



DISEASE CONTROL
PRIORITIES PROJECT



Disease Prevention and Control

An Evidence Based Strategy for Health Policy & Programs

Fariyal F. Fikree

Victoria, Seychelles

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INVESTING IN GLOBAL HEALTH “BEST BUYS” AND PRIORITIES FOR ACTION IN DEVELOPING COUNTRIES

What is the DCPP?

An alliance of organizations facilitating the review, creation and dissemination of information on improving health in developing countries.

Fogarty International Center
World Health Organization
World Bank

Population Reference Bureau
Bill & Melinda Gates Foundation

Key Concepts

- ❖ Burden of Disease
 - Mortality, Morbidity
 - Risk Factor Assessment
- ❖ Healthy Life Years
 - Disability-Adjusted Life Years (DALYS)
- ❖ Interventions
 - Cost-Effectiveness

Burden of Disease

- ❖ A composite measure of total health loss due either to premature death or to non-fatal disability
- ❖ Age, duration and severity are the key parameters

DCPP measures healthy life years by a specific unit, Disability-Adjusted Life Years (DALYs)

Years of life lost to premature death = **the difference between the age at death and the life expectancy at that age**, differentiated by sex

A year of life is of **equal value at every age**

Years of life affected by a disability are adjusted by a **disability weight**, which varies from one condition to another (blindness, depression, etc.) but is the same for all people with that condition.

Major causes of death (> 1.0% of total deaths) and disability (> 1.0% of total DALYs) in sub-Saharan Africa, 2001

Cause	Deaths		DALYs	
	000s	%	000s	%
Tuberculosis	317	2.93	8,084	2.34
STDs			3,842	1.11
HIV/AIDS	2,058	18.99	56,820	16.48
Diarrheal disease	712	6.60	22,046	6.39
Childhood cluster	745	6.87	23,198	6.73
Malaria	1,093	10.09	35,447	10.28
Tropical cluster			4,897	1.42
Lower respiratory	1,080	9.97	30,455	8.83
Maternal conditions	237	2.19	9,743	2.83
Perinatal conditions	573	5.29	20,047	5.81
Protein-energy malnutrition			5,220	1.51
Cancers	409	3.77	6,281	1.82
Neuropsychiatric conditions			15,151	4.39
Cataracts			5,169	1.50
Ischemic heart disease	343	3.17	4,579	1.33
Cerebrovascular disease	355	3.28	5,125	1.49
Respiratory diseases	477	4.40	6,150	1.78
Congenital anomalies			3,441	1.00
Road traffic accidents	121	1.12	6,374	1.85
Violence	141	1.30	4,090	1.19



What do we mean by “intervention” ?

An *intervention* is a deliberate action, using one or more resources, intended to improve health, and not undertaken by the patient or beneficiary

To stop smoking is *not* an intervention

To make an effort to persuade people to stop smoking *is* an intervention

Different kinds of interventions

**Interventions aren't always medical--
they can:**

- ❖ ***Change*** how an intervention is delivered (particularly to improve efficiency of resource use, reduce waste)
- ❖ ***Improve*** the quality of the intervention (often the most important thing to do, if quality is low)
- ❖ ***Introduce or modify*** laws or regulations
- ❖ ***Impose*** economic incentives (prices, taxes, subsidies)



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Interventions Cost-Effectiveness

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The cost part of cost-effectiveness

- ❖ Cost: value of total resources used to *produce* the intervention (almost always actually *paid*; difficult to value when people's time is donated, volunteered or subsidized); primarily from provider's perspective
- ❖ Cost users incur to *consume* the intervention, whether paid (travel) or not (lost work time) not counted, because of problems of data and imputation—but very important for raising financial risk and for reducing access to care

Costs can be distinguished as direct vs. indirect, in two senses of “indirect”--

Costs required to create the capacity to deliver the intervention or to administer the facility delivering it (e.g., overhead costs of a hospital or the Ministry of Health); or

Costs not directly related to the production or consumption of the intervention but that have to be paid because of it (e.g., safe disposal of medical waste)

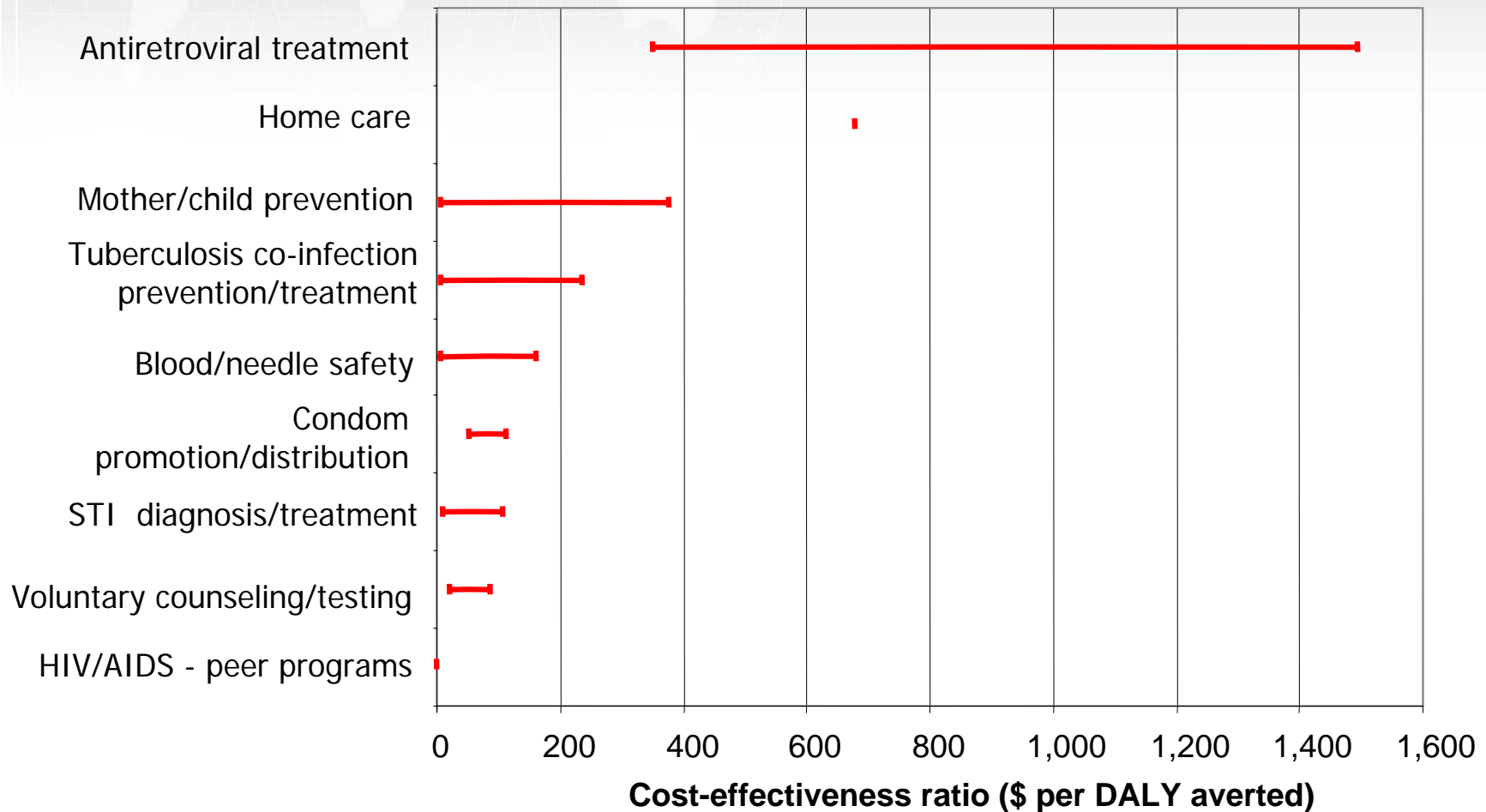
The effect part of cost-effectiveness

- ❖ Effectiveness is the health *improvement* due to the intervention
- ❖ It can be measured as prevention of adverse health events (cases of diarrhea or malaria, heart attacks, injuries); deaths from those events; loss of life-years
- ❖ If regarded as the *reduction in burden*, then the unit of measure for effect is also DALYs

DCPP cost-effectiveness methods can help to set priorities in:

- ❖ Deciding on uses for additional resources (e.g., from Global fund or World Bank)
- ❖ Re-allocating resources from current budget, for *different* actions or goals
- ❖ Re-allocating resources from current budget, for different ways to achieve the *same* actions or goals

Cost-Effectiveness of Interventions Against HIV/AIDS in Sub-Saharan Africa



Laxminarayan et al (DCPP authors), 2006, in Jamison et al, *Disease Control Priorities in Developing Countries*

Improve Quality of Health Spending

- ❖ Provide information on the “price” of buying health through different interventions
- ❖ Policymakers can combine this information with other considerations to determine how best to improve health

What CEA does and doesn't tell

Does tell whether an intervention is worth undertaking (relatively, not absolutely)—does it provide *value for money*--but

Does **not** say *who* should undertake it (government, NGOs, private providers)

Does **not** say how to pay for it (patient fees, taxes, insurers, donors, charities, etc.)

What other considerations matter?

Other criteria that affect priorities:

Equity, poverty, catastrophic cost, public goods, externalities, rule of rescue, and public demands

Any of these may be inconsistent with cost-effectiveness; need to judge the balance

The Best Health Interventions

- ❖ Target major causes of death, disability and illness in developing countries;
- ❖ Are cost-effective; and
- ❖ Can be scaled up.



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Health Systems Strengthening

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Evidence Based Approach

- ❖ What works best in your country/region?
- ❖ Identify clear disease priorities and use them to drive generic improvements in the health system – **evidence based** (GBD, DALYs, CEA)
- ❖ Strengthen the health system as a whole – **incremental progress**

Closing Thoughts

- ❖ DCPD provides tools for priority setting
- ❖ Policymakers can vastly improve quality of health spending - complemented by increased spending
- ❖ Prioritize health interventions in meeting both disease-specific and system-specific goals and initiatives (i.e. MDGs, Abuja Declaration)
- ❖ In ECSA, what are the best means by which to build the health system while addressing key disease priorities?