names and disease terms.

The Model List and the Model Formulary are available electronically on the WHO Essential Medicines Library website (<http://mednet3.who.int/eml>); search facilities and links between the Model Formulary and the Model List provide easy access to relevant information.

The electronic version of the Model Formulary is also available on CD-ROM, intended as a starting point for developing national or institutional formularies. National or institutional committees can use the text of the Model Formulary for their own needs by adapting the text, or by adding or deleting entries to align the formulary to their own list of essential medicines. The Model Formulary is also being translated.

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For further details on Essential Medicines, see <http://www.who.int/medicines/>.