Using reviews to inform healthcare decisions in poor countries: achievements, challenges & opportunities

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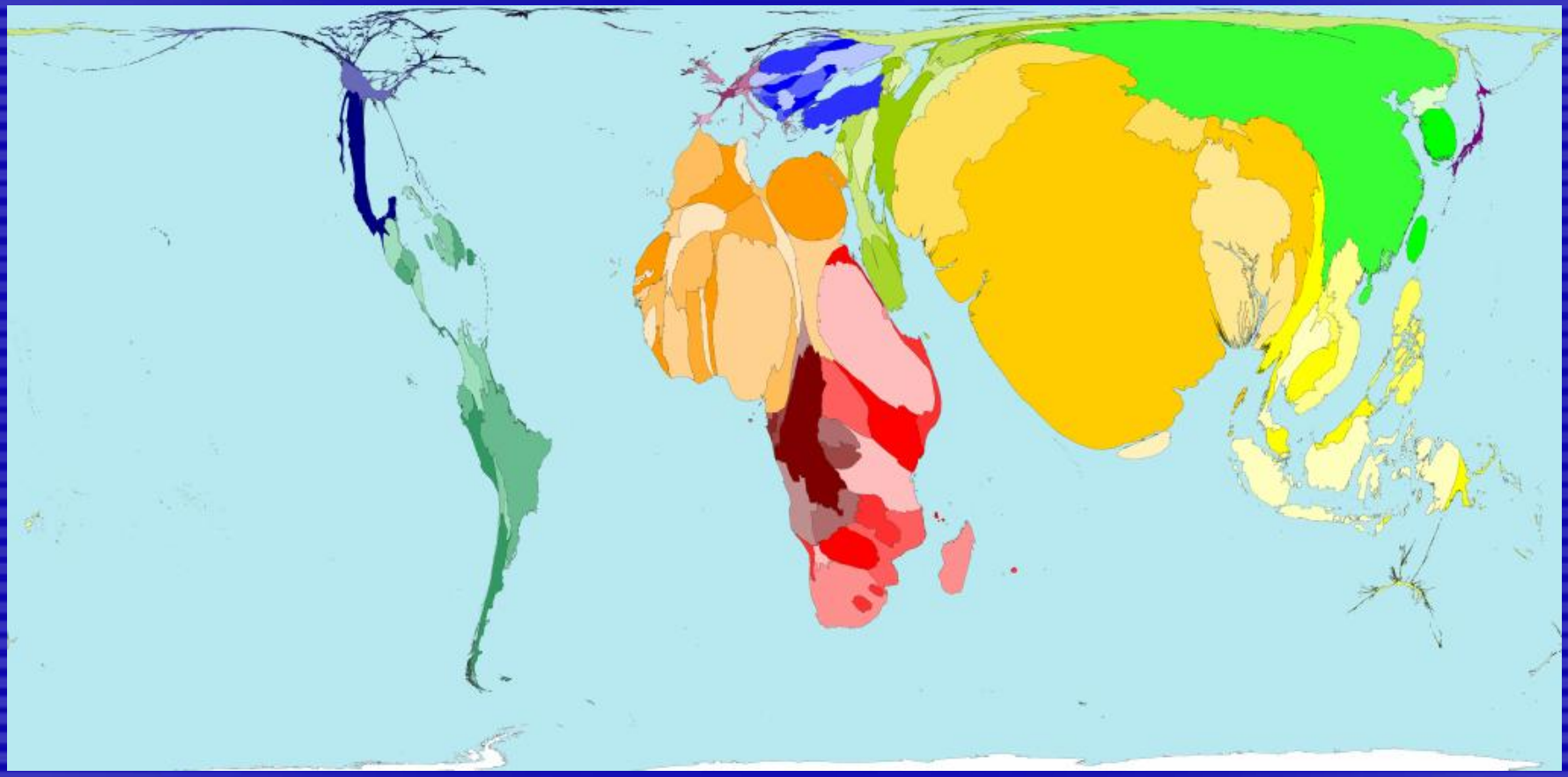
Presentation overview

- Why evidence is (more) important in poor countries
- The ‘evidence to decision-making’ process
- Barriers to the process
- Two case studies of successful process
- Facilitators
- Opportunities

"Wherever health care is provided and used, it is essential to know which interventions work, which do not work, and which are likely to be harmful. This is especially important in situations where health problems are severe and the scarcity of resources makes it vital that they are not wasted"

Chinnock P, Siegfried N, Clarke M (2005) Is evidence-based medicine relevant to the developing world? PLoS Med 2(5): e107.

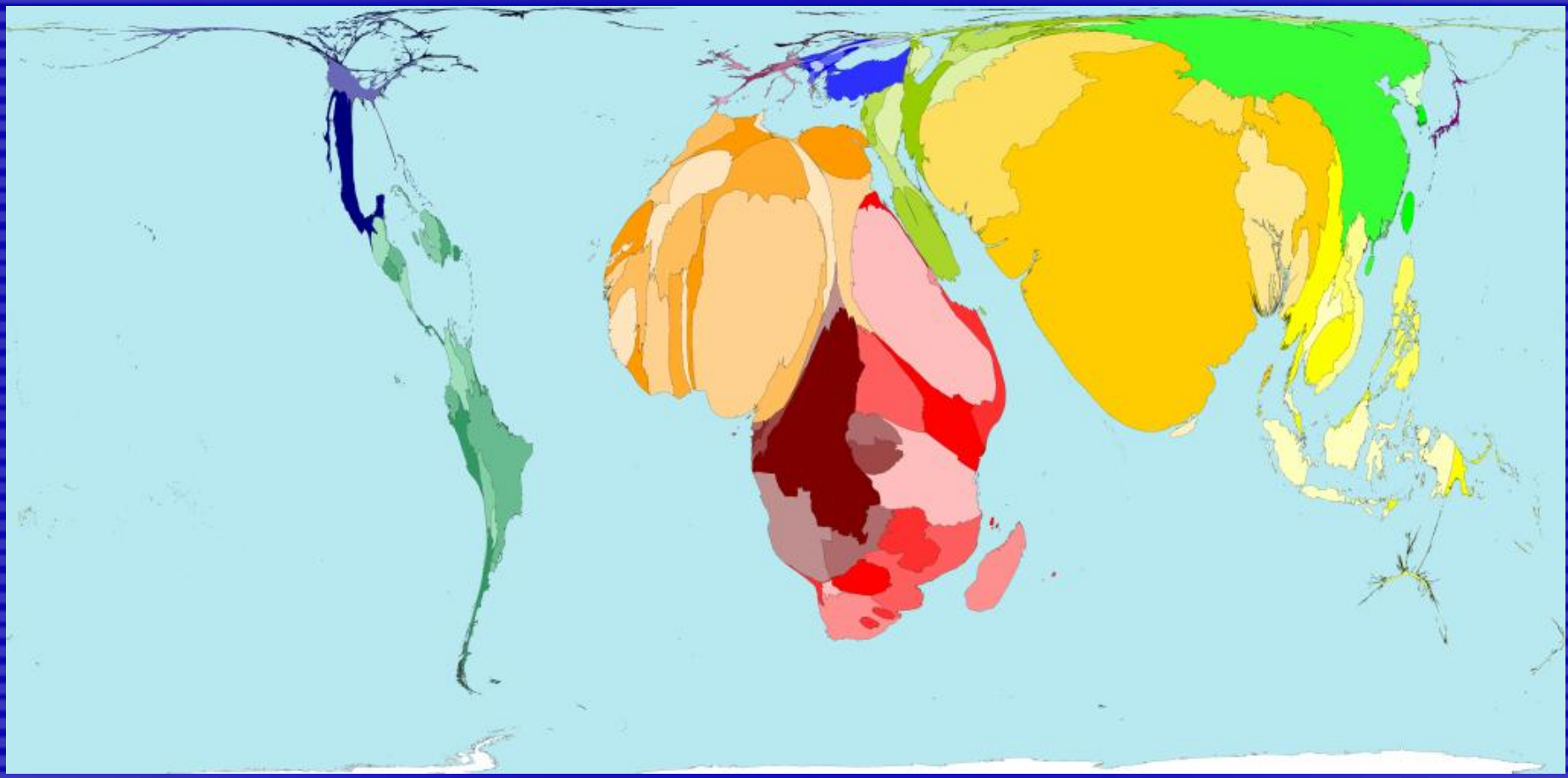
Human poverty index



Territory size shows the proportion of the world population living in poverty living there

Dorling D (2007) Worldmapper: The human anatomy of a small planet. PLoS Med 4(1): e1.

Infant mortality



Territory size shows the proportion of infant deaths worldwide that occurred there in 2002. Infant deaths are deaths of babies during their first year of life.

CAPE TIMES FRIDAY, SEPTEMBER 7, 2007

Disease is a barometer of progress

DAVID PIENAAR and CHRIS COLVIN

EPIDEMIOLOGY is the medical science that investigates the fundamental causes and distributions of disease.

Within the field, there is consensus that poverty contributes enormously to the disease profiles of countries. This is because the determinants of good health are really quite simple.

They include healthy food, clean water, decent sanitation, secure housing, proper health information and simple, cheap medicines.

The absence of these factors results in disease.

The word poverty, as a concept, has problems of precision and local applicability, but a reasonable working definition could be defined as "lacking access to that set of factors which determines good health".

The Gini co-efficient measures income inequality in countries (a country with a score of 0 has perfect equality, with everyone having equal income, while a country with a score of 1 is the exact theoretical opposite, where one person has all the income and everyone else has none).

It is no surprise that countries with high Gini co-efficients (South Africa has one of the highest in the world) have some of the worst health statistics in the world.

Other states, such as Kerala in India, or Sri Lanka have much greater co-efficients of equality (which is not necessarily the same as being wealthy) and as a result have much better health outcomes than South Africa.

Given the above, everyone agrees that we need to tackle poverty if we wish to improve the health status of our nation.

But it is not absolute wealth that matters in terms of health outcomes. Rather, it is how fairly resources are distributed.

The real questions for the future will be how to achieve this and how to measure it.

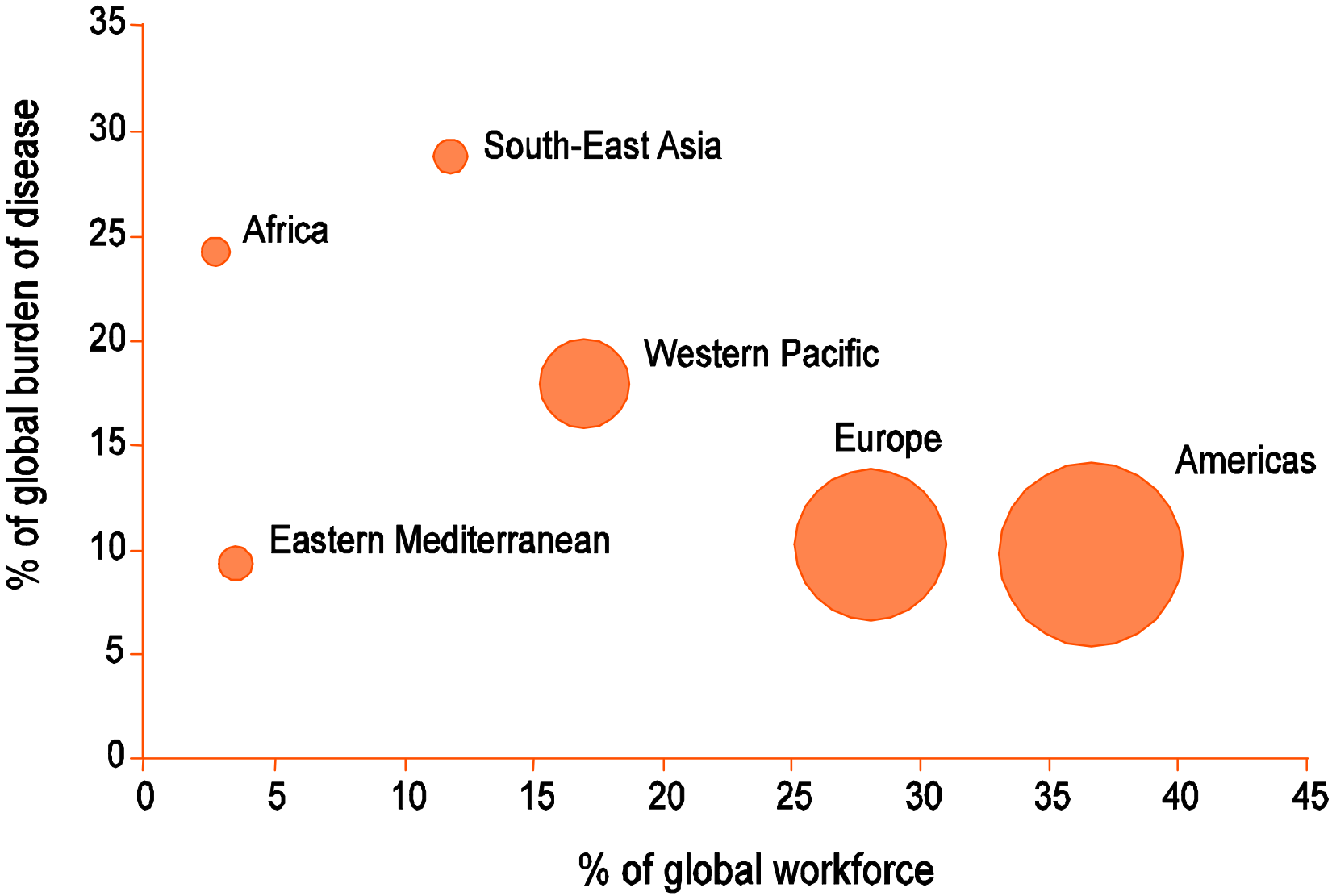
Our measurement of "economic growth" is crude and is subject to the tyranny of averages.

Imagine a region has three core industries that contribute equally to its domestic product at year zero, say, banking, fishing and mining.

Imagine then that mining and fishing experience no change in a year but banking "grows" by 15%

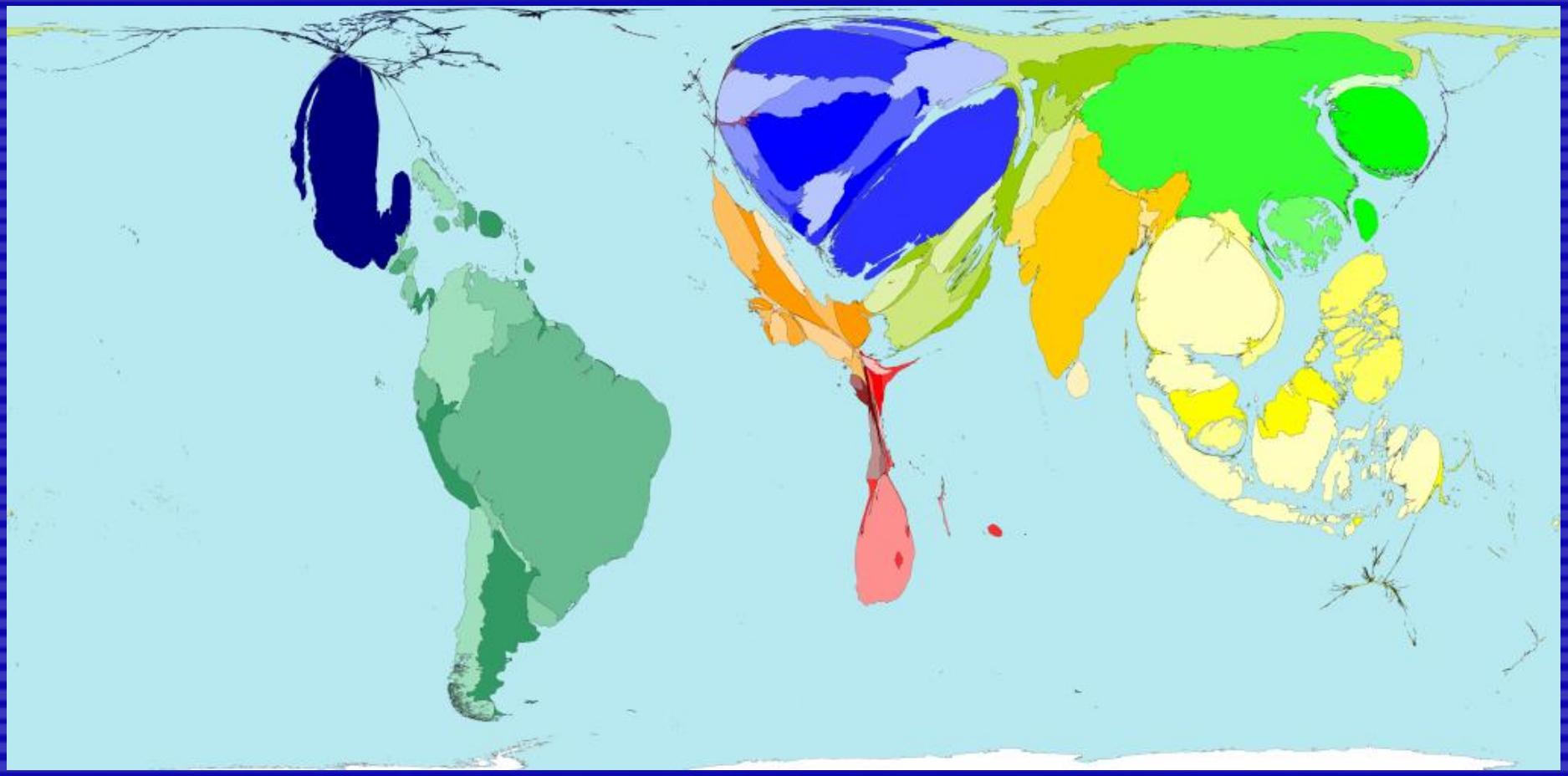
POOR HEALTH: Discrepancies in wealth affect a nation's health, say the writers. The People's Health Movement believes a healthy nation reflects its progress, and is launching a campaign challenging the government to enact enlightened, pro-poor policies.

Distribution of health workers by level of health expenditure and burden of disease, by WHO region



Source: WHO, World Health Statistics, 2006

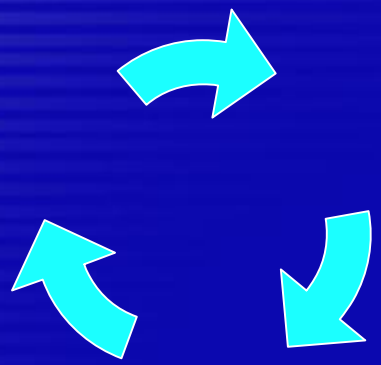
Total debt service 2002



Territory size shows the proportion of all payments for public debt that were paid by that territory in 2002.

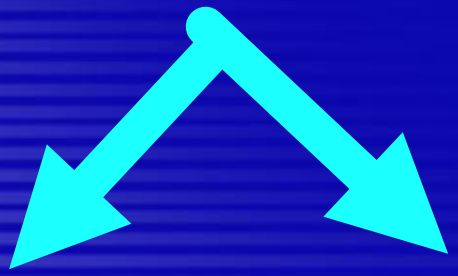
Healthcare decision-making

Decision-making is not linear!



Cyclical

Convergent

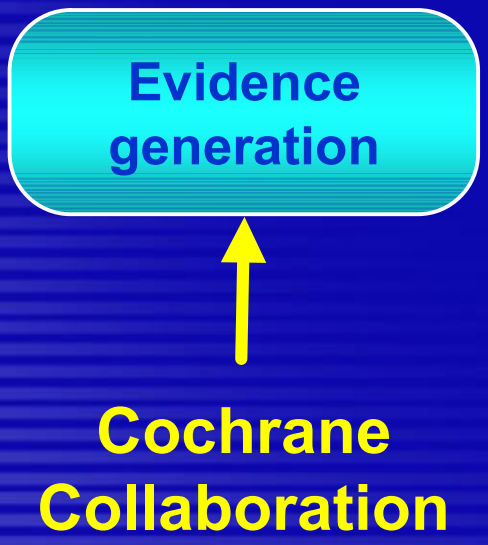


Divergent

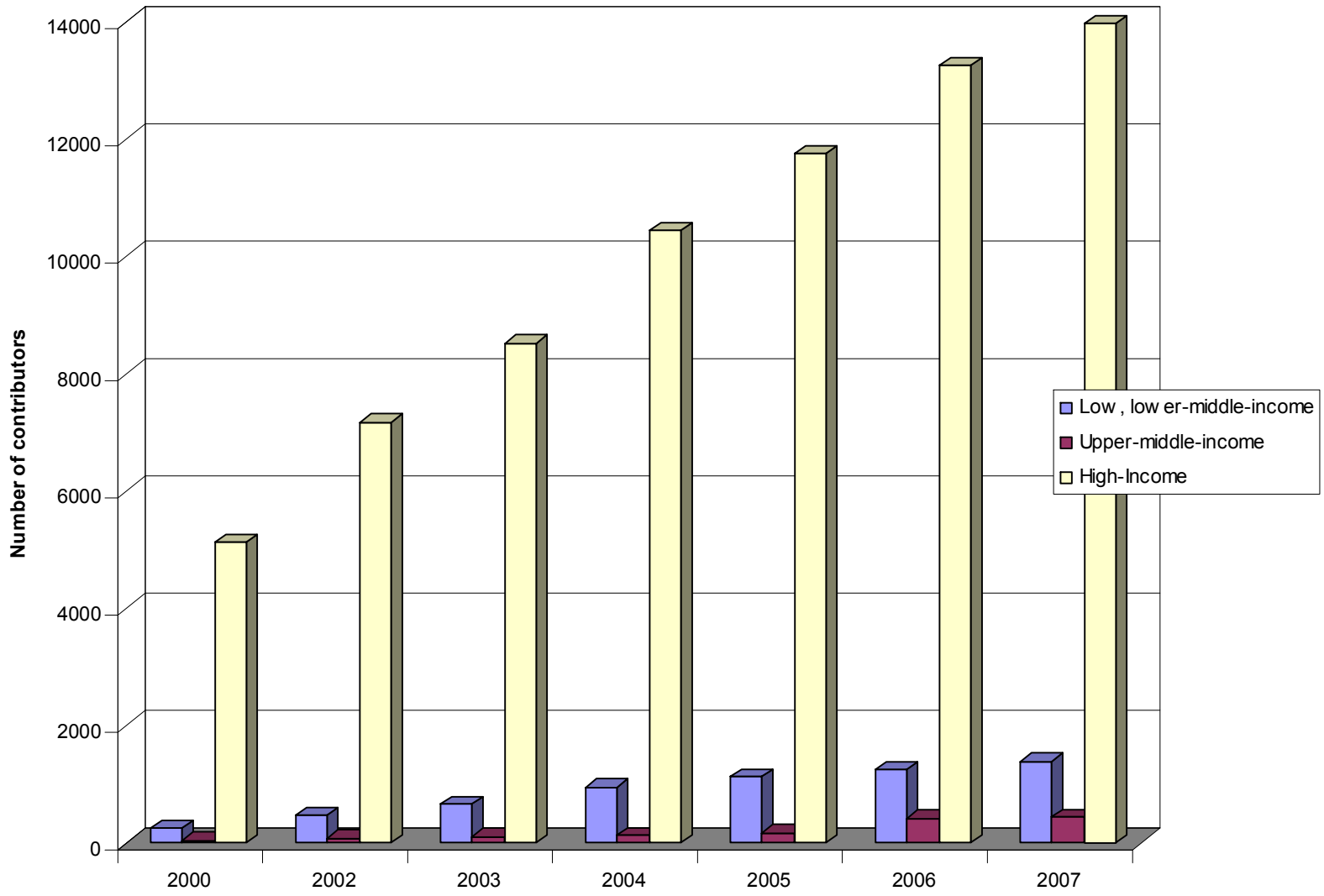
Opposing

Parallel

Healthcare decision-making



How well are we doing in poor countries?



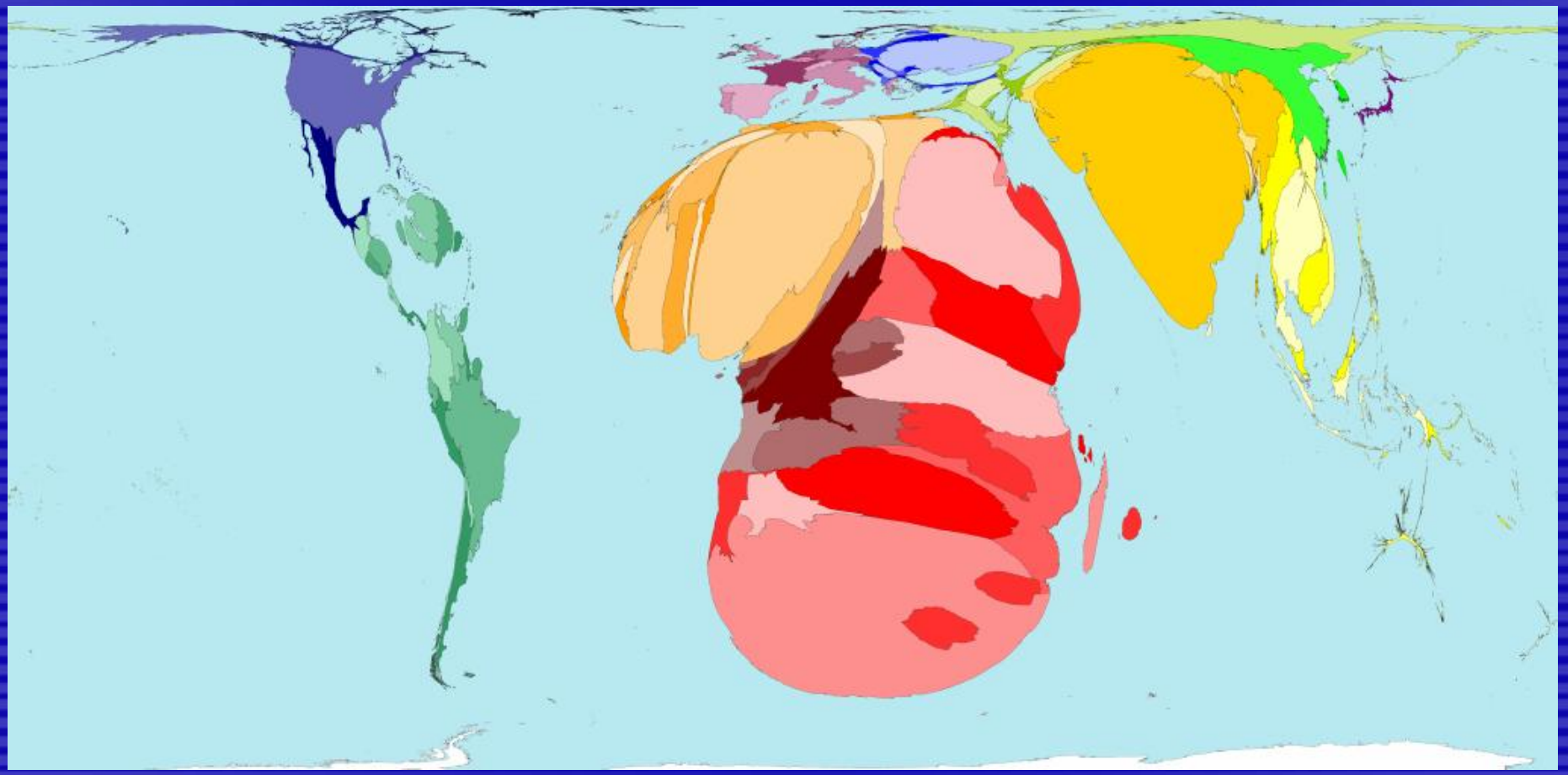
Growth of activity in Cochrane Collaboration activities in poor countries from 2000 to 2007

Allen et al. , Cochrane Colloquium, 2007

Barriers to evidence generation

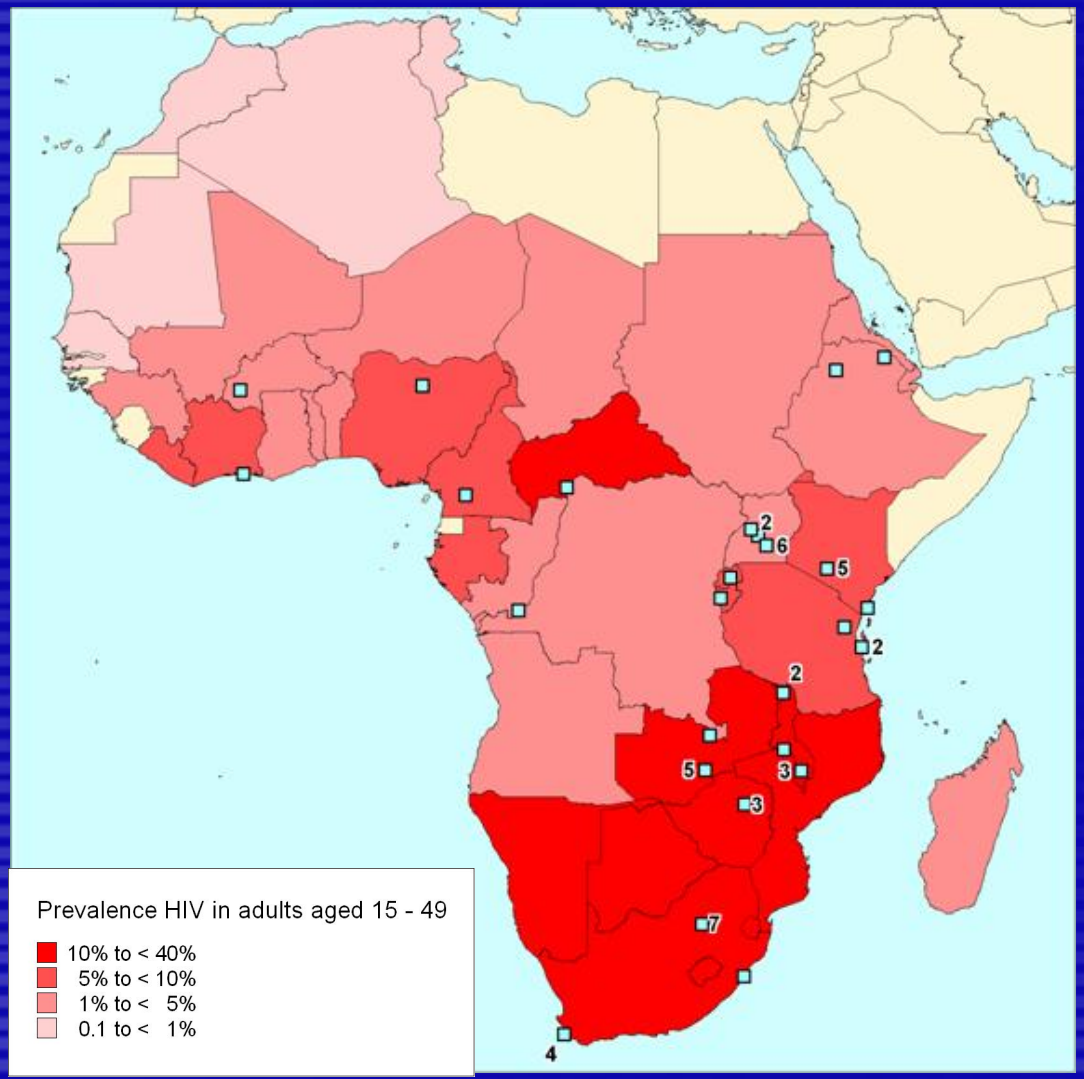
- Few systematic reviews relevant to global burden of disease Swingler et al, BMJ, 2003
- Little primary research (trials) conducted in poor regions Isaakidis et al. BMJ, 2002
- Evidence is ultimately lacking for many interventions

HIV prevalence



Territory size shows the proportion of all people aged 15-49 with HIV (Human Immunodeficiency Virus) worldwide, living there.

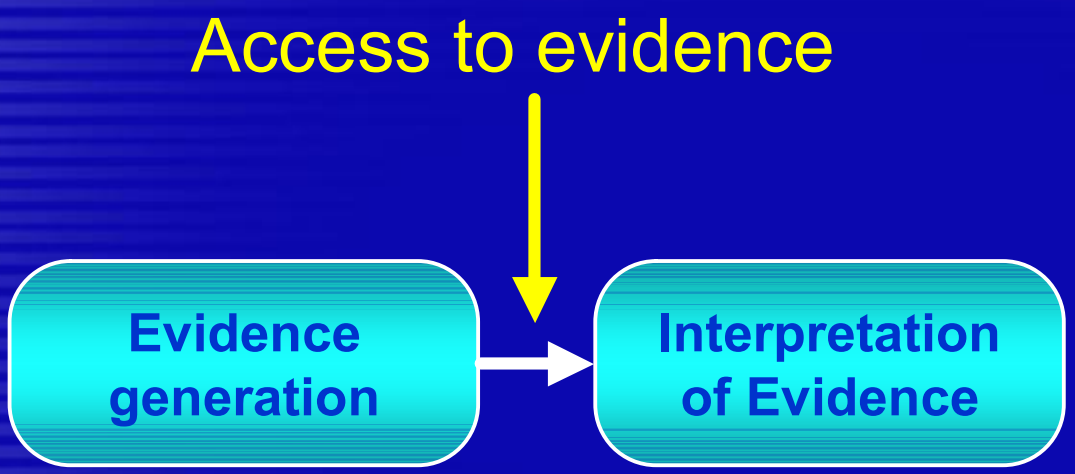
HIV treatment trials & prevalence per country

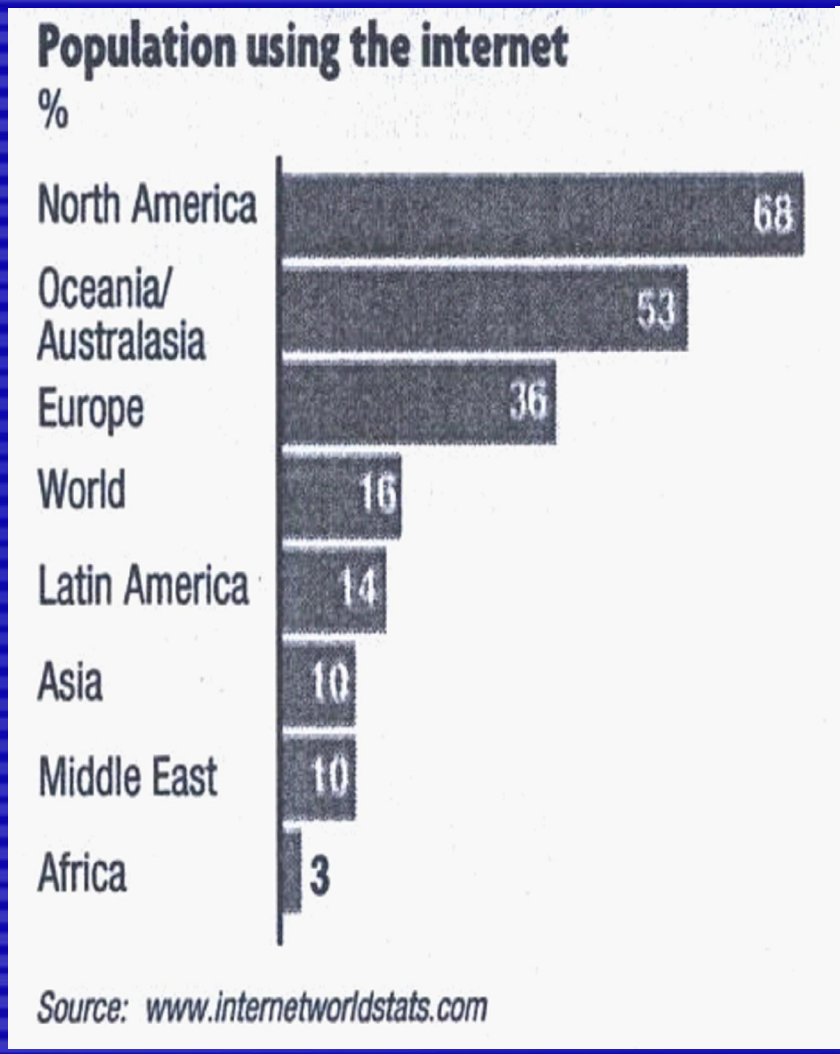


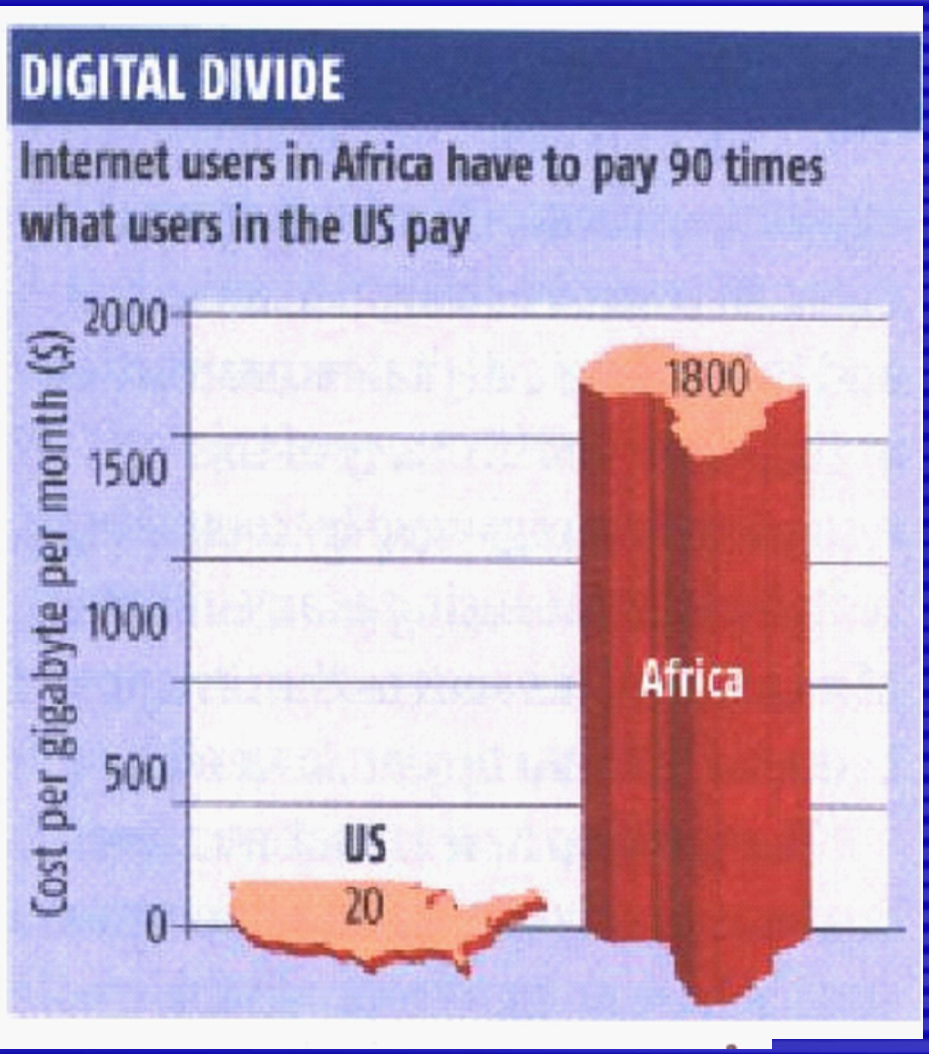
Squares represent the location of a trial. Where more than one trial has been conducted in a location, the actual number of trials is given for that location. Prevalence data is from UNAIDS 2003.

Siegfried et al, BMJ, 2005

Healthcare decision-making







Financial Times, May 21, 2006

Healthcare decision-making

Use of evidence in WHO recommendations

Andrew D Oxman, John N Lavis, Atle Fretheim

Summary

Background WHO regulations, dating back to 1951, emphasise the role of expert opinion in the development of recommendations. However, the organisation's guidelines, approved in 2003, emphasise the use of systematic reviews for evidence of effects, processes that allow for the explicit incorporation of other types of information (including values), and evidence-informed dissemination and implementation strategies. We examined the use of evidence, particularly evidence of effects, in recommendations developed by WHO departments.

Methods We interviewed department directors (or their delegates) at WHO headquarters in Geneva, Switzerland, and reviewed a sample of the recommendation-containing reports that were discussed in the interviews (as well as related background documentation). Two individuals independently analysed the interviews and reviewed key features of the reports and background documentation.

Findings Systematic reviews and concise summaries of findings are rarely used for developing recommendations. Instead, processes usually rely heavily on experts in a particular specialty, rather than representatives of those who will have to live with the recommendations or on experts in particular methodological areas.

Interpretation Progress in the development, adaptation, dissemination, and implementation of recommendations for member states will need leadership, the resources necessary for WHO to undertake these processes in a transparent and defensible way, and close attention to the current and emerging research literature related to these processes.

Lancet 2007; 369: 1883–89

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See Comment page 1842

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"Systematic reviews and concise summaries of findings are rarely used for developing recommendations. Instead, processes usually rely heavily on experts in a particular speciality, rather than representatives of those who will have to live with the recommendations or on experts in particular methodological areas."

Global Policy Case Study: Oral Rehydration Solution

- Childhood diarrhoea is a major cause of death
- Oral rehydration therapy had saved lives for 2 decades
- In late 1990s: Was lower osmolarity solution better than solution in current use?
- WHO commissioned Cochrane review

[Review]

Reduced osmolarity oral rehydration solution for treating dehydration caused by acute diarrhoea in children

S Hahn, Y Kim, P Garner

Cochrane Database of Systematic Reviews 2007 Issue 4

DOI: 10.1002/14651858.CD002847 This version first published online: 21 January 2002 in Issue 1, 2002
Date of Most Recent Substantive Amendment: 19 September 2001

This record should be cited as: Hahn S, Kim Y, Garner P. Reduced osmolarity oral rehydration solution for treating dehydration caused by acute diarrhoea in children. *Cochrane Database of Systematic Reviews* 2002, Issue 1. Art. No.: CD002847. DOI: 10.1002/14651858.CD002847.

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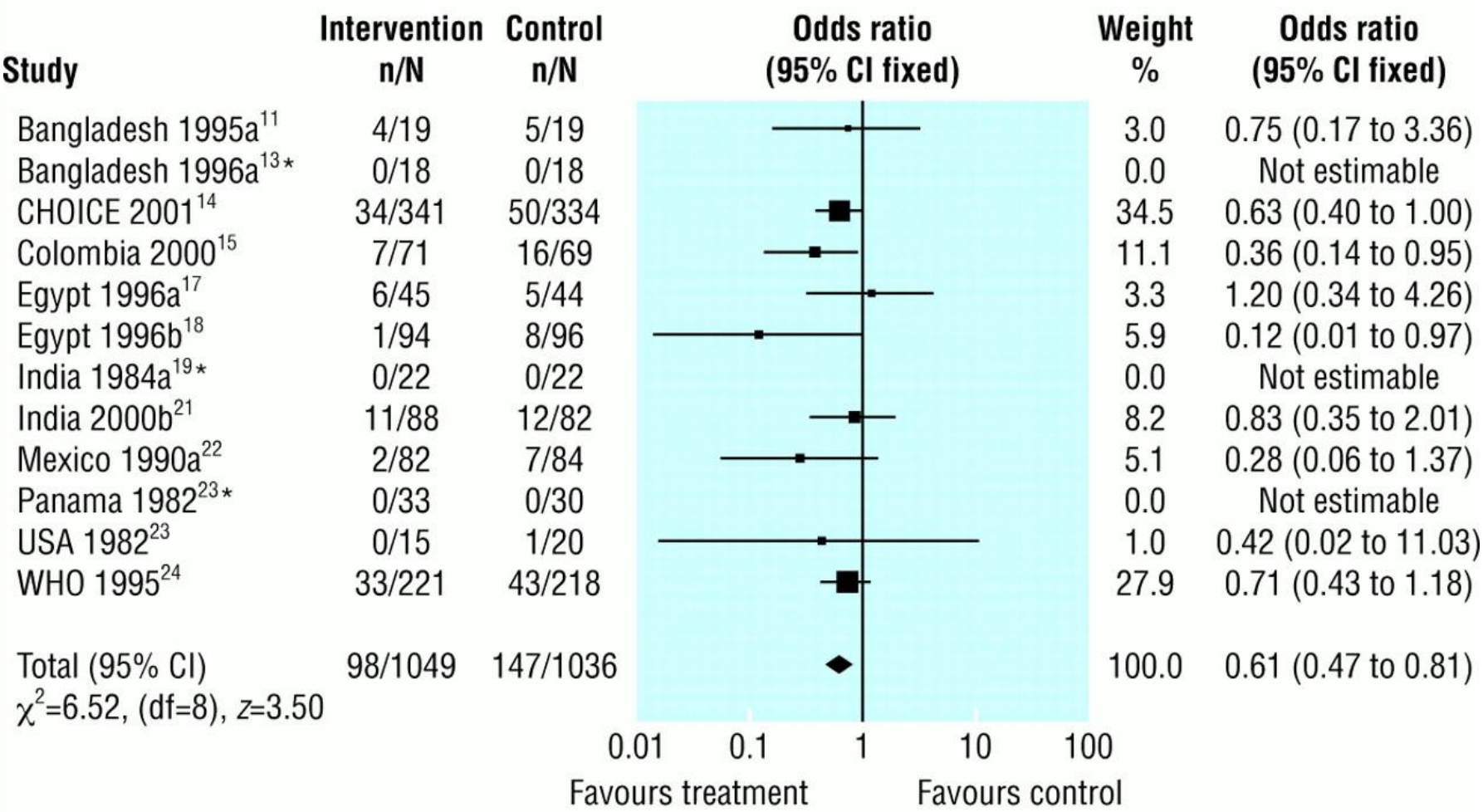
Abstract

Background

Oral rehydration solution (ORS) has reduced childhood deaths from diarrhoea in many countries. Recent studies suggest that the currently recommended formulation of ORS recommended by the World Health Organization (WHO) may not be optimal, and solutions that contain lower concentrations of sodium and glucose may be more effective.



* No patients required intravenous infusion

India first to launch new ORS

Print story Email story Video Gallery

Wednesday, June 2, 2004 (New Delhi):

India became the first country today to launch the new WHO/UNICEF recommended ORS (Oral Rehydration Salts).

The ORS will decrease the number of deaths due to diarrhoea in children and bring down the severity of the disease.

"The new formulation not only prevents dehydration associated with diarrhoea but also cures the disease, which is the second largest killer of children in India, claiming about 600,000 lives," Health Minister Anbumani Ramadoss said in New Delhi while launching the new ORS.

The government has already decided to procure the new ORS from now onwards, which is less expensive than the previous product.

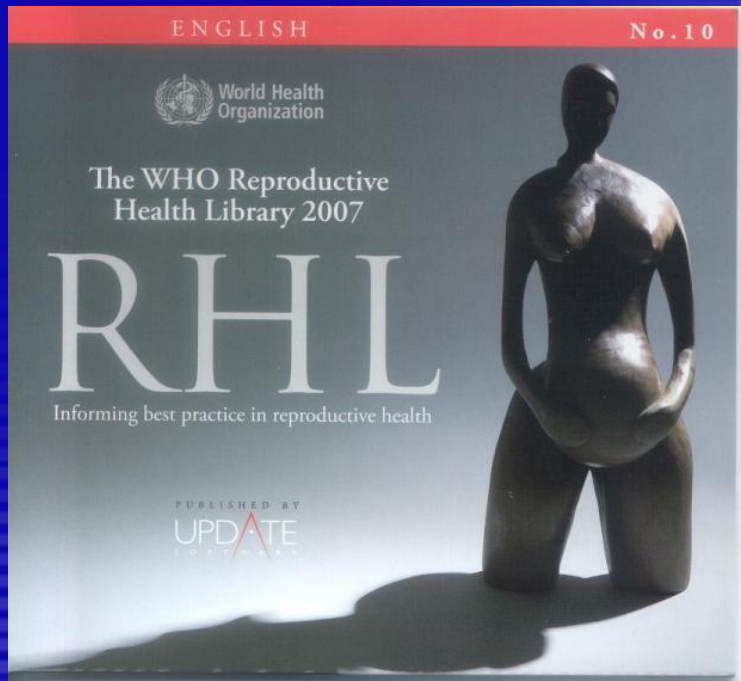
Facilitators

- WHO/UNICEF recognised Cochrane review as independent
- Personal contact between CRG and WHO
- Equipoise present
- Trials existed allowing for meta-analysis
- Review findings conclusive
- Policy change could be implemented centrally– change to product manufacture

Garner et al. BMJ, 2004

Local Practice Case Study: The Better Births Initiative

- Aims to ensure clinical obstetric practice grounded in reliable research evidence
- Workshops and outreach training draws on reviews in the Reproductive Health Library



Findings

- Pre-post test design in 10 hospitals in Gauteng, South Africa
- Improvements in practice at some sites at 4-6 months
  - Reduced enema, shaving & episiotomy
  - Increased use of oral fluids and companionship during labour

Smith at al, SAMJ, 2004

Facilitators to success

- Workshops used an informal environment
- Bright, attractive, concise materials
- Good working staff relationships
- Enthusiastic and motivated staff
- Involvement of opinion leaders before programme implementation

Smith et al, SAMJ, 2004

How does this compare to what we know?

- Commonly reported facilitators:
  - Personal contact
  - Timely relevance
  - Summaries with policy recommendations
- Commonly reported barriers:
  - Absence of personal contact
  - Lack of timeliness or relevance
  - Mutual mistrust
  - Power and budget struggles

Innvaer et al., J HSR & P, 2002

Generalizability

- Personal contact
- Leadership
- Advocacy

BBC News | AFRICA | Joy at SA Aids drugs victory - Microsoft Internet E

http://news.bbc.co.uk/1/hi/world/africa/1285971.stm

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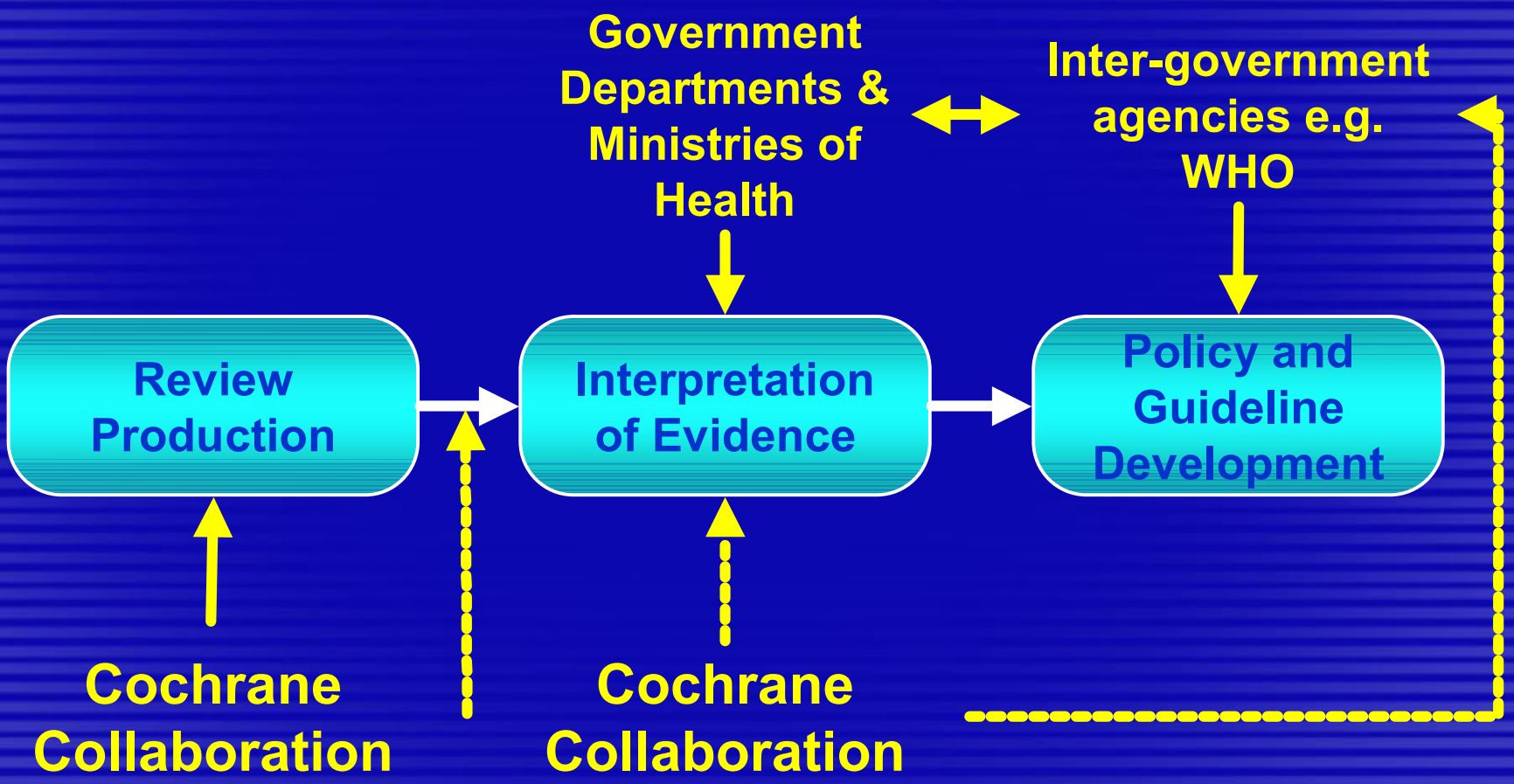
Letter From America
UK

Aids activists are celebrating what is being seen as a landmark victory in the effort to secure medication for Africa's 26 million HIV

Healthcare decision-making



Opportunities

- Reduce cost of *The Cochrane Library* especially national licences
- Centre core activity to include training of policymakers
- Priority reviews to be identified by CRGs working with policymakers at a local and global level
- More active engagement with consumer groups in poor countries
- Adapt Cochrane principles of a systematic approach to translation research
- Dissemination and advocacy to be considered a core function overall

Leadership and advocacy

"Progress in the way that WHO develops and disseminates recommendations for member states, and in how it supports member states in their efforts to adapt and implement recommendations, will require leadership."

Oxman et al. Use of evidence in WHO recommendations. (2007) Lancet: 369: 1883-9

Sir Iain Chalmers founded Cochrane Collaboration in 1994: change agent, advocate and revolutionary

Global warming has its advocate

Who will be the advocate for research translation in poor countries?

The Nobel Prize 1947

"Science is only science when it involves constant progress and improvement arising from research. Thus, there are only two possible standpoints: that of tuggers and that of others being tugged.

In other words, you may either create knowledge at the same time others do, or accept a subordinate position and depend on what others produce…

Wise countries do not live waiting for saints or miracles to occur."

Bernardo Houssay

quoted in Ortiz et al, PLoS Med, 2005