

Access to Effective Medical Technology in Developing Countries - What Role for WHO ?

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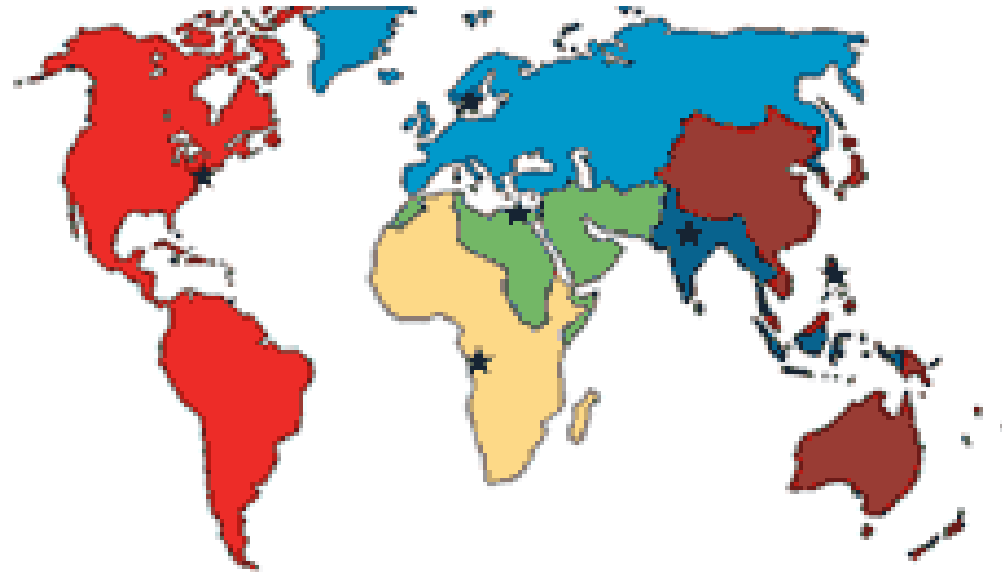
**World Health
Organization**

WHO in Brief

- The World Health Organization is the United Nations specialized agency for health, founded in 1948
- 193 Member States
- HQ is situated in Geneva



6 Regional Offices



- :: Regional Office for Africa
- :: Regional Office for the Americas
- :: Regional Office for South-East Asia
- :: Regional Office for Europe
- :: Regional Office for the Eastern Mediterranean
- :: Regional Office for the Western Pacific



Partners in the UN System

- UNICEF The United Nations Children's Fund
- UNFPA The United Nations Population Fund
- UNAIDS Joint United Nations Programme on AIDS/HIV
- UNHCR United Nations High Commissioner for Refugees
- UNIDO United Nations Industrial Development Organization
- The World Bank Group



WHO Objectives

Article 1 of WHO Constitution:

"The attainment by all people of the highest possible level of health."

- WHO provides guidance and advocacy
- WHO is not primarily a financing or infrastructure building organization



The Essential Health Technologies Department (EHT) strives to:

Strengthen the ability of Member States to address health problems through the use of essential health technologies



The objectives of EHT are to:

Develop norms, standards, guidelines, information and training materials as well as foster research on essential health technologies in support of the provisions of effective health technologies by Member States.



WHO Recommends to Countries/Regions to Implement Global Healthcare Policies in order:

- To maximize the benefits that rationally used healthcare technologies may generate in a given economical context
- To manage risks associated with healthcare technologies
- Resource those countries who typically have little such resources and would be particularly in need of health technologies evaluation



Medical Technologies - Health Technologies

A recent definition of the term health technology:

- "the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives".



Health Technologies in Developing Countries

- What is a developing country ?
- United Nations (UN) – World Trade Organization (WTO) use the term
- WTO does not have a definition. It is a country applying for membership that classifies itself as a developing country. In the WTO system, some advantages are linked to that status. Classification can be appealed.



Human Development Index

The HDI takes into account :

- Level of affluence (or poverty)
- Level of literacy
- Level of education
- Life expectancy and other factors
- Is intended to provide a means of worldwide comparison



Health Technologies in Developing Countries

- In general terms a developed country is one that enjoys a relatively high standard of living derived through diversified economy.
- Countries with a high Human Development Index (HDI) are generally considered developed countries.



Health Care Economics in a Global Perspective

- In numerous developing countries the total annual health spending per capita amounts to less than \$100 and in a few countries amounts to as little as \$15
- In developed countries the annual health spending per capita is from about \$1000 to more than \$5000
- The quotient between the highest and the lowest level of spending is about 500.



Demographics of healthcare professionals

- The lowest figures in WHO statistics are 1 medical doctor and 5 nurses per 10000 inhabitants
- In developed countries one usually finds more than 20 doctors and more than 50 nurses per 10000 inhabitants



Demographics of healthcare professionals

- In most developed countries the ratio between the number of doctors and nurses is about 1/2 to 1/5
- In some countries and regions there is an inversion phenomenon - there are more medical doctors than nurses, particularly so in Latin America



Medical devices trade

- Medical devices are used worldwide and international trade is extremely important
- No country manufactures "every" type of device needed
- There is a need to harmonize national regulatory systems in order to minimize barriers to the circulation of medical devices thus giving access, in principle, to safe and efficient medical devices



What is WHO/EHT doing to improve access to health technologies

- An updated policy for health technologies



Update of strategy for Health Technologies

- WHO/EHT held two expert panel consultations with experts from Member States in February and March 2007
- The experts made a number of recommendations regarding WHO policy
- Many of them had already been formulated but the consultation confirmed their relevance



Objectives of the Consultation

The overall objective of the consultation was to solicit the advice of experts on the following two issues:

1. How could WHO support countries in their decision to integrate health technologies into health systems?
2. What health technologies information could WHO make available to Member States?

The specific objective of the consultation was to contribute to the development of a WHO strategy on health technologies, to be implemented by EHT, including recommendations on short-term and long-term activities coupled with needed deliverables.



The domains for which Recommendations were formulated

- 1) Nomenclature
- 2) Model for Prioritization of Needs
- 3) Tools for Health Technology Assessment and Planning
- 4) Inventory Management System
- 5) Database on Human Resources and Human Resource Development
- 6) Health Technology Assessment (available external sources)
- 7) Good Procurement and Donation Practices
- 8) Regulatory Affairs
- 9) Identification of a Focal Point in MoH
- 10) Equipment Maintenance Systems and Training for Maintenance Personnel



Model for prioritization of needs

Assist Member States in conducting an assessment of health technology that takes into consideration:

- Disease profile and trends
- Population data and trends
- Health systems data and trends
- Financial resources



Model for prioritization of needs

- Assist Member States in identifying health technology gaps by comparing assessment data with national, regional and international health technology standards
- Assist member States in setting priorities on acquisition of health technologies
- Make available a methodology, relevant tools and any other assistance required in helping Member States conduct assessments, gap analysis and identify needed technologies.



Database on human resources and human resource development

- Advocate for Member States to make available a human resources database including their capacities, and identify existing and projected HT related training needs
- Assist Member States in building capacity through training courses, fellowships and other activities
- Provide information on how to identify training needs
- Provide information on training materials



Good procurement and donation practices

- Advocate good procurement practices
- Encourage discussions with industry to promote good procurement practices
- Advocate for good donation practices
- Assist Member States to develop, support the development of, or review and recommend existing standard equipment specifications for different health care procedures
- Provide procurement and donations' guidelines and tools



Regulatory affairs

- Advocate Member States to establish or enhance regulatory systems as necessary
- Assist Member States in developing policies and regulations through collaboration with relevant bodies
- Assist Member States in identifying appropriate international medical device standards (~approval mechanisms)
- Assist Member States in the training of medical device regulatory personnel



Equipment maintenance systems and training for maintenance personnel

- Advocate Member States to implement an equipment maintenance system
- Raise awareness of the importance of taking into consideration spare parts and maintenance when investing in health technology
- Assist Member States in training
- Drafting preventive and corrective maintenance guidelines



WHO/EHT INITIATIVE

- Global Initiative for Health Technologies
- Benchmarking of health technologies in countries
- Comparison with countries of comparable economical strength
- Advice on sustainable investments in health technologies



Trends

- Tissue engineered medical products, advanced therapy products, biologics
- Nano-technologies
- Devices integrating IT or consisting exclusively of IT, communicating devices
- Minimally invasive technologies
- Technologies avoiding "transmissible agents"



Challenges

- Non-professional use and use by insufficiently trained professionals
- Counterfeit devices
- Reuse of single use medical devices



What is the difference between developed and developing countries in respect to use of technologies?

In developing countries:

- The design process has to ask the question "when" is there a power cut rather than "if" there is a power cut
- The probability of similar events is completely different in developed countries
- Simple, robust and sustainable technologies are to be favoured
- Emergency or back-up procedures are essential



What is the difference between developed and developing countries in respect to use of technologies?

In developing countries the following issues are more important than in developed countries:

- Absence/presence of adequately trained staff
- Infrastructure
- Maintenance
- Supply of products



Standard Setting - Risk acceptance

Standard setting, which implies establishing a level of risk acceptance is one of WHO's key missions:

- An important and difficult issue anywhere
- Sometimes higher risks are accepted in developing countries as the alternative is no treatment at all (relative risk measure)
- Ethically the (absolute) risk acceptance level should be the same.



Optimal Access-Coverage

- Regulatory approval mechanisms which are proportionate to the risks to control and neutral with respect to different sectors of the health care system
- Reimbursement acceptance, authorization to practice and other steering mechanisms which are based on public health policy
- Generally speaking: funding of the health care system



How Much to Spend ?

- A political choice for each Member State
- WHO advocacy to raise awareness of certain key issues
- How to measure ?
- Difficult to measure outcomes as medical device use is often very procedure dependent and vice-versa



Are methods available ?

- Compare with countries of equal disease burden, economic strength, population and population density
- Such comparisons are used in other areas of society using indicators such as Gross Domestic Product GDP, inflation etc. in order to steer economic policy, professional training and taxation policy to name but a few examples.
- The GIHT indicators will provide a similar tool specific for health technologies



The OECD uses indicators for "Medical Technology"

"OECD HEALTH DATA 2006"

- Computed Tomography Scanners
- Magnetic Resonance Imaging Units
- Radiation therapy equipment
- Lithotriptors
- Mammographs



SAMPLE INDICATORS

Percentage of hospitals equipped with hospital information systems (HIS)

Number of kidney transplantations from living and deceased donors per million inhabitants

Total number of laboratory technicians per 100000 inhabitants

Existence of a national obligation to follow internationally accepted guidelines such as the WHO - IAEA - ICRP guidelines "International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources". International Atomic Energy Agency Vienna 1996

Percentage of health facilities, including hospitals, using disposable syringes for all preventive and curative injections



What expectations on the GIHT indicators?

- WHO establishes a partnership with institution endorsed by the Ministry of Health
- Countries will be able to compare with other countries or regions
- Will provide a relative guidance for future spending
- The purpose is not to simply copy the behaviours of other countries, but to stimulate further analysis
- Will help focus analysis on the technologies where a country lags behind (or possibly spends too much)

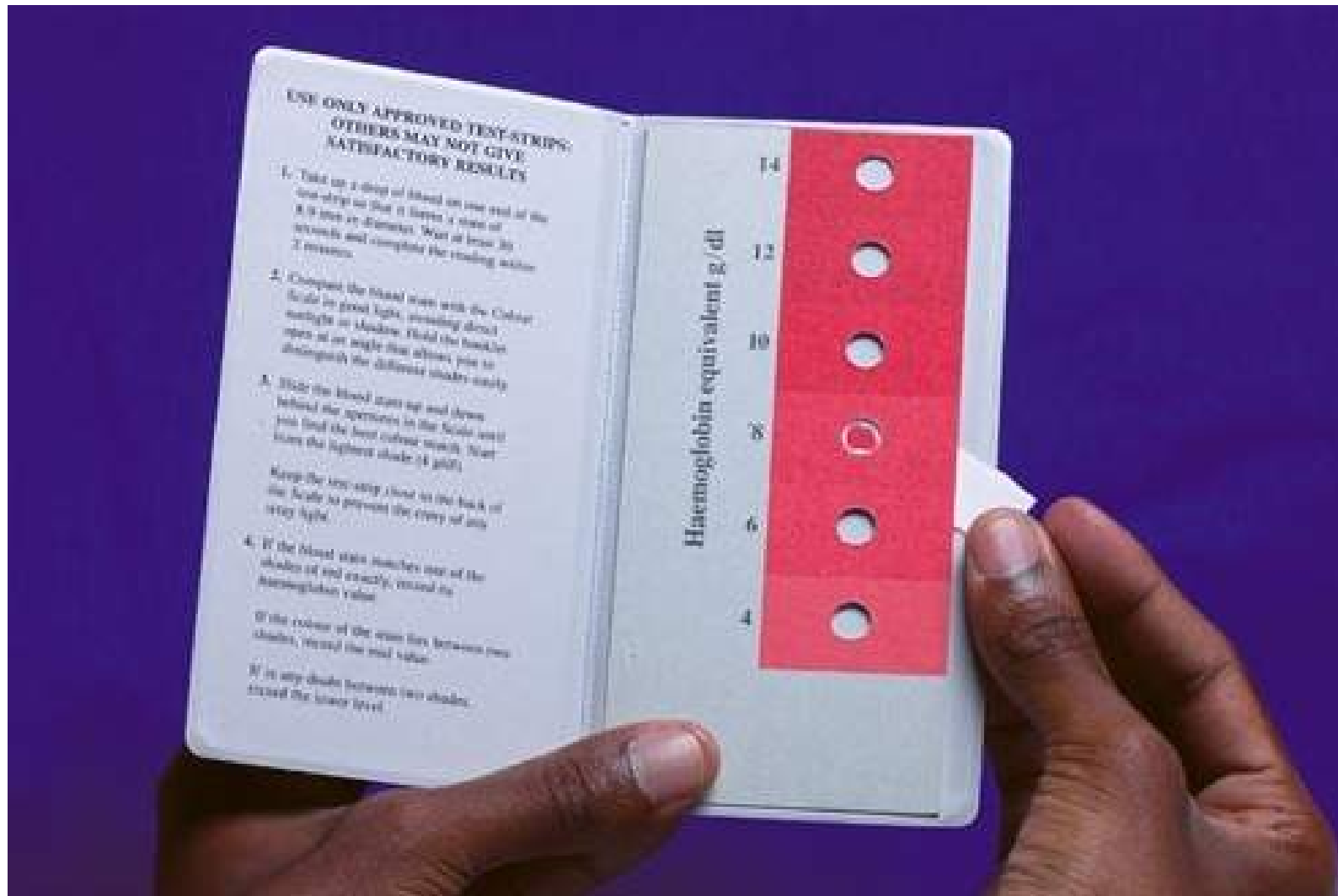


Examples of technologies WHO/EHT promotes

- Medical imaging – robust yet high performance x-ray imaging system
- E-health – e-learning for health care professionals
- Oxygen concentrators in locations where oxygen is not readily available
- Simple screening tools



Haemoglobin Colour Scale

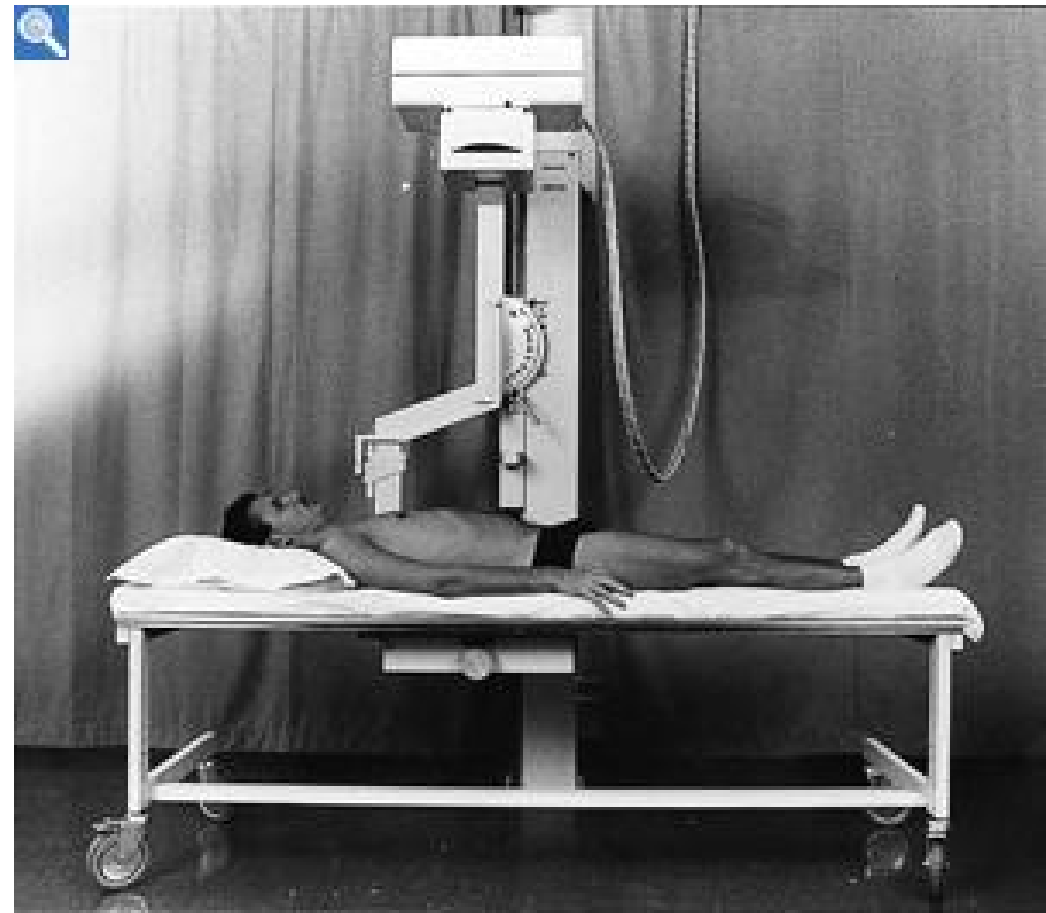
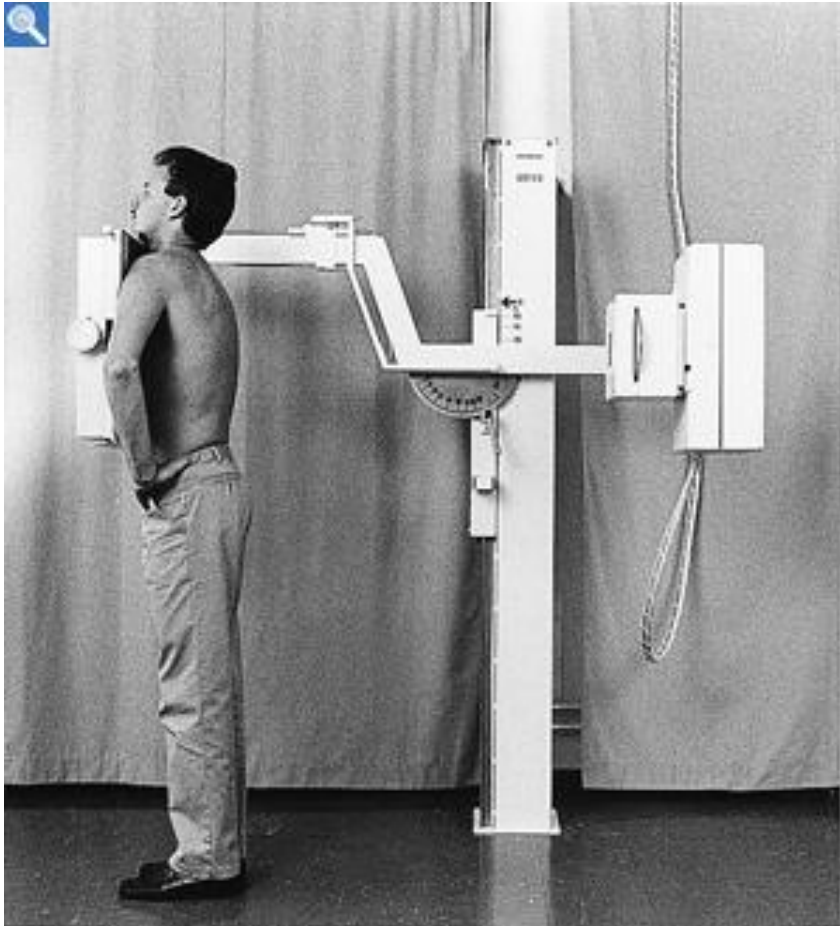


Features of Haemoglobin Colour Scale

- An anaemia screening tool whereby haemoglobin laboratory dosage is not easily available
- Inexpensive method



WHISRAD-Radiology System



Features of WHISRAD

- High quality images, as good, as or better than most radiographs available in major centres.
- Standard radiographic projections, which are easily recognized by any doctor.
- Safety for staff and patients.
- Easy installation and maintenance. Easy operation.
- Ability to operate with poor main electrical supply.



New and Innovative solutions

- Identify cutting edge technologies which can be brought to countries
- Identify technologies allowing countries to leapfrog old technologies
- Technologies have to be cost-effective



THE END

If you wish to read some further material about WHO:

http://www.who.int/about/brochure_en.pdf

