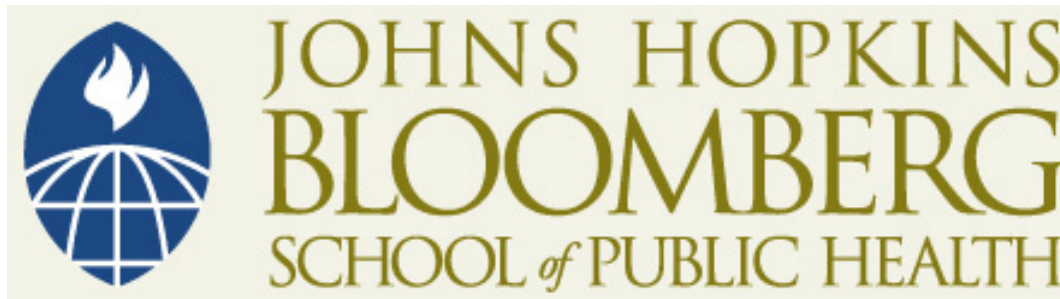


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# Session 11: Access to Essential Medicines

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Keith Johnson

Management Sciences for Health



JOHNS HOPKINS  
BLOOMBERG  
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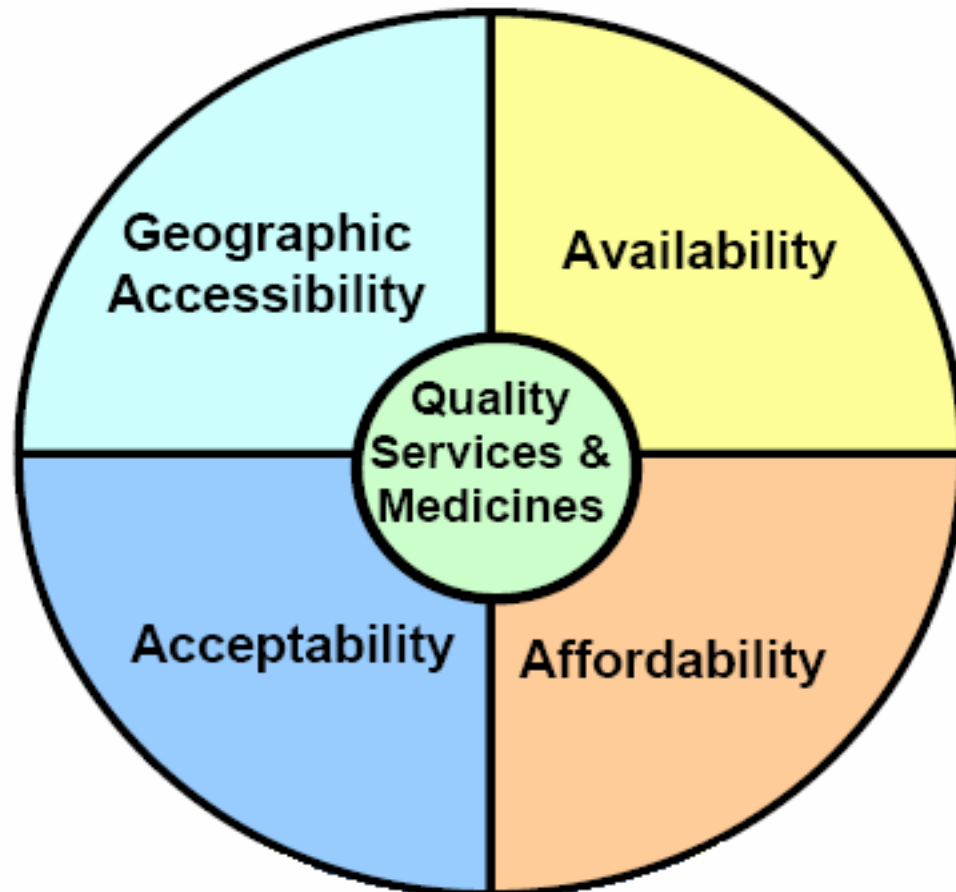
# Unit Objectives

1. Understand the different dimensions of access
2. Explain how to appraise access to essential drugs at the community level
3. Describe different types of community participation that affect access
4. Describe how to do a community needs assessment
5. Describe recent innovations to improve access involving the private sector
6. Expand the main factors influencing cost, use, and access to pharmaceuticals

# What Is Access to Medicines?

- Access: “potential” use (freedom or ability to obtain a medicine)
- Use: “accomplished” access “exercised” (freedom or ability to utilize obtained medicine)
- Medicinal products or services may be accessible (available, affordable, etc.) but not necessarily used

# Framework for Assessing Access to Medicines



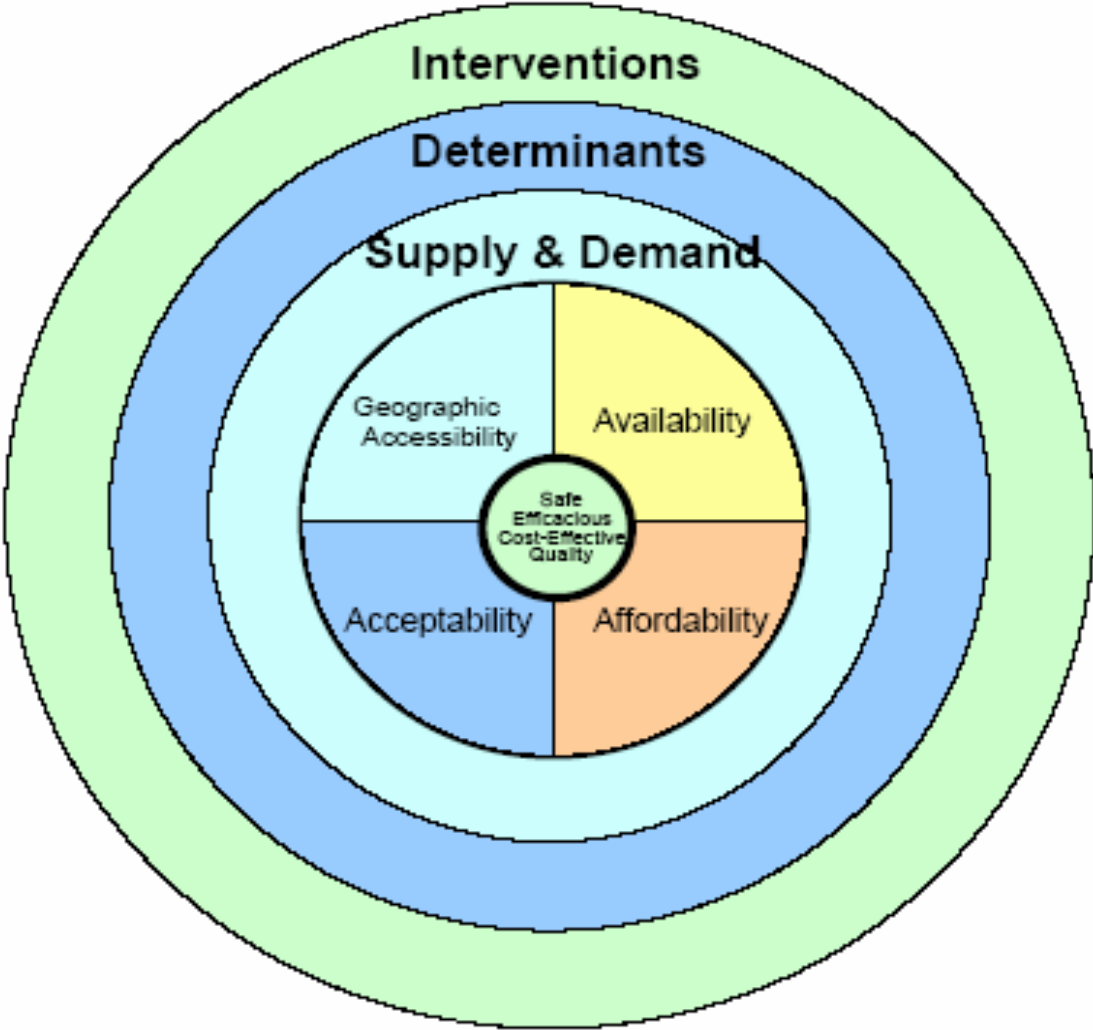
Source: MSH: Management Sciences for Health. Used with permission.

# Framework for Assessing Access to Medicines

## Supply and Demand Factors



# Framework for Assessing Access to Medicines



Source: MSH: Management Sciences for Health. Used with permission.

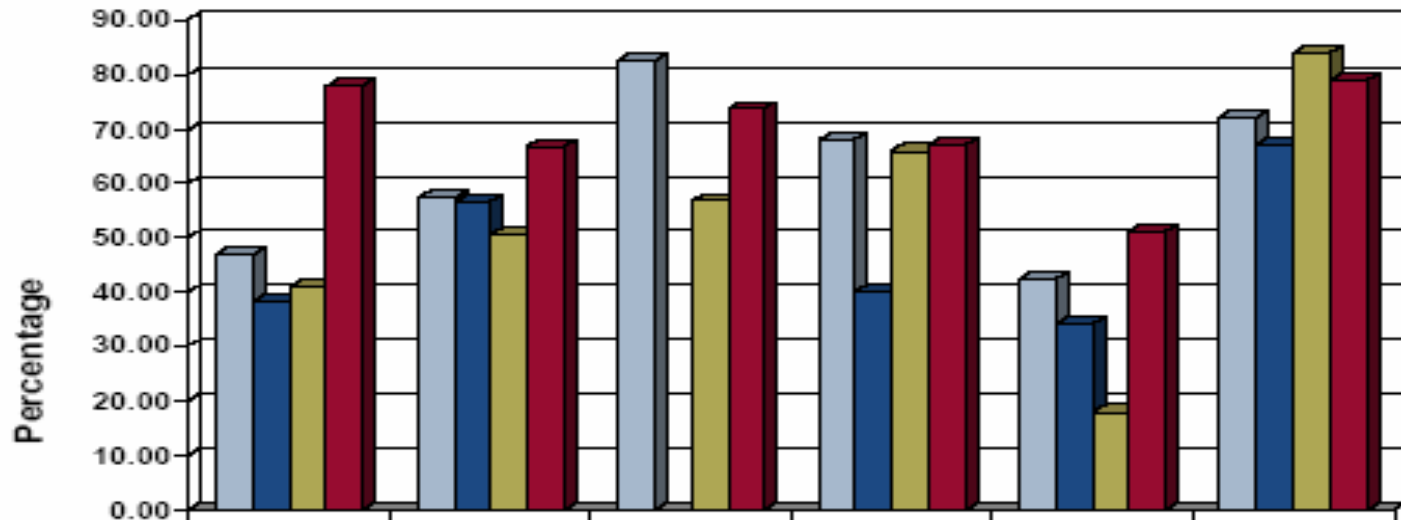
# Availability

- Relationship: Supply vs. demand
- Determinants:
  - Inadequate forecasting of needs, procurement practices, manufacturing capacity
  - Demand for alternative products, etc.
- Interventions:
  - Essential medicines list
  - pooled procurement



# Availability: Selected Countries

Percentage of a Set of Unexpired Key Items in Stock



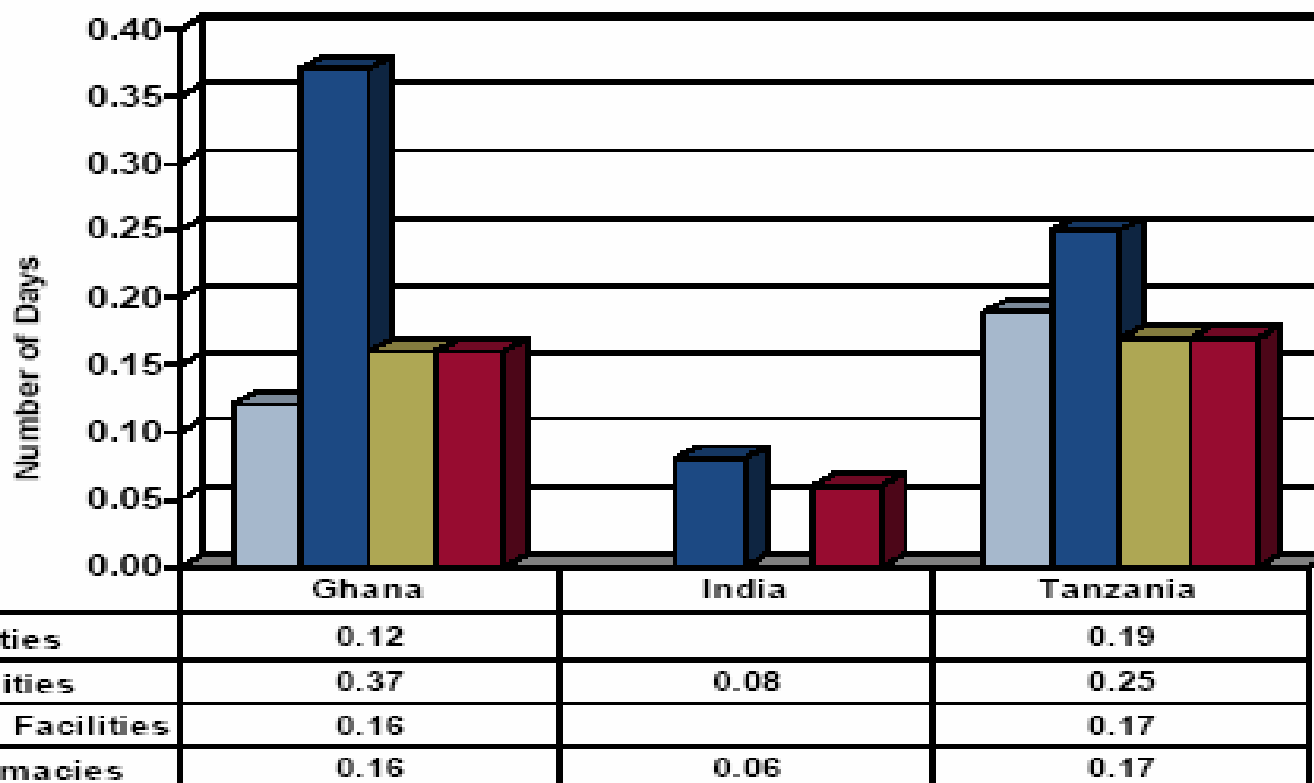
	Brazil	Cambodia	El Salvador	Ghana	India	Tanzania
Public Facilities	46.90	57.29	82.49	68.00	42.60	72.00
Private Facilities	38.10	56.42		40.00	34.30	67.00
NGO/Mission Facilities	41.00	50.35	56.75	66.00	18.00	84.00
Private Pharmacies	78.00	66.82	73.70	67.00	51.00	79.00

# Affordability

- Relationship: Price, cost, value vs. user's income or ability to pay
- Determinants:
  - Lack of product competition
  - Unemployment or level of income
- Interventions:
  - Generic or therapeutic equivalence policies
  - Social insurance, income generation measures

# Affordability: Ghana, India, Tanzania

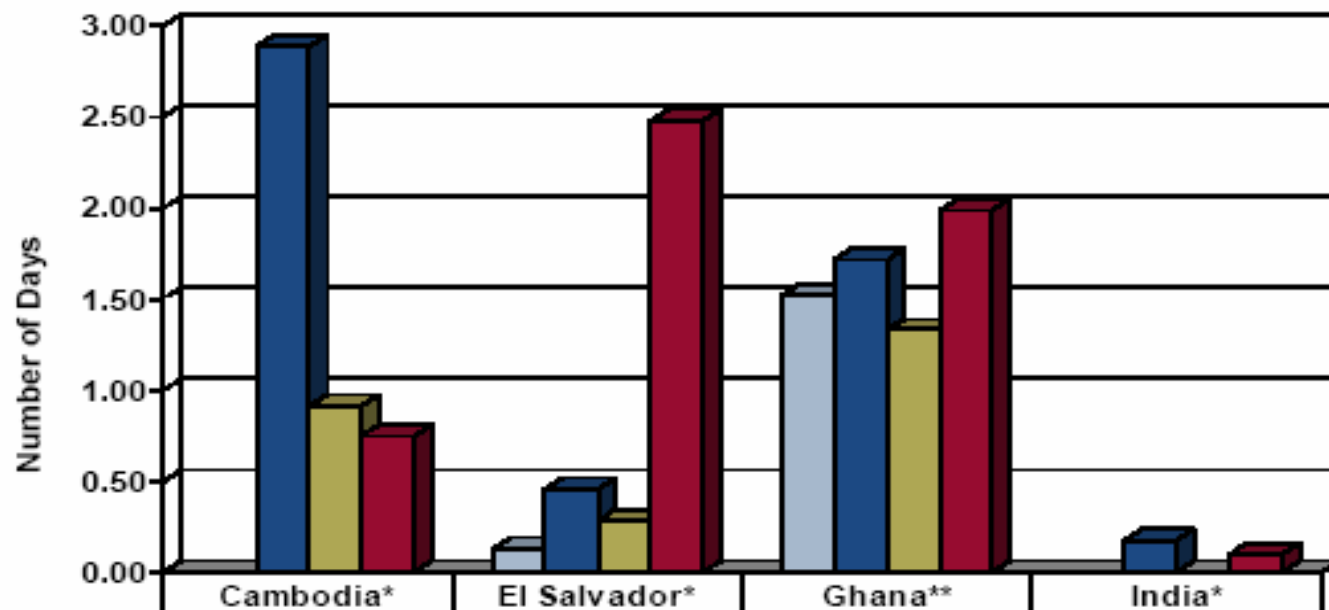
Number of Days Needed to Pay for Malaria Treatment (Chloroquine)



Note: For Tanzania – Sulfadoxine + Pyrimethamine

# Affordability: Cambodia, El Salvador, Ghana, India

Number of Days Needed to Pay for Pneumonia Treatment



Public Facilities	0.13	1.52	0.17	0.13
Private Facilities	2.89	0.45	1.72	0.17
NGO/Mission Facilities	0.91	0.28	1.33	0.09
Private Pharmacies	0.75	2.48	1.99	0.09

\*Child 1–5 years old, co-trimoxazole; \*\*Adult, amoxicilline

Source: MSH: Management Sciences for Health. Used with permission.

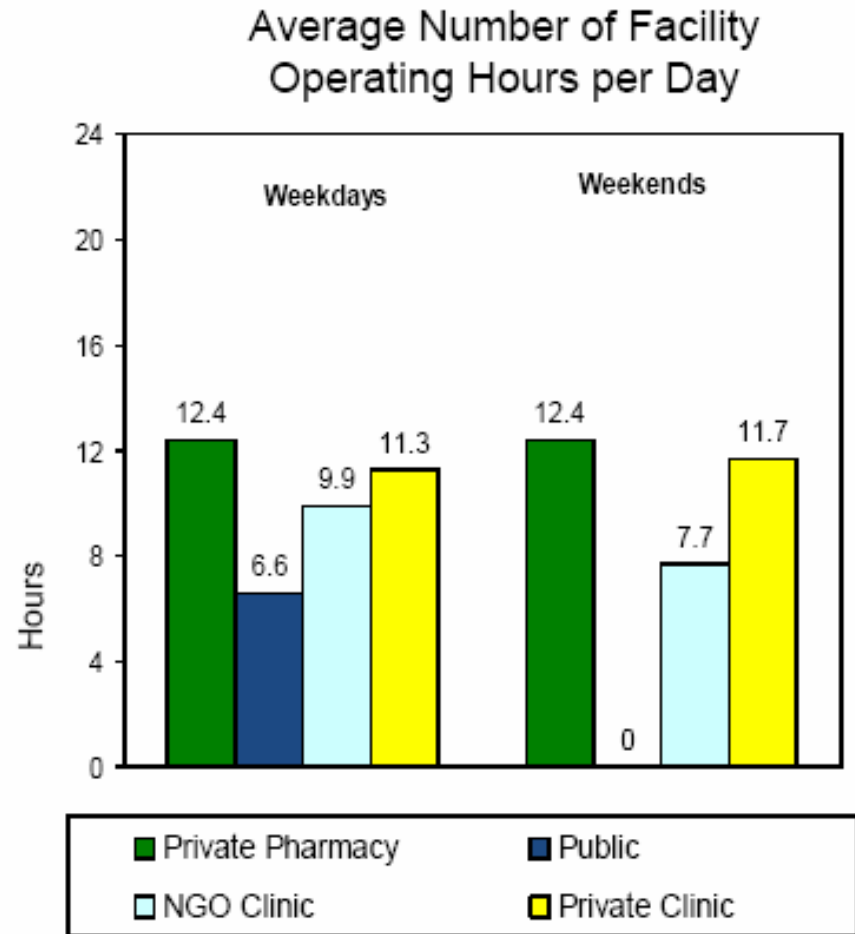
# Geographic Accessibility

- Relationship: Location of supply or services vs. location of user
- Determinants:
  - Insufficient economic incentives to operate retail drug outlets
- Interventions:
  - “Rural drug outlet” program
  - “Pharmacy franchise” program

# Geographic Accessibility: Cambodia



- 35% of the population is more than 10 km or 2 hours' walk away from any basic health care facility



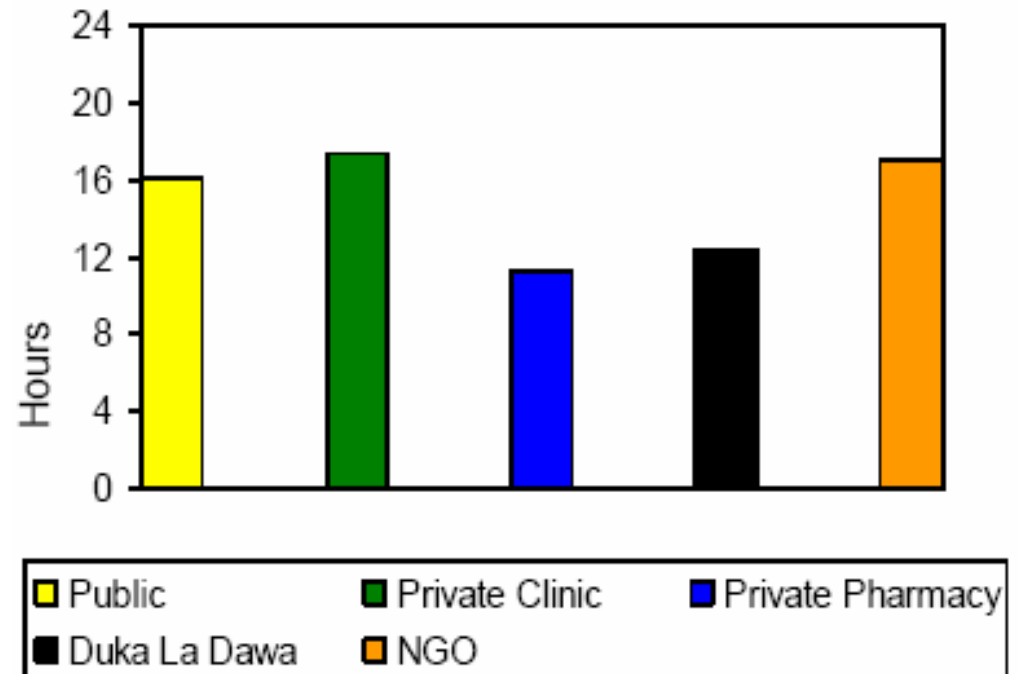
# Geographic Accessibility: Tanzania



## Distance to Health Facility

- 14% of the population is more than 10 km away from public facility
- 6% is more than 10 km away from private drug retailer

Average Number of Facility Operating Hours per Day

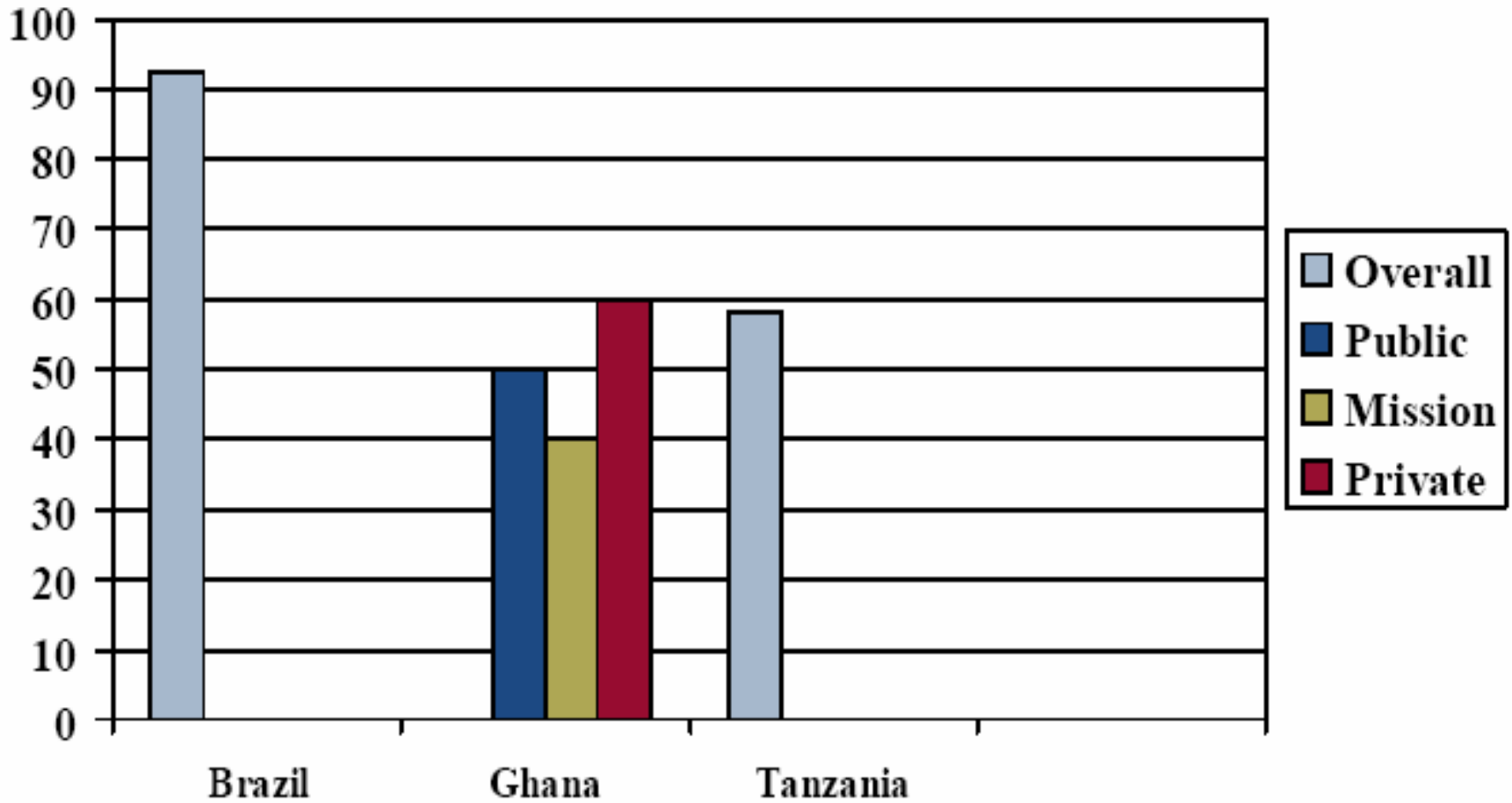


# Acceptability

- Relationship: Characteristics of products and services vs. user's attitude toward, perception of, or expectations of products and services
- Determinants:
  - Product appearance (color, container)
  - Information (pharmaceutical equivalence, indications, instructions)
- Interventions:
  - Product change
  - Information program
  - Customer service improvements



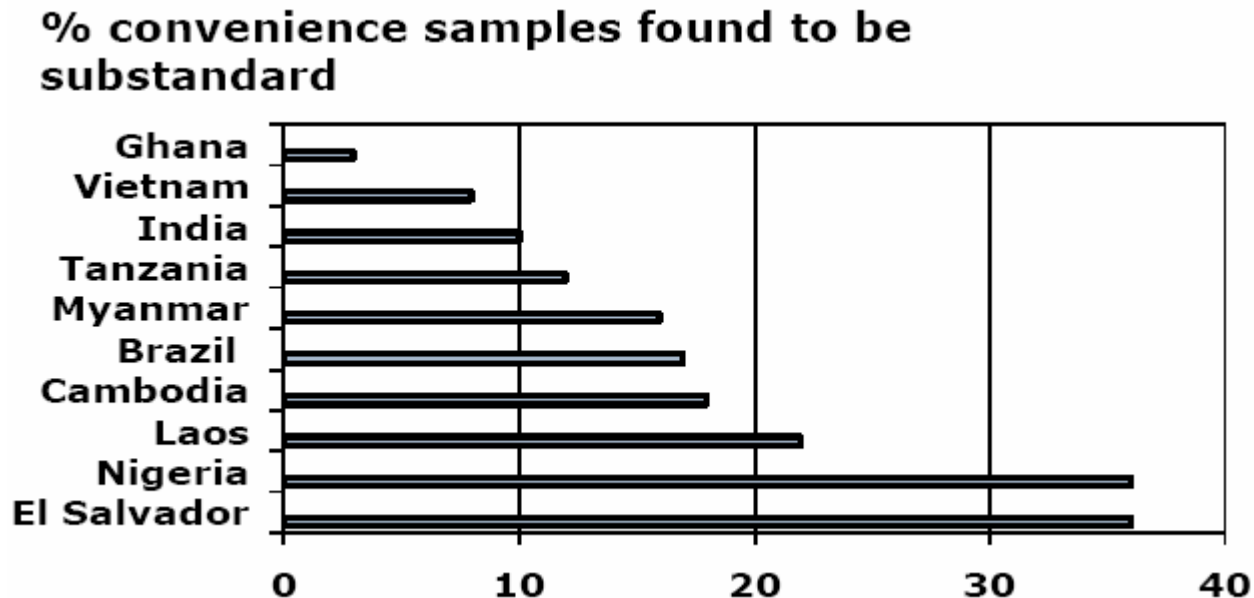
# Acceptability/Satisfaction



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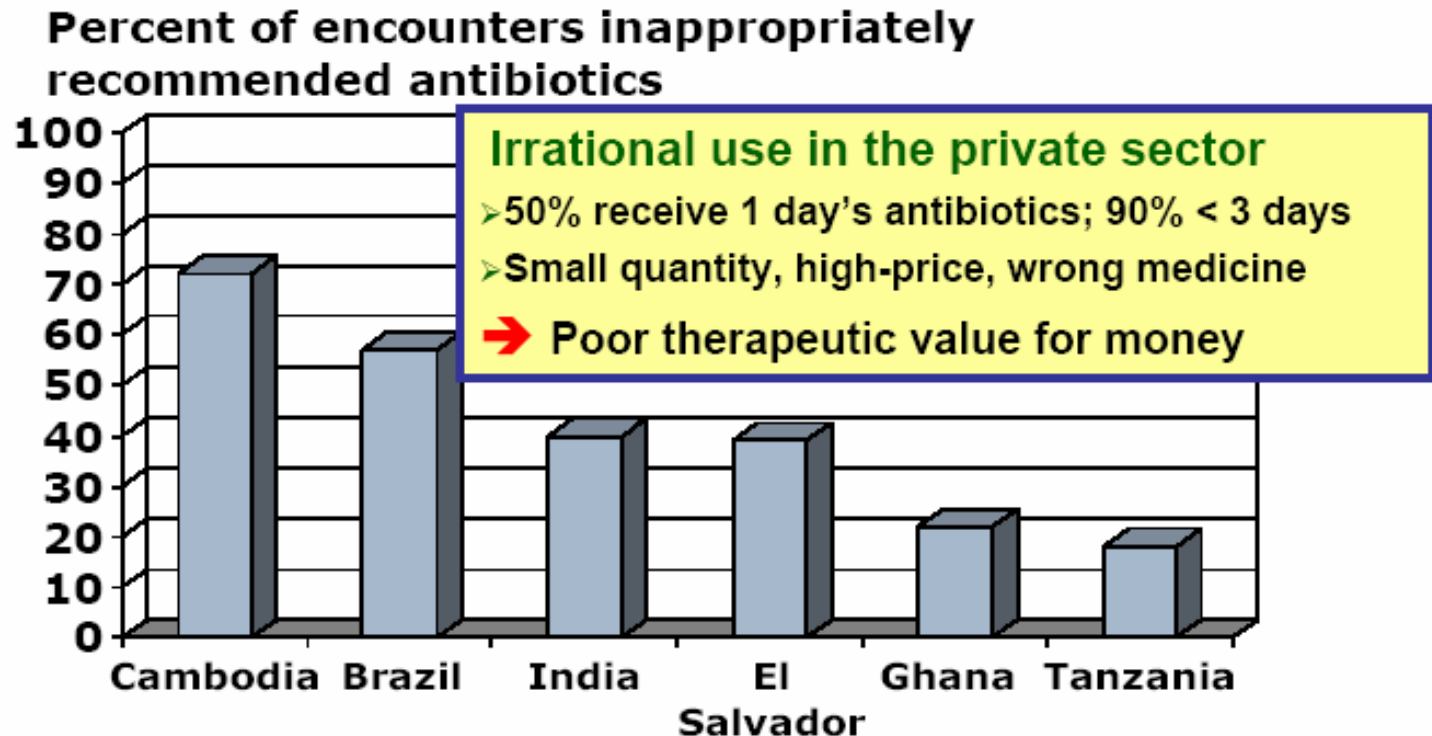
# Product Quality

Unreliable Medicine Quality –3 to 36 % of samples are substandard; a health hazard



# Service Quality

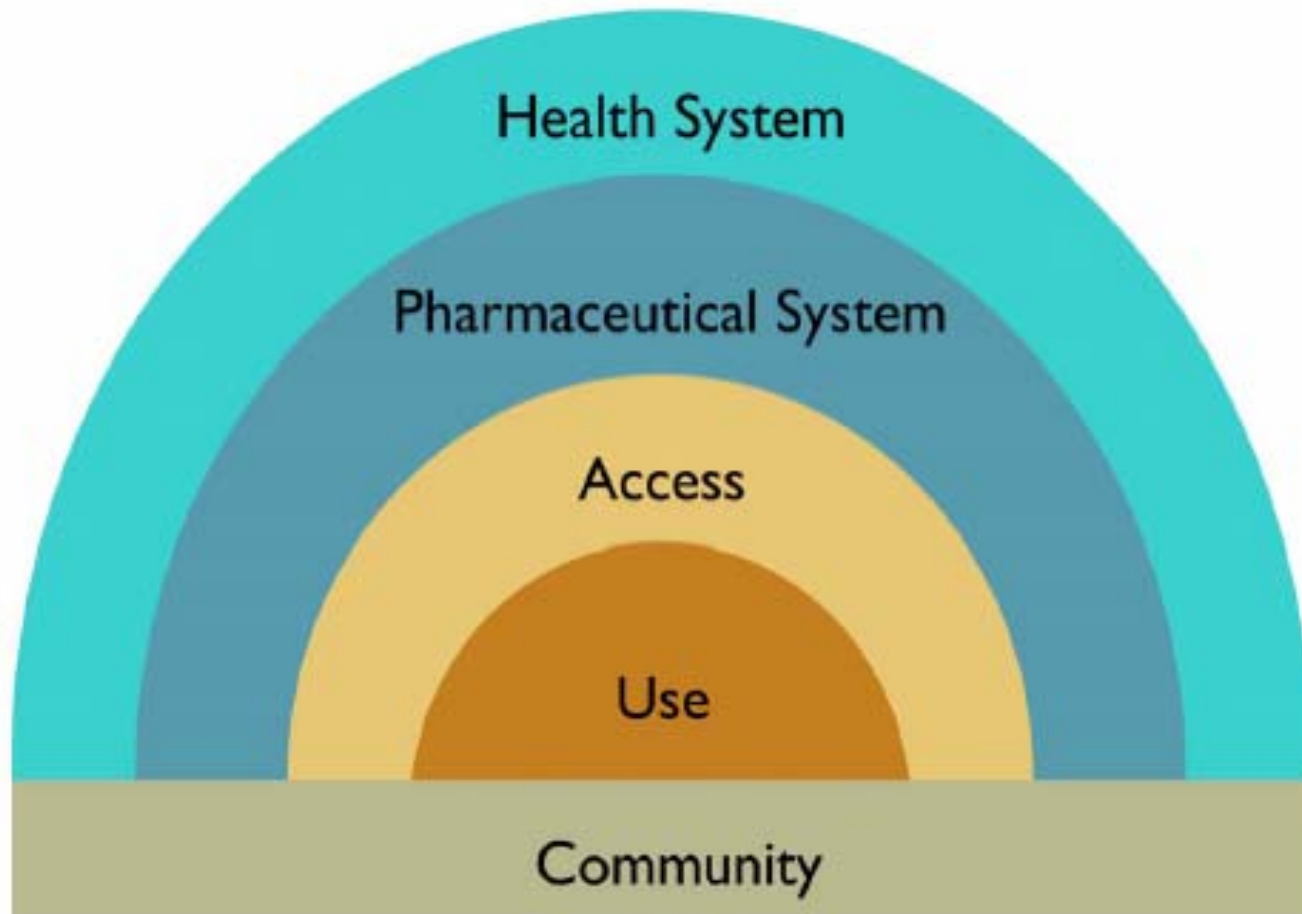
18 to 72% of antibiotics are inappropriately recommended



# Designing and Implementing Interventions

- Intervention should address identified access gaps
- Multifaceted targeting of different barriers is more likely to succeed than single interventions
- Evaluation of impact is essential

# Pharmaceutical Management, Access, and Use of Medicines



Source: MSH: Management Sciences for Health. Used with permission.

# Available Methods and Indicators

- Indicators for monitoring national drug policies
- Operational package for monitoring and assessing the pharmaceutical situation in countries
- Access indicators
- Price monitoring
- Logistics assessment indicators
- Pharmaceutical supply systems assessments
- Studies of drug use in health facilities
- Studies of drug use in communities



# Tanzania

Demographics	Tanzania
Area (sq km)	945,100
Population	32,900,000 25% urban
GNP per capita	USD 240
Human Development Index	0.358 (150/174)
Literacy rate	Male: 84% Female: 65.7%
Infant mortality rate	94.8 per 1,000
Life expectancy	47 years

# Strategies to Improve Access in Tanzania

Gaps	Interventions
Availability, especially in public sector	Approving additional sources of supply to Medical Stores Department for public sector
Accessibility –14% more than 10 km of public facility; 6% more than 10 km of private drug retailer	A regulated network of accredited drug dispensing outlets (ADDOs)
Quality and affordability of products and services, especially in the private sector serving rural areas	A quality assurance strategy to permit improved screening of drugs entering and circulating in the market



# Where Do Tanzanians Buy Their Medicines?

- 339 Part I drug outlets (pharmacies)
- More than 4,000 Part II drug shops (*dukala dawa baridi* [DLDB])
- Population is largely rural; only 17% have access to private pharmacies
- DLDB shops more accessible to population than all other public or private drug outlets

Drug Outlets Per Capita Population: 33.97 million		
	# Facilities	Facilities per Capita
Part II shops (DLDB)	4,627	7,343
Public facilities	2,907	11,687
Voluntary/religious	772	44,009
Private	934	36,375
Private pharmacies	339	102,026
Parastatal	211	161,017

# So Where Do We Target Drug Access Interventions?

**Sutton's corollary: Go where the people go**

- Public sector (rarely over 25% of encounters)
- Mission/faith-based/NGO sector (up to 40% in rural areas)
- Traditional medicine (high usage in some areas)
- Private commercial sector (40–60% of encounters)

# Tanzania Drug Shops –*Dukala Dawa Baridi* or “Cold” Drug Shops

Most geographically accessible and the first stop for over 60% of population for accessing medicines



Source: MSH: Management Sciences for Health. Used with permission.

# Tanzania Drug Sellers –The Problem

- Unqualified, untrained staff
- Unknown drug quality
- Unreliable source of drugs
- High drug prices
- Inadequate regulation
- Insufficient variety of legally available drugs



Source: MSH: Management Sciences for Health. Used with permission.

# Tanzania Drug Sellers –The Strategy

- *Dukala Dawa Muhimu* (essential drug shops)
- Accredited Drug Dispensing Outlets (ADDOS)
- TFDA regulations and standards of practice
- Training (both business and dispensing skills)
- Incentives (loans, mentoring, expanded list of legally sold drugs, marketing)
- Regulation and inspection – Local strategy
- Drug supply – Local sources; TFDA approved products

# Tanzania Drug Sellers –The Results

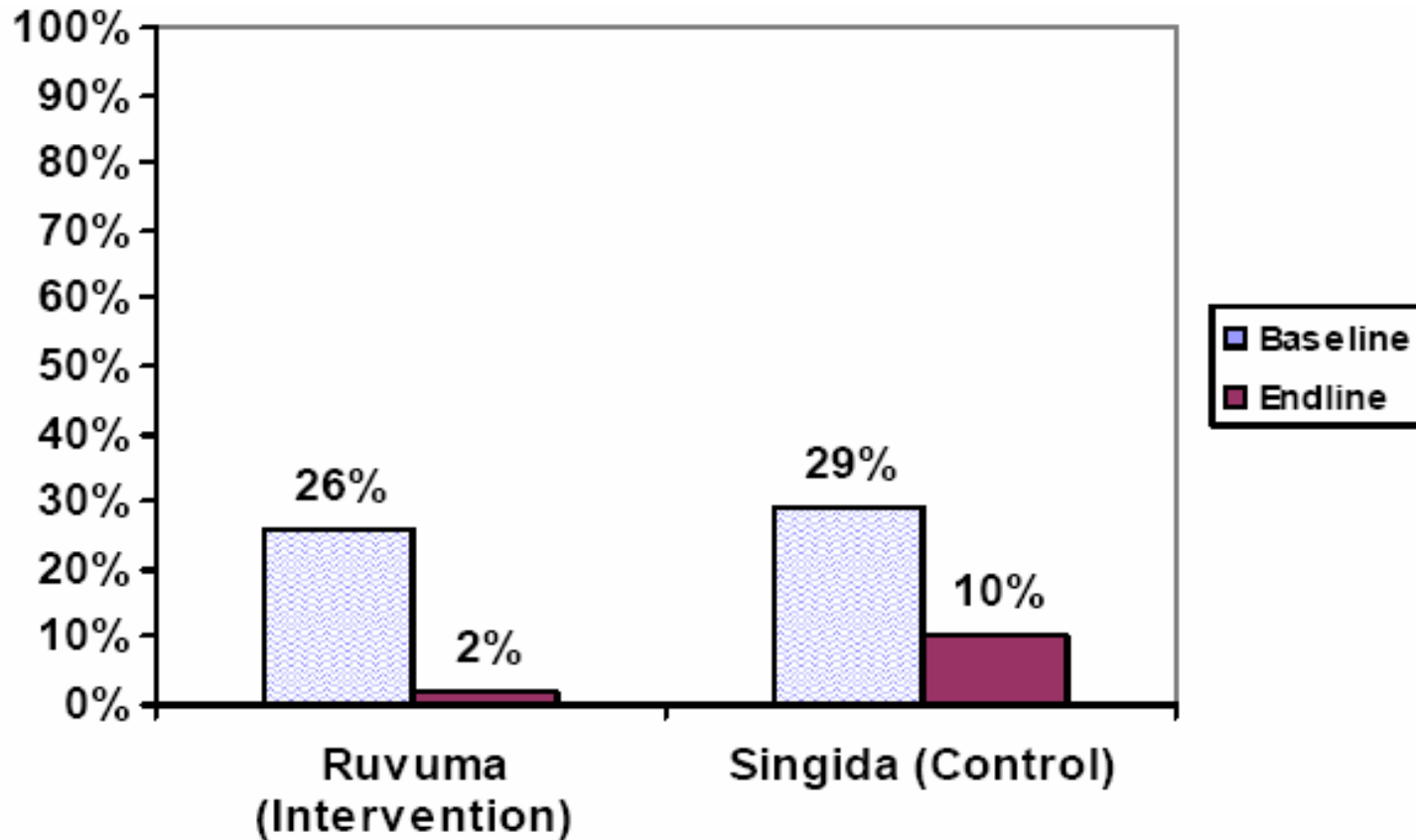
Accessibility – 156 ADDO shops are open, with 36 applications pending (80 originally targeted); evaluated using the Singida Region as control



Source: MSH: Management Sciences for Health. Used with permission.

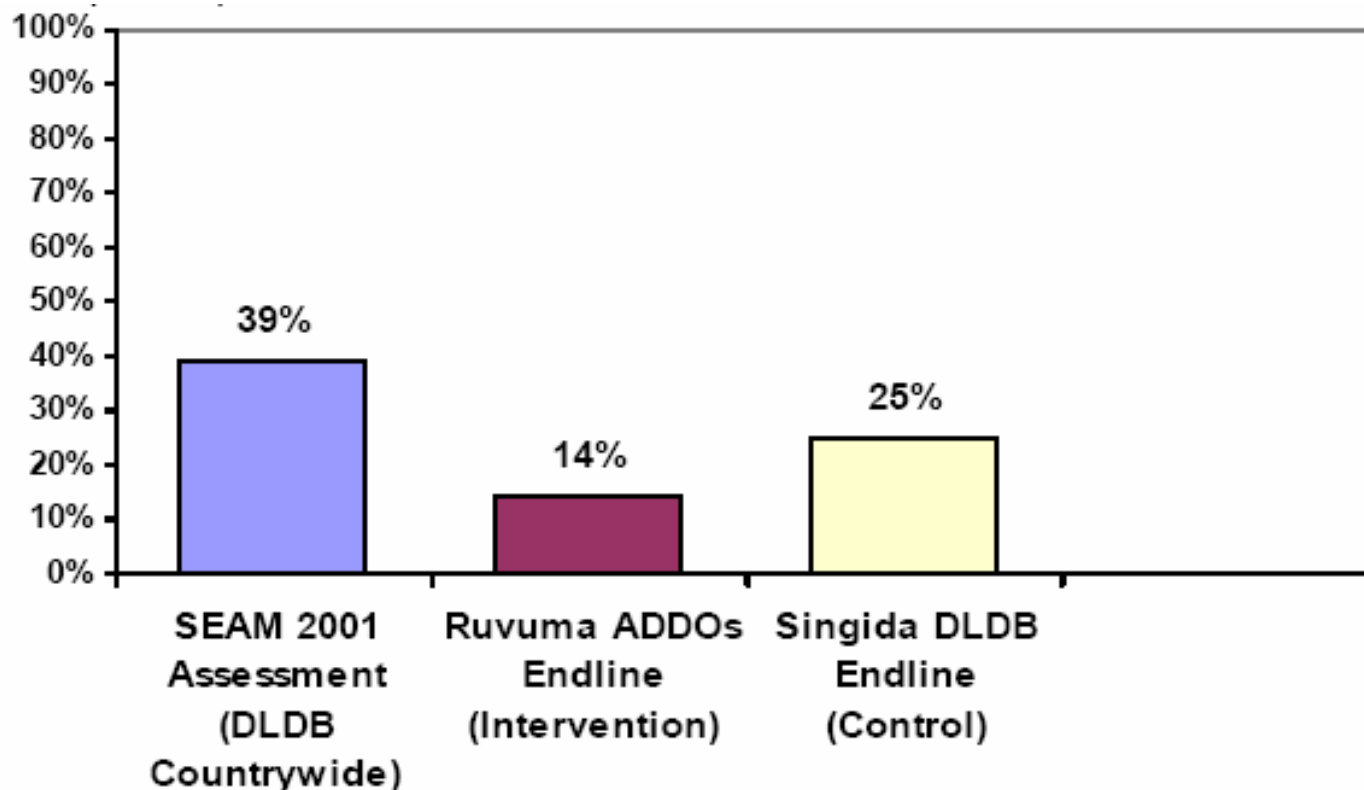
# Product Quality

People in intervention group have a 1 in 50 chance of buying an unapproved drug, compared to a 1 in 10 chance in control group



# Service Quality

Fewer ADDO attendants (14%) sold/recommended antibiotics for URTI in intervention group at endline than during nationwide assessment (39%) or in control group at endline(25%)

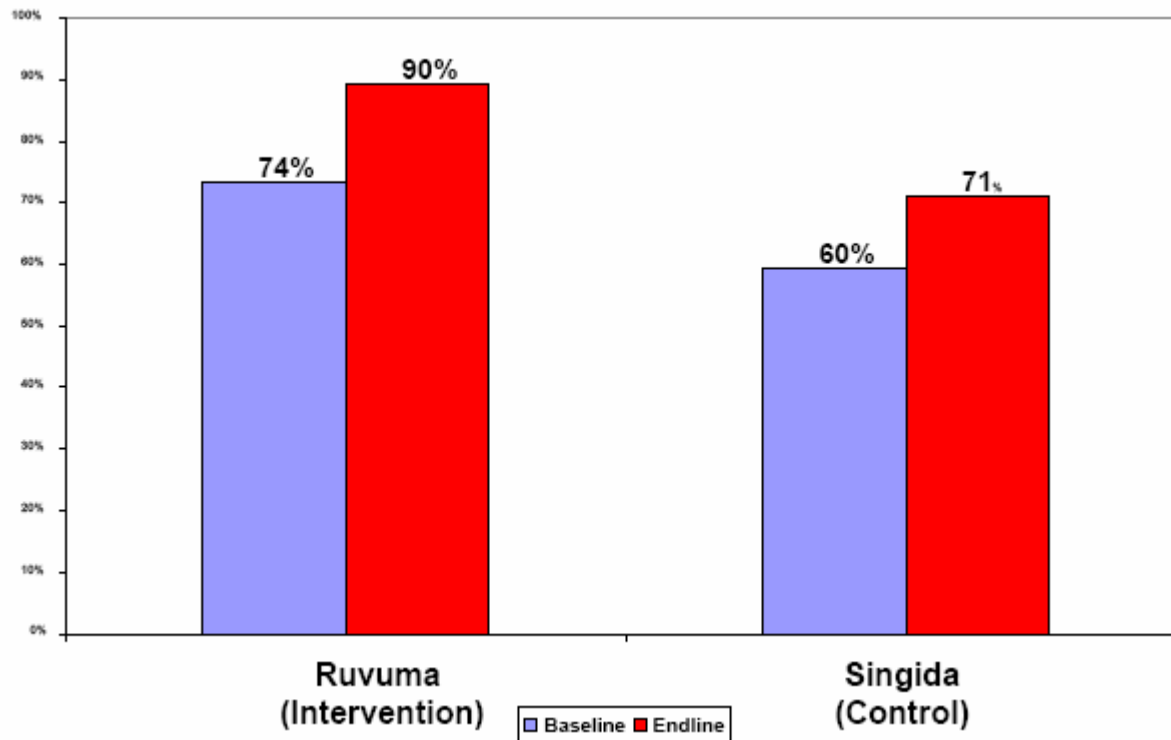


Source: MSH: Management Sciences for Health. Used with permission.



# Availability

In intervention group, average availability of antimalarials increased from 74 to 90% vs. 60 to 71% in control region



# Affordability

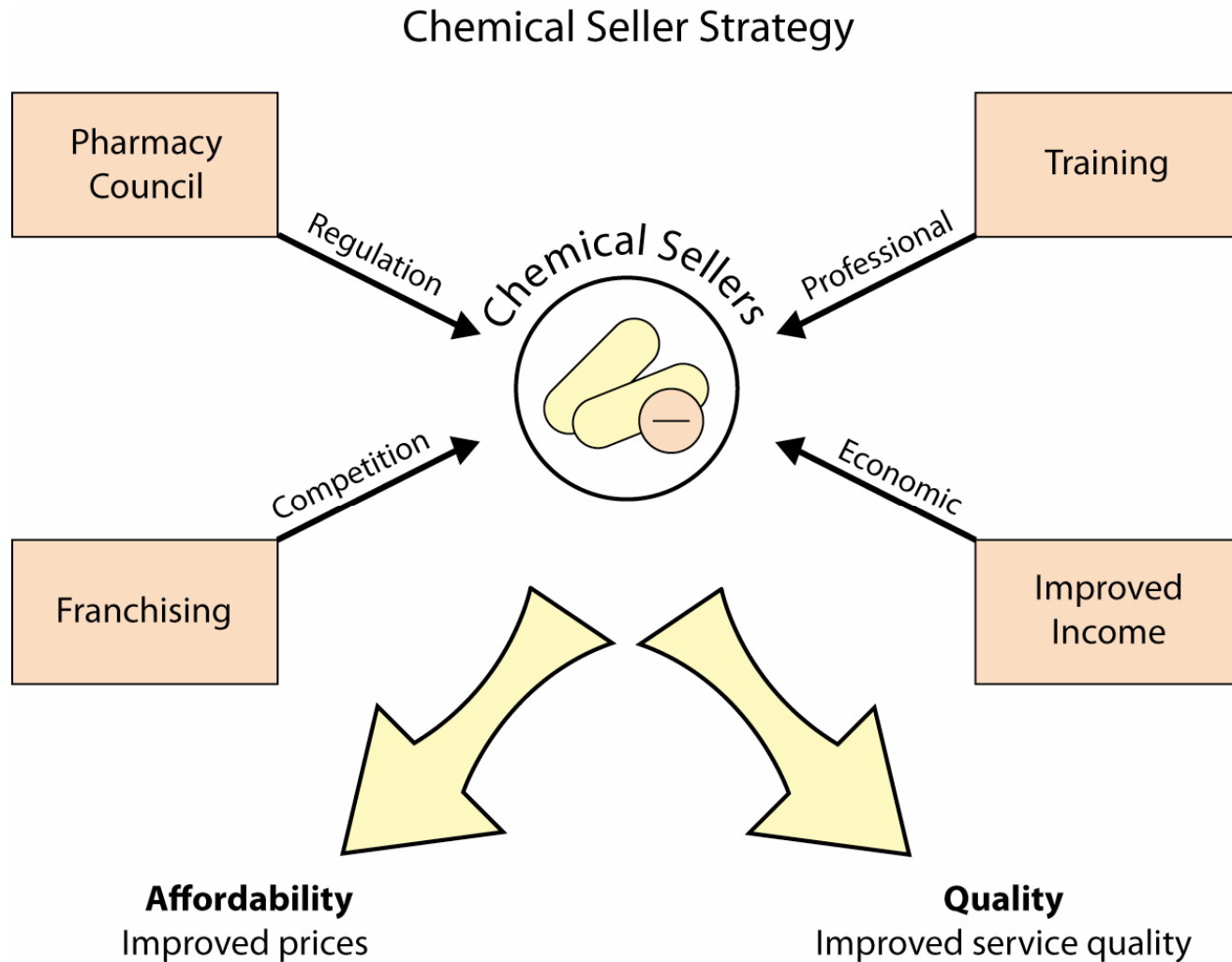
**Average median prices increased slightly from baseline to endline in both intervention and control groups**

- Prices in Ruvuma are now more in line with national market prices; tracer item prices same in both regions at end-line
- Median cost of course of treatment for malaria and URTI was better in intervention group 60% less for malaria (TSH 200 in Ruvumavs. TSH 500 in Singida) 10% less for URTI (TSH 900 in Ruvumavs. TSH 1000 in Singida)
- Customer base remained stable in intervention group

# Tanzania Drug Sellers –The Future

- National roll-out
  - Government of Tanzania buy-in; funding
  - USAID support for 2 initiatives; other donors
- Expanded services (e.g., child health, HIV/AIDS, malaria)
- Next steps:
  - Developing and testing roll-out strategies; coordination of donors
  - Refinement of training, supervisory, and inspection roll-out strategy and support
  - Roll-out sustainability with continuing government and donor commitment

# Chemical Sellers Intervention in Ghana



# Ghana Chemical Sellers –The Strategy

1. CAREshop®chemical sellers franchise
  - For-profit franchisor (GSMFEL); business plan
  - Conversion/upgrading of selected LCS shops
  - 5-week training; ongoing mentoring/supervision
  - Pooled procurement and supplier negotiation
  - Central marketing/promotion;
  - CAREshopline
2. Regulation and supervision
  - Pharmacy Council
  - Franchisor supervisory visits (monthly)

# Ghana Chemical Sellers: The Results

Accessibility—263 CAREshops are open (250 originally targeted) with 40 more shops scheduled to open each quarter; evaluated against Licensed Chemical Sellers (LCS) in Eastern/Volta Regions and LCS in Western Region



Source: MSH: Management Sciences for Health. Used with permission.

# Ghana Chemical Sellers: The Results

- Service quality: Mixed results
  - Increased antimalarial dispensing (50 to 62%) compared with 3% decrease in control; but only 18% dispensed exactly according to treatment guidelines
  - 59% of staff asked about malaria symptoms (50% baseline; 31 & 27% for controls)
- Availability: Slight decrease in tracer items
- Affordability: Slight increase; median price 3% less than Eastern/Volta region controls
- Sustainability: Breakeven point now at 600 outlets

# Ghana Chemical Sellers: The Future

- GSMFEL committed to continued expansion
  - 600 outlets (rate of 40 per quarter)
  - Government support for roll-out and prioritization for donors
- Expanded public health services and products
- Next steps
  - Limited drug list, pooled procurement, and tendering/negotiations
  - Expanded line of CAREshop products
  - Control/recover costs of training and supervision
  - Investment capital/additional donor support for roll-out
  - Regional warehouses and operational facilities



# Drug Seller Initiatives: The Models

Feature	Tanzania	Ghana	Kenya
Structure	Independent drug seller shops (ADDOs)	Franchised chemical seller shops	Franchised drug shops or clinics
Focus of control	Government accreditation and regulation	Franchiser	Franchiser
Shop selection	Conversion or new	Conversion	New
Operators	<i>Duka la dawa muhimu</i> trained drug sellers	Licensed chemical sellers	Community health workers or nurses
Training	Owners and dispensers – 5 weeks	Owners and assistants – 5 weeks	Owners and assistants – 4 weeks
Supervision	ADDO project support	Franchiser (monthly)	Franchiser
Inspection and regulation	Local inspectors linked to TFDA	Franchiser (monthly) + Pharmacy Council	Franchiser (monthly)

# Drug Seller Initiatives: The Results

	Tanzania ADDOS	Ghana CAREshops	Kenya CFWshops
Business model viability	↑	↑	?
Product quality	↑	↔	↔
Service quality (rational use)	+/-	+/-	+/-
Affordability	↔	↔	↑
Availability	↑	↔	↔
Geographic accessibility	↑	↑	↑
Acceptability	↑	↑	↑
Government acceptance	↑ ↑	↑	↑

# Drug Seller Initiatives: Lessons Learned

1. Both accreditation/regulation and franchise models appear to increase accessibility
  - A. Country-specific determination
  - B. Platform for expanded public health services
2. Training and supervision are key components but are complex and need to be made more economical
3. Harmonized and limited product lists, coupled with good forecasting and pooled procurement, are essential
4. The regulatory component, both internal and external, is critical to ensuring appropriate marketplace behavior
  - A. Complex and requires resource commitment
  - B. Decentralized regulation shows promise
5. Key stakeholder buy-in and participation are essential

# Drug Seller Initiatives: Challenges

- Assuring public health focus and working with public health initiatives
  - Child Survival
  - Malaria
  - TB/HIV
- Managerial and financial sustainability when scaling up
- Ensuring local source of quality products and maximizing affordability
- Reaching the “poorest of the poor”

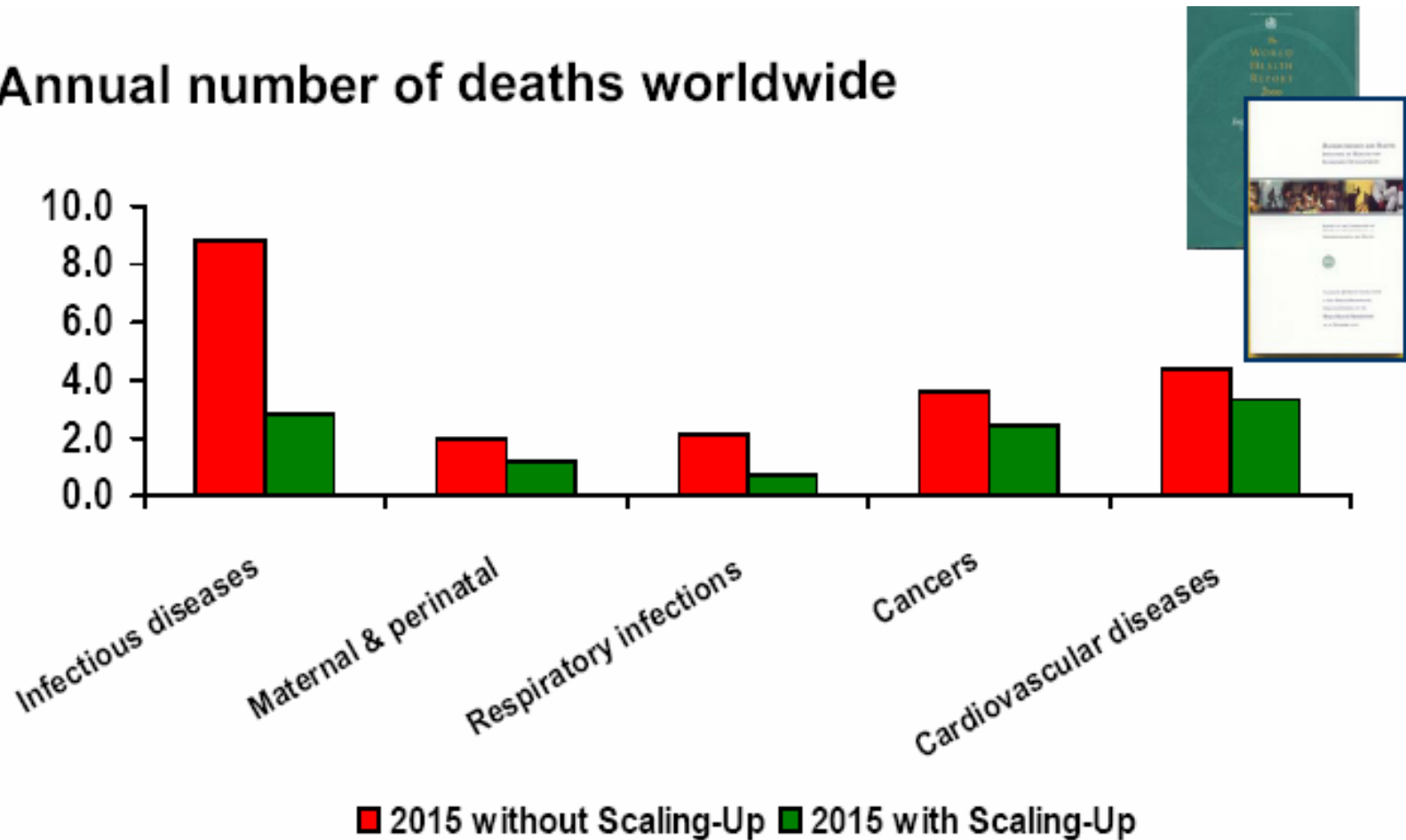
# Access to Essential Medicines

“...25 years ago, less than half the world’s population had regular **access** to essential drugs. Today, through a combination of public and private health systems, nearly two-thirds of the world’s people are estimated to have access to full and effective treatment with the medicines they need. In absolute terms, the number of **people with access** to essential drugs grew from roughly 2.1 billion in 1977 to 3.8 billion in 1997.”

*Source: World Health Organization (WHO). 1998. Revised Drug Strategy: WHO's Work in Pharmaceuticals and Essential Drugs. EB/RDS/RC/1. Geneva, Switzerland: WHO.*

# Access Gap –Scaling Up Existing Prevention & Treatment Would Save 10.5 Million Lives Per Year

Annual number of deaths worldwide

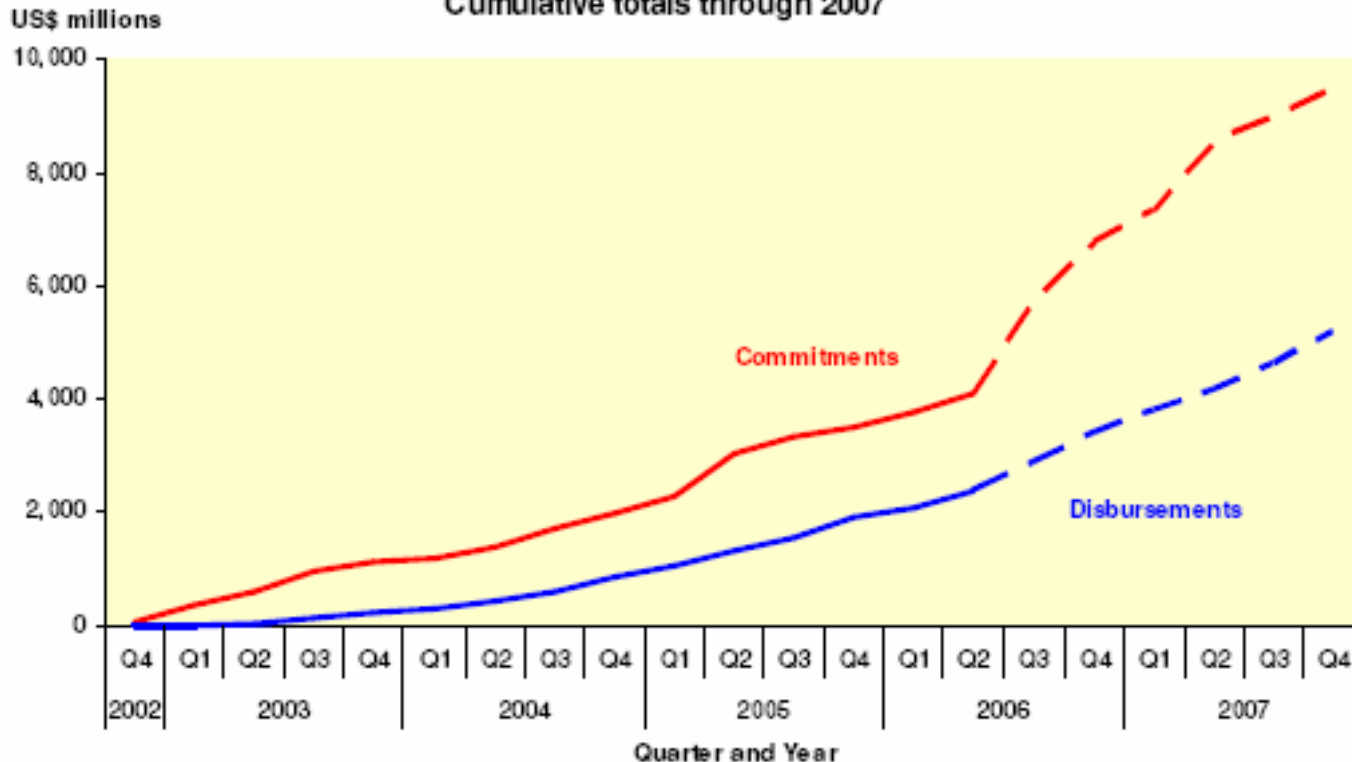


Source: World Health Organization.

# Implementation Gap

Technology & funding are vital –Scale-up is increasingly limited by inadequate existing public health delivery systems

Actual and Projected Commitments and Disbursements  
Cumulative totals through 2007<sup>1</sup>



**Commitments** follow Board approvals and represent the full amount of the Global Fund's liability for the period of the grant agreement. For Phase 1, this period is the first two years of the grant's lifespan. In the case of Phase 2 grant agreements, this generally refers to years three to five of the grant's lifespan, although not all grants are for a five-year period.

Incremental **disbursements** of the approved grant are made periodically, not all at once, and so they lag somewhat behind commitments. As new rounds are approved and new grant agreements are signed, commitment and disbursement figures rise accordingly.

<sup>1</sup>Assumes that Round 6 is approved in 2006 (at US\$ 1.1 billion) and that Round 7 is approved in 2007 (at US\$ 1.3 billion) for Phase 1 (years 1 & 2), and that renewal requests for Phase 2 (years 3 to 5) are approved when eligible. Incorporates assumptions regarding renewal rates, disbursement rates and other variables.

# Summary

- Access is a construct that encompasses various distinct dimensions
- The proposed analytical framework is useful to measure the various dimensions, identify determinants, and design interventions to improve access
- Experience with the use of proposed indicators is increasing
- We've got a long way to go to achieve universal access and equity