

Access to medicines



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Peace, Health and Medical Work
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Content

- Access components
- Research and development – the case of neglected diseases
- Patents
- Prices



Access

- “Access to essential drugs of assured quality is one of the key indicators of equity and social justice”

Dr Brundtland, 2000

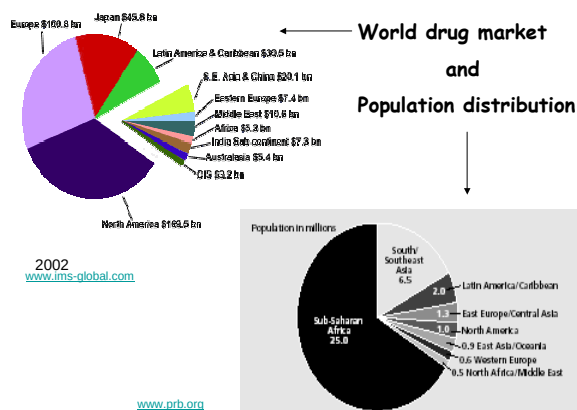


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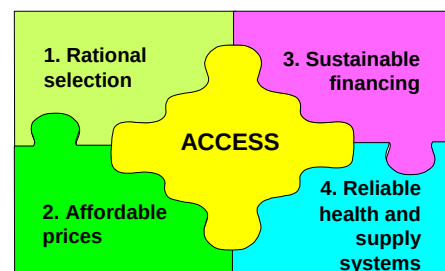
Access to essential medicines is fundamental to human rights

- The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition
- Everyone has the right to a standard of living adequate for the health of himself and of his family, including food, clothing, housing and medical care and necessary social services
- Governments and the international community have an obligation to see the right to health progressively realised, which includes the responsibility for prevention, treatment and control of disease, and the creation of conditions to ensure access to health, facilities, goods and services
- Access to goods and services include – of course – the provision of essential medicines necessary for the prevention and treatment of prevalent diseases

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Improved access through



AND Research and Development (R&D)

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1. Rational selection

Reduced number of medicines will:

- bring down purchase cost
- reduce cost of transactions
- reduce cost of storage
- improve logistics
- improve information about rational use of medicines

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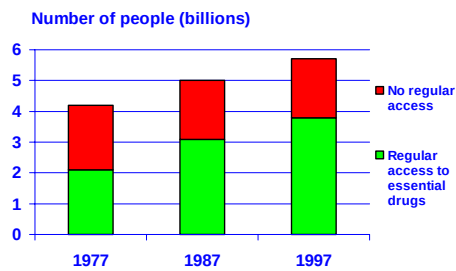
Essential medicines



- Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to public health relevance, 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 adequate information, and at a price the individual and the community can afford.
- The implementation of the concept of essential medicines is intended to be flexible and adaptable to many different situations, exactly which medicines are regarded as essential remains a national responsibility.

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Availability and affordability of essential drugs have increased - but a huge gap remains



In 32 countries 50% of the population lacks regular access:

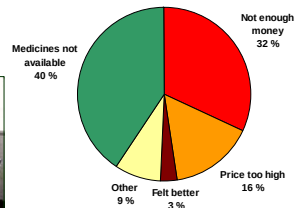
- public spending is insufficient and decreasing
- limited health insurance coverage
- new essential drugs are costly
- supply systems are often unreliable and poorly managed

2 Acceptable prices



28% of people could not obtain all prescribed medicines - barriers were money, prices, availability

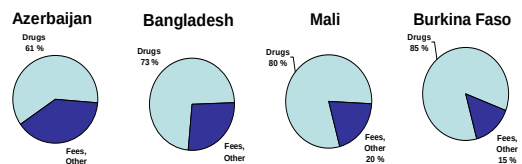
Reasons for not obtaining all prescribed medicines



Kampala, Uganda (source: WHO)

Medicines are the largest household health expenditure in low-income countries

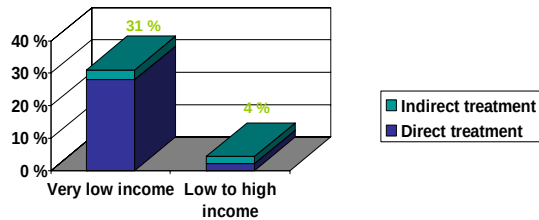
Spending on medicines as a percent of total out-of-pocket health spending



Source: Azerbaijan - UNICEF-Bamako Technical Report No. 35; Bangladesh 1995 - National Accounts 1996/97; Mali (1986) - Diarra K and Coulibaly S. Financing of recurrent health costs in Mali. Health Policy and planning; 1990, 5(2):126-130

For low income households, treatment costs can consume a large share of income

Malaria treatment as % of annual income - Malawi



Entling M, McFarland DA, Schultz LJ, Chitsulo L. Economic Impact of malaria in Malawian households. Trop. Med. Parasitol. 45(1994) 74-79 (ID:17)

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Pay or free? Public or private?

3. Sustainable financing

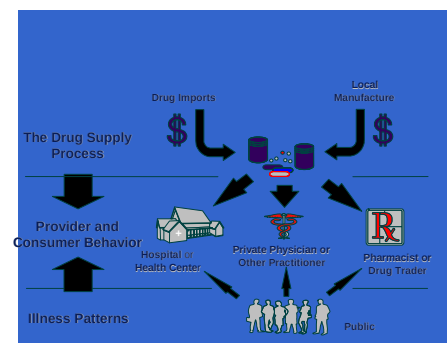
- In general, a small part of public expenditure is being used for health (as opposed to e.g. defense)
- A large part of health expenditure is used for medicines (as opposed to developed countries)
- Health insurance is almost unknown
- As medicines (or raw material) are often imported, foreign exchange becomes crucial

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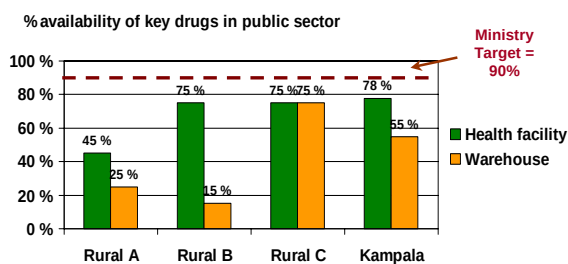
4. Reliable health and supply systems

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Components of the Drug Use System

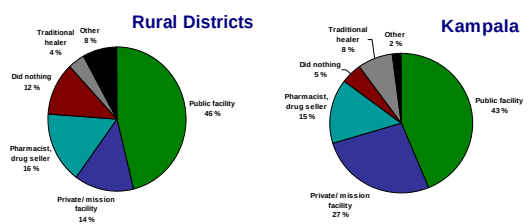


% availability varied 2-fold among health facilities, 5-fold among warehouses

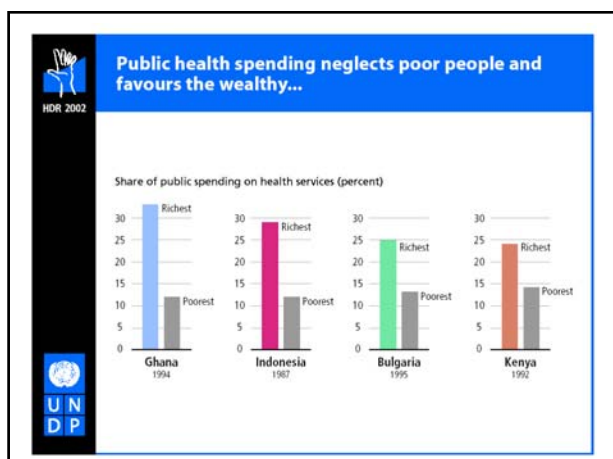


Uganda (source: WHO) 17

Sources of care in rural districts and Kampala, Uganda - households rely heavily on public services



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COUNTERFEIT

DRUGS

Quality

Guidelines for the development of measures to combat counterfeit drugs

Quality assurance

High standards exist for drug regulation and quality, but implementation and enforcement vary

- less than 1 in 3 developing countries have well-functioning drug regulation
- 10-20% of drugs fail quality control testing (10 countries)
- global trade brings global quality assurance challenges

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Health Technology and Pharmaceuticals

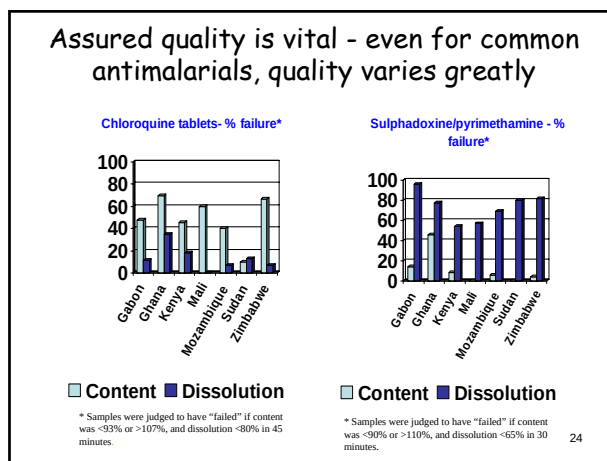
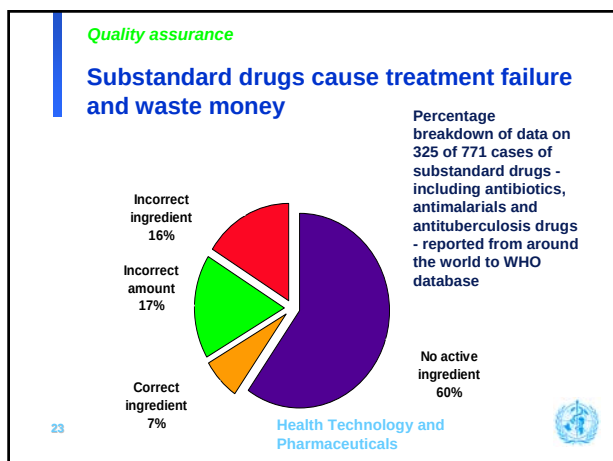
Quality assurance

Substandard and counterfeit drugs can kill

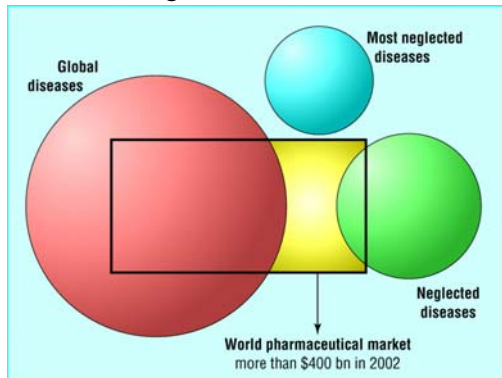
- Substandard: e.g. contamination/mixing up propylene glycol with diethylene glycol**
 - Nigeria 1990 - 109 children died
 - Bangladesh 1992 - 223 children died
 - Argentina 1992 - 23 patients died
 - Haiti 1995/1996 - 89 children died
- Counterfeit: e.g. meningitis vaccine with no antigen**
 - Niger 1995 - around 2500 deaths

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Health Technology and Pharmaceuticals



Neglected diseases



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Research and Development

- Governments and pharmaceutical manufacturers are the main funders of the R&D of new medicines
- Investment in health R&D is concentrated in the industrialised countries
- Only 10% of R&D spending is directed to the health problems that account for 90% of the global disease burden (the 10/90 gap)

Doctors without Borders (MSF)



www.accessmed-msf.org/index.asp

**Initiative 2001 to establish the DNDi
(drugs for neglected diseases initiative)**

Neglected diseases

- Tuberculosis
- Malaria
- African Trypanosomiasis (sleeping sickness)
- Leishmaniasis
- Chagas disease
- Other infectious and parasitic diseases



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Current barriers to drug development for neglected diseases in developing countries

- Cost of Research and Development (R&D)
- Regulatory barriers
- Protection of intellectual property



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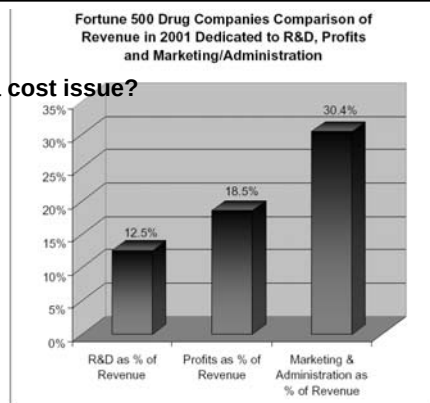
Drug development 1975-1999

- 1393 New Chemical Entities granted market authorisation, mainly for diseases affecting patients in high-income countries, especially pronounced for infectious and parasitic diseases which account for 1/3 of disease burden worldwide, but only for 5% in high-income countries

Trouiller P et al. Drug development for neglected diseases: a deficient market and a public-health failure. Lancet 2002;359:2188-94

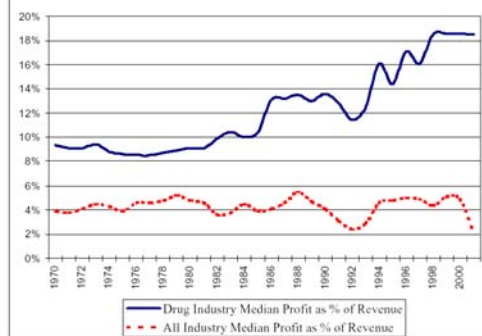
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Is it a cost issue?



Source: Public Citizen analysis of company annual reports; *Fortune* magazine, April 2002, Fortune 500 (www.fortune.com)

Profitability of Fortune 500 Drug Industry and All Fortune 500 Industries 1970 to 2001



Source: Public Citizen update of Stephen W. Schneiderman calculation, *Competition and Pricing Issues in the Pharmaceutical Market*, PRIME Institute, University of Minnesota based on data found in *Fortune* magazine, 1958 to 1999, *Fortune* magazine, April 2002, Fortune 500 (www.fortune.com)

2003



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Number of companies (out of 11 respondents) with research and development activities targeting drugs for neglected diseases

Disease	R&D Spending	Screening	Pre-clinical or Clinical Development	Product to market in last five years
sleeping sickness	0	0	0	0
Chagas disease	1	0	1	0
leishmaniasis	1	0	1	0
malaria	2	1	2	2
tuberculosis	5	4	3	1
Other infectious diseases (includes viral, bacterial and fungal diseases)	9	N/A	8	6

Figure 1C

MSF. Fatal imbalance 2001

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Public/Private Partnerships

- Attempt to fill gaps in the health needs of developing countries through
 - establishment of public-private collaboration
 - networks
 - partnerships
- Private sector: for-profit and not-for-profit
- Public sector: international organisations, development and aid agencies, governments, academia

Working together through the global medicines family

- Member states
- UNICEF, UNAIDS, World Bank, UNFPA, UNCTAD, WTO...
- Collaborating centres and institutions
- Public interest NGOs, professional associations, industry
- WHO "global medicines group" - EDM, regional advisors
- 91 staff in countries, regional offices and HQ

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Health Technology and Pharmaceuticals



WHO partnerships

- European Partnership on Tobacco Dependence
- Global Alliance for TB Drug Development
- Global Alliance to Eliminate Lymphatic Filariasis
- Global Alliance for Vaccines and Immunization
- Global Elimination of Blinding Trachoma
- Global Polio Eradication Initiative
- Multilateral Initiative on Malaria
- Medicines for Malaria Venture
- Partnership for Parasite Control
- Roll Back Malaria
- Stop TB
- UNAIDS/Industry Drug Access Initiative

Patents and TRIPS

Based on a presentation by
Carmen Perez-Casas, MSF

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Patent objectives

- Patents protect *inventions*, for both products and processes, i.e. gives the owner a monopoly over the invention, usually for 20 years
- In all fields of technology
- Patent criteria: novelty, inventive step, industrial application (TRIPS Art.27)
- For pharmaceuticals, the invention is often a new molecule or family of molecules for the treatment (or prevention) of a particular disease (protected by what is known as a 'product' or 'substance' patent, or
- - a method of producing a drug (protected by what is known as a 'process' or 'methods' patent)

→ there can be more than one patent for a single medicine!!

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Patents for

- Pharmaceutical forms
- "Analogy" processes
- Combinations of known products
- Optical isomers
- Active metabolites
- Prodrugs
- New salts of known substances
- Variants of known manufacturing processes
- New uses for known products

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Patents utility

- Stimulate innovation – a debate over this concept
- Publication of patents: dissemination of information, technical knowledge
- Grant a monopoly – preventing others from using, making, selling, marketing the product for a time-limited period

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TRIPS-agreement

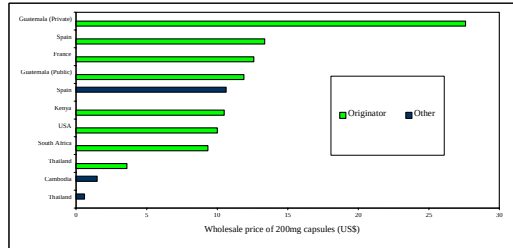
Trade Related Aspects of Intellectual Property Rights

- Minimum standards for protection of patent rights and copyright
- minimum 20 years patent protection (EU, USA, Japan and Australia have 24-25 years)
- covers both process- and product patents
- deadlines for national implementation:
 - 1996 industrialised countries
 - 2000 developing countries
 - 2006 the poorest 49 countries (2016 after DOHA)

Medicines are only a small part of the agreement

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**Before countries introduce patent laws:
Wholesale prices of originator and generic
fluconazole in developing and developed countries**



Source: C. Pérez-Casas, HIV/AIDS Medicines Pricing, Report (www.accessmed-med.org).

**Pharmaceuticals and
trade**

**WTO TRIPS Agreement - Trade-Related
Aspects of Intellectual Property Rights**

- **World Trade Organization - WTO**
 - entered into force in 1995
 - 134 Member States - plus 30 in the process of joining
- **Before TRIPS: diversity in patent laws**
 - patents for pharmaceutical products, processes, or both
 - patent term protection varied from no protection to over 20 years
- **After TRIPS: uniformity in patent laws**
 - minimum 20 years
 - both "product" and "process" patents required

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Health Technology and
Pharmaceuticals



**TRIPS Agreement and Doha Declaration
- interpreting exemption in the agreement
to protect public health**

- WTO Ministerial Conference, Nov 2001
- Patent and prices debate
- Clarification of TRIPS provisions
- Para 4: TRIPS "can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and in particular, to promote access to medicines for all"

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TRIPS Agreement and Doha Declaration

TRIPS-consistent policy options for
affordable medicines: use of public health
safeguards affirmed in Doha Declaration

- Government use
- Compulsory licences
- Parallel importation
- Patent exceptions (e.g., Bolar exception)

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Government use of exemptions

Article 31 TRIPS

- "Public non-commercial use"
- Government right (govt. agency, dept. or contractor) to use patent in the public interest
- Fast-track approach to compulsory licences
- Compensation to patent holder
- State practice: US and UK legislation

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Compulsory licence

Article 31 TRIPS

- Government grant of licence to 3rd party to use patent without consent of patent holder
- Right to determine grounds for compulsory licence
- NOT just for emergencies
- Conditions for grant: prior negotiations, compensation to patent holder, appeals process

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Parallel import

Article 6 TRIPS

- Import and resale of patented product in another country, without consent of patent holder
- Exhaustion of rights: national, regional or international regimes
- State practice: S. Africa, Malaysia

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Parallel import

The same patented product from the same manufacturer; e.g., Zithromax® from Pfizer



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Concerns expressed by developing countries on the impact of TRIPS

- The TRIPS Agreement treats drugs as any other commodity, but drugs are not ordinary consumer products
- High prices for new drugs in countries with no previous patent protection
- Generic competition delayed in countries with previous patent term less than 20 years
- Weakening of local pharmaceutical industry - concentration of drug production increasing dependence of developing countries

WHO - EDM Drug Action Programme

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Acceptable prices

Medicine Prices a new approach to measurement

2003 edition

Working draft for field testing and revision

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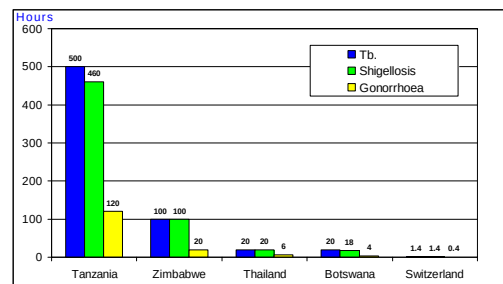
Medicine Prices
a new approach to measurement

Medicine prices - a controversial topic

- Awareness of relatively rapid price rises in many countries
- Publicity over high price of ARV medicines in relation to HIV/AIDS epidemiology
- Controversy over R&D costs (innovation) and price of new (patented) medicines
- Globalisation of high prices - concerns about WTO/TRIPS
- Price differences in different international markets are common
- Concern with medicine price information raised in World Health Assembly from 1999

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Number of hours a person must work to pay for a treatment course (average prices in the world market)



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Kirsten Myhr
Price survey in East Africa 1999
<http://www.accessmed-msf.org/prod/publications.asp?scntid=3920012349208&contentType=PARA&>

4 East African countries:

- Ethiopia, Kenya, Tanzania, Uganda
- a basket of 15 drugs
- prices collected in different sectors and rural and urban areas
- data on tariffs and mark-ups
- comparison of countries, sectors
- comparison with international data

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Antimalarials Mefloquine (Lariam®) prices

Norway:

- Average retail price in Tanzania for 100 is 549 USD
- Max retail price in Norway for 100 is 308 USD
- very small market
- not reimbursed
- Nordic text on label and box
- Nordic package insert but: max retail price

Purchasing power in Norway 100 times higher, i.e. price in Tanzania 200 x higher

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Antiretrovirals Nevirapine (Viramune®) prices

Norway:

- Average retail price in Kenya for 100 is 874 USD
- Max retail price in Norway for 100 is 430 USD
- small market
- no parallel import
- reimbursed
- Nordic text on label and box
- Nordic text on package insert

Purchasing power in Norway 100 times higher, i.e. price in Kenya 200 x higher

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Antimicrobials Ciprofloxacin (Cipro®) prices

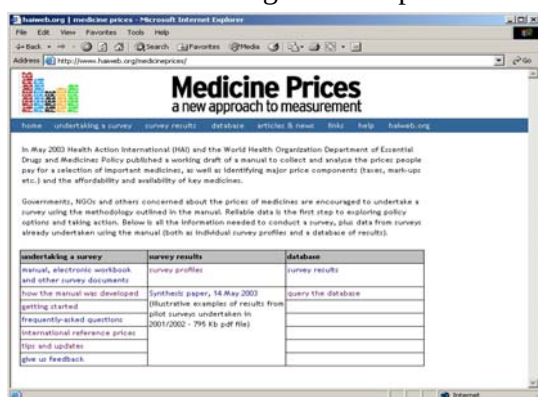
Norway:

- Average retail price in Uganda for 100 is 315 USD
- Max retail price in Norway for 100 is 162 USD
- reasonable market
- reimbursed for some conditions
- Nordic text on label and box
- Nordic package insert

Purchasing power in Norway 100 times higher, i.e. price in Uganda 200 x higher

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www.haiweb.org/medicineprices



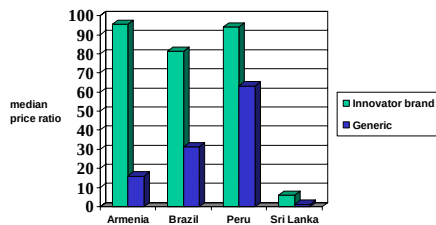
Medicine Prices
a new approach to measurement

Some results from pilot studies

- more is available on the website:
www.haiweb.org/medicineprices

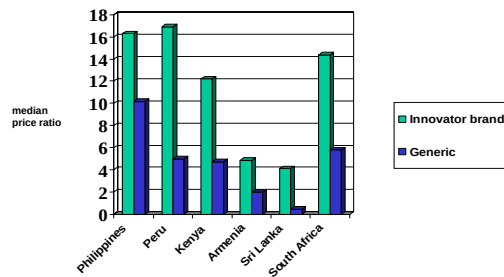
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Innovator brand versus generic median price ratios ciprofloxacin 500mg tabs, private pharmacies



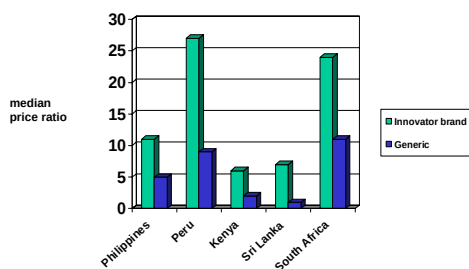
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Innovator brand versus generic median price ratios captopril 25mg tabs, retail pharmacies



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Innovator brand versus generic median price ratios amoxicillin 250mg, retail pharmacies



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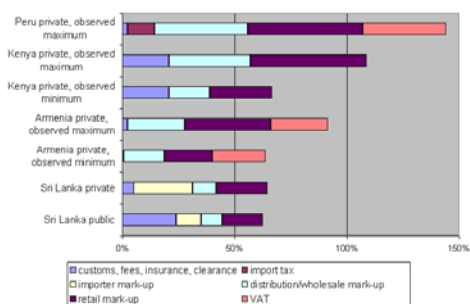
Medicine Prices
a new approach to measurement

These 3 examples show

- the huge difference within countries between innovator brands and generics, what may be called the innovator brand premium
Is this a problem? YES where:
 - generics are not available
 - the medicine is patent protected and without competition
 - the innovator brand is sold to increase profit
- some huge differences within countries between the price of the innovator brand, generics and the international reference price
- large cross-country variations in sales price of the same innovator brand

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Price components - total markup as % of CIF price



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Medicine Prices
a new approach to measurement

'Add-on' prices

- add-ons vary tremendously both in type and quantity
e.g. in private sector in Sri Lanka = 60 %, in Peru > 100 %
- Governments in some countries are taxing the sick by applying high import tax and adding VAT/GST
e.g. in Peru, 12 % import tax and 18 % VAT are added
- as most add-ons are applied as percentages, the higher the starting price, the higher the price to the patient
- while it is essential in the surveys to evaluate the add-ons, it is equally important to know the manufacturers' prices

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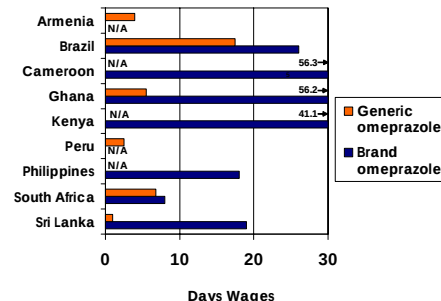
Availability

- For a number of medicines the expensive innovator brand was more frequently found than the cheaper generics
- Some examples:
 - no generics even though patent had expired
e.g. ciprofloxacin in Cameroon and the Philippines
 - no generics although it was an old medicine
e.g. beclometasone inhaler in the Philippines

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Affordability -

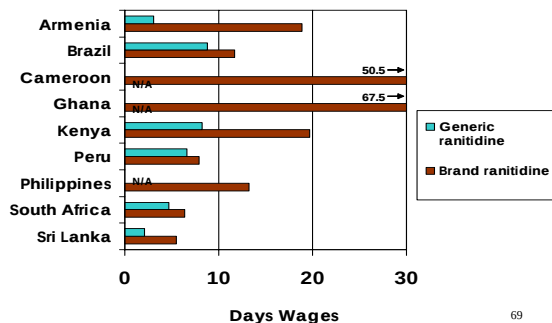
days' wages, lowest paid government worker, needed to buy 30 days' ulcer treatment with omeprazole



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Affordability -

days' wages, lowest paid govt. worker, needed to buy 30 days' ulcer treatment with ranitidine



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Affordability and Sector Comparison

- days wages needed to pay for treatment, Peru

	Brand – Private pharmacy	Generic – Private pharmacy	Generic – Public sector
One month's therapy - glibenclamide	4.4 days	2.1days	0.9 days
One month's therapy - ranitidine	7.9 days	2.2 days	1.3 days

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Affordability of a month of treatment for hypertension in Peru

- Innovator brand atenolol costs more than half a week's wages
- However, there are generic versions of atenolol that are more affordable than generic hydrochlorothiazide



South Africa: cost of treating 1 episode of ARI in children with co-trimoxazole

Source	Cost of treating one episode of ARI USD/2 mill children	No. of children treated for 1 ARI with a budget of 2,9 mill USD
Innovator brand	15,7 mill	365 000
Generic	2,9 mill	2 mill

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Affordability

- Not only are innovator brands expensive in many countries, but sometimes even generics are
- However, usually generics are much cheaper and they must be available in all sectors to give patients a possibility of a better choice
- Affordability can be improved through:
 - making generics available in public sector
 - therapeutic substitution

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The right price for any commercial product is the highest price that the market will bear

"It takes much less effort and imagination to grow rich by selling expensive products to a small number of people than by selling cheap products to a large number of people"

"The market will bear a higher price if you can persuade people that the higher the price, the greater the assurance of quality"

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WHO perspectives on access to drugs:

- Access to essential drugs is part of the fundamental right to health.
- Essential drugs are not simply another commodity.
- Patent protection has been an effective incentive for research and development for new drugs, BUT
- Patents should be managed in an impartial way, protecting the interests of the patent-holder, as well as safeguarding public health principles.