ACT Subsidy Update

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Expert Workshop on a High-Level Buyer Subsidy for ACTs

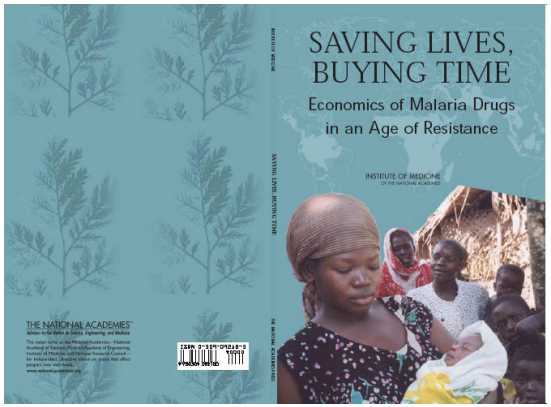
Amsterdam
18 January, 2007

Agenda

- **Plenary presentation**
- **Break-out presentations and discussions**

Status of work on ACT Facility

2004 — 2005 — 2006 — 2007 — 2008



- Institute of Medicine (IOM) Report outlines economic rationale for ACT subsidy (2004)
- Recommends commitment of funds within 5 years

- Laxminarayan, Over & Smith, 2006 conduct research that determines that: *a subsidy for ACTs – even a partial one – would save lives*
- Presentations in Cairo and elsewhere building support

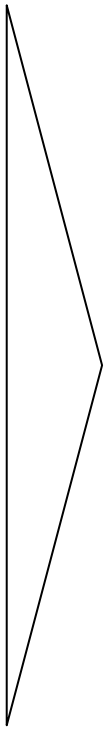
Status

- Gates Foundation and RBM support, World Bank facilitation of design of ACT Facility
- Consultants and expert team retained to refine design and implement
- Target launch in 6-9 months

The business case for the ACT Facility

Current ACT situation

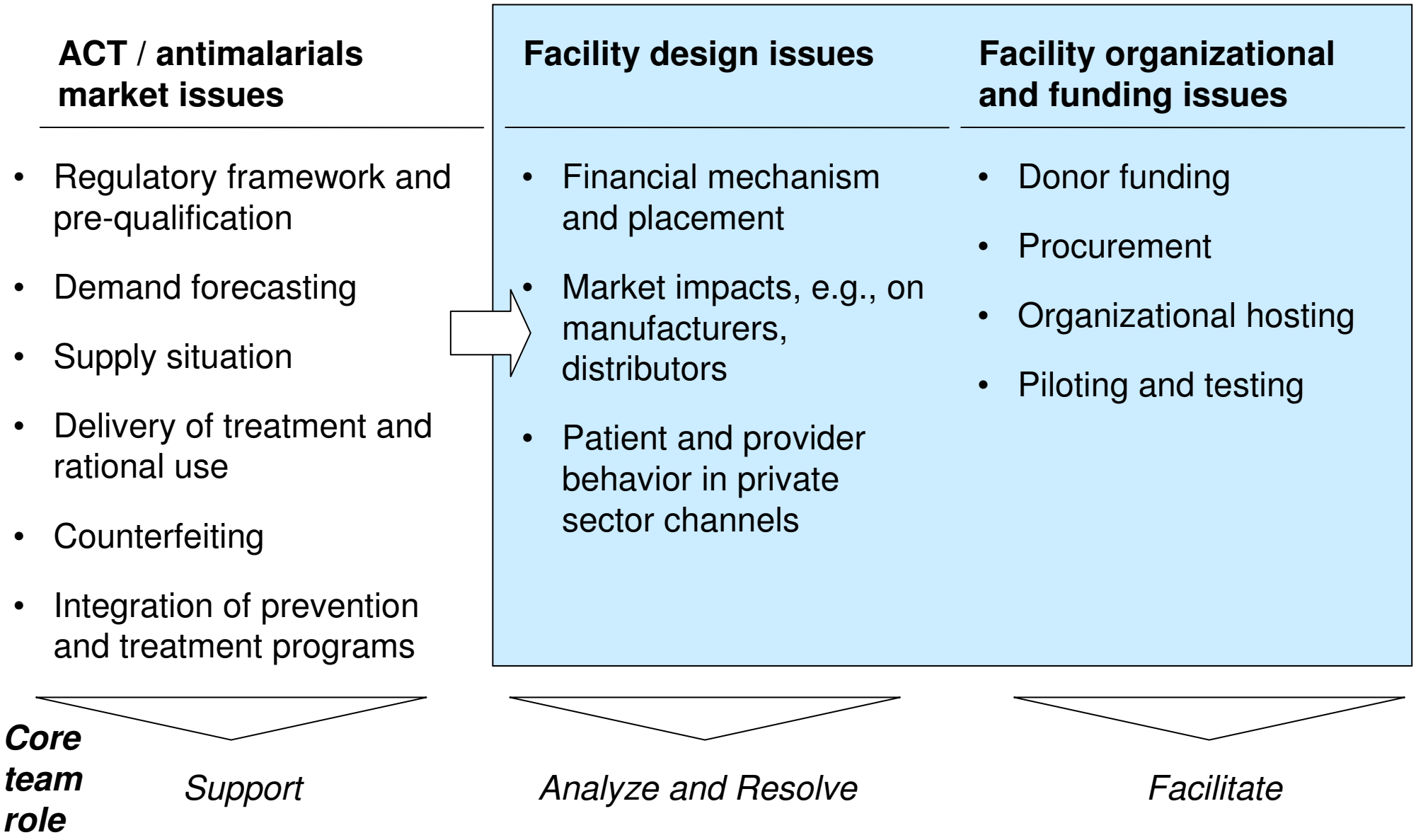
- Most effective malarial medicine
- Only reaching 20% of the market
  - High price compared to chloroquine
  - Sustainable financing issues in the public sector
  - Limited access to ACTs in private sector where 50-70% of anti-malarial treatments are obtained
  - Use of AMT promoting resistance
  - Counterfeits filling the gap



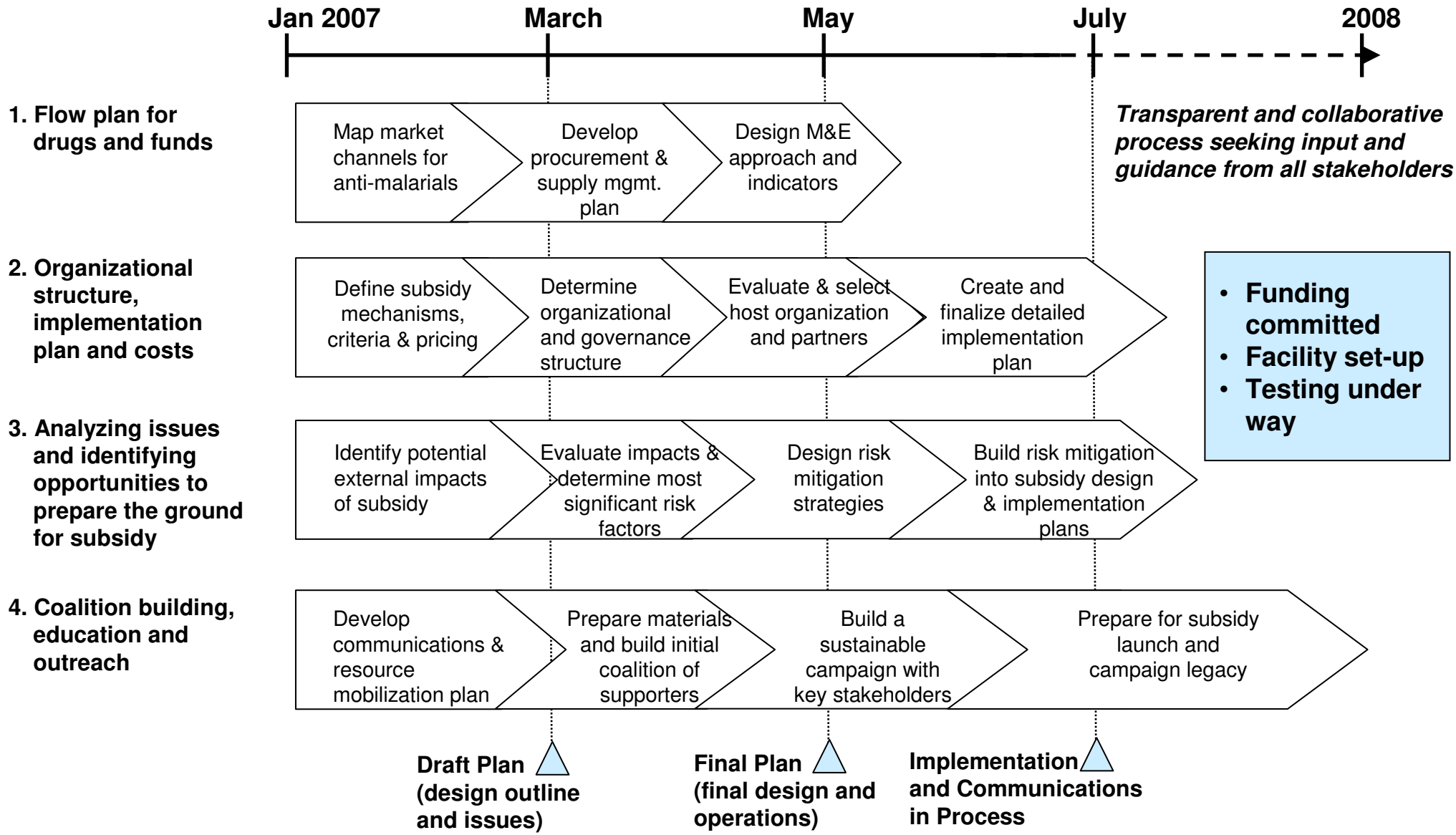
Facility

- Increases access to ACTs
  - Reduces financial burden for public sector
  - Enables penetration of non-public channels including community projects, NGOs, franchise drugstores
- Delays resistance by undercutting AMT price
- Undermines counterfeit market
- Improves predictability and sustainability for manufacturers and public sector

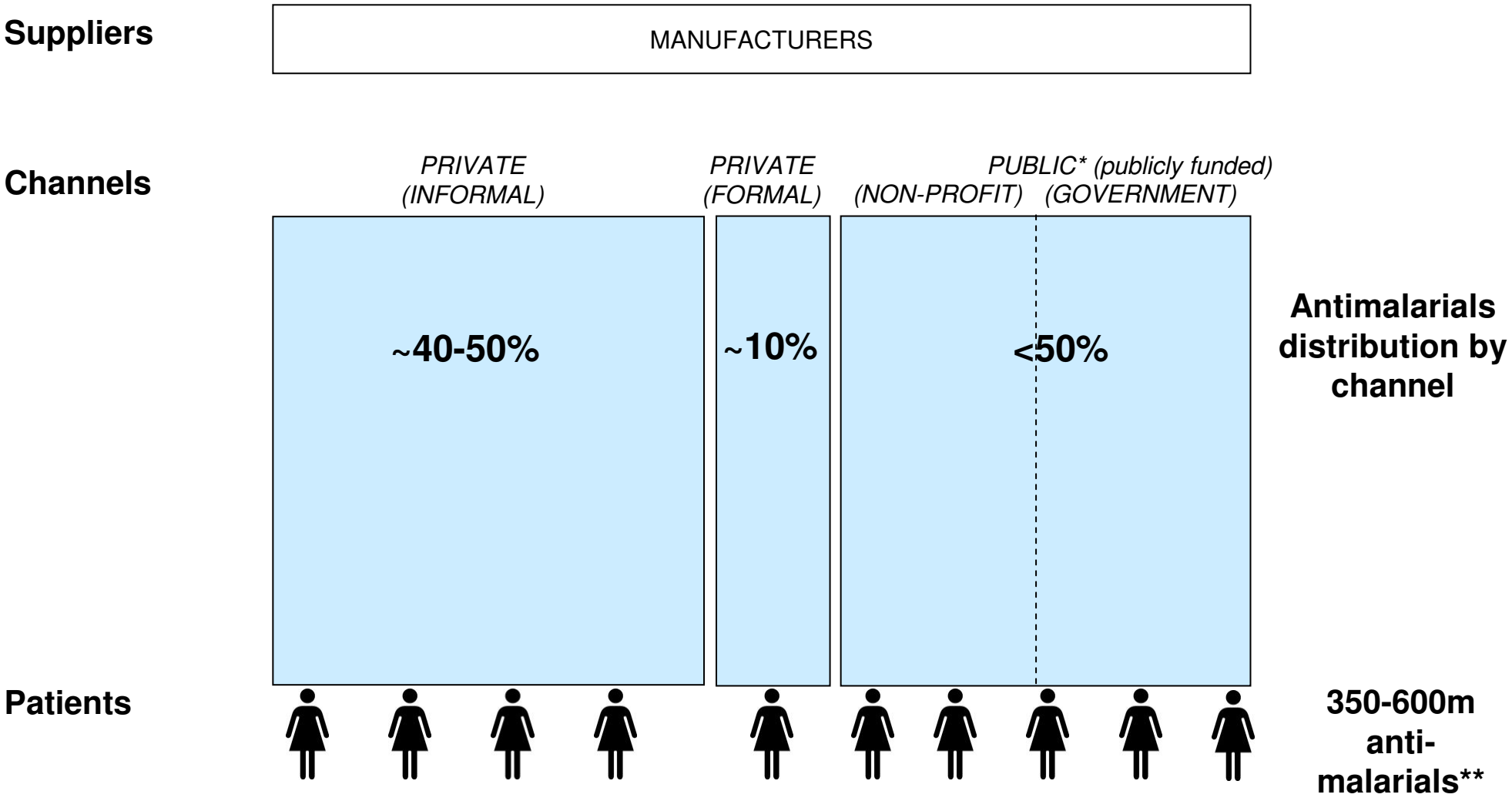
There is an urgent need to shift to implementation and address Facility-specific issues



Action plan for Core Team is focused around four work-streams



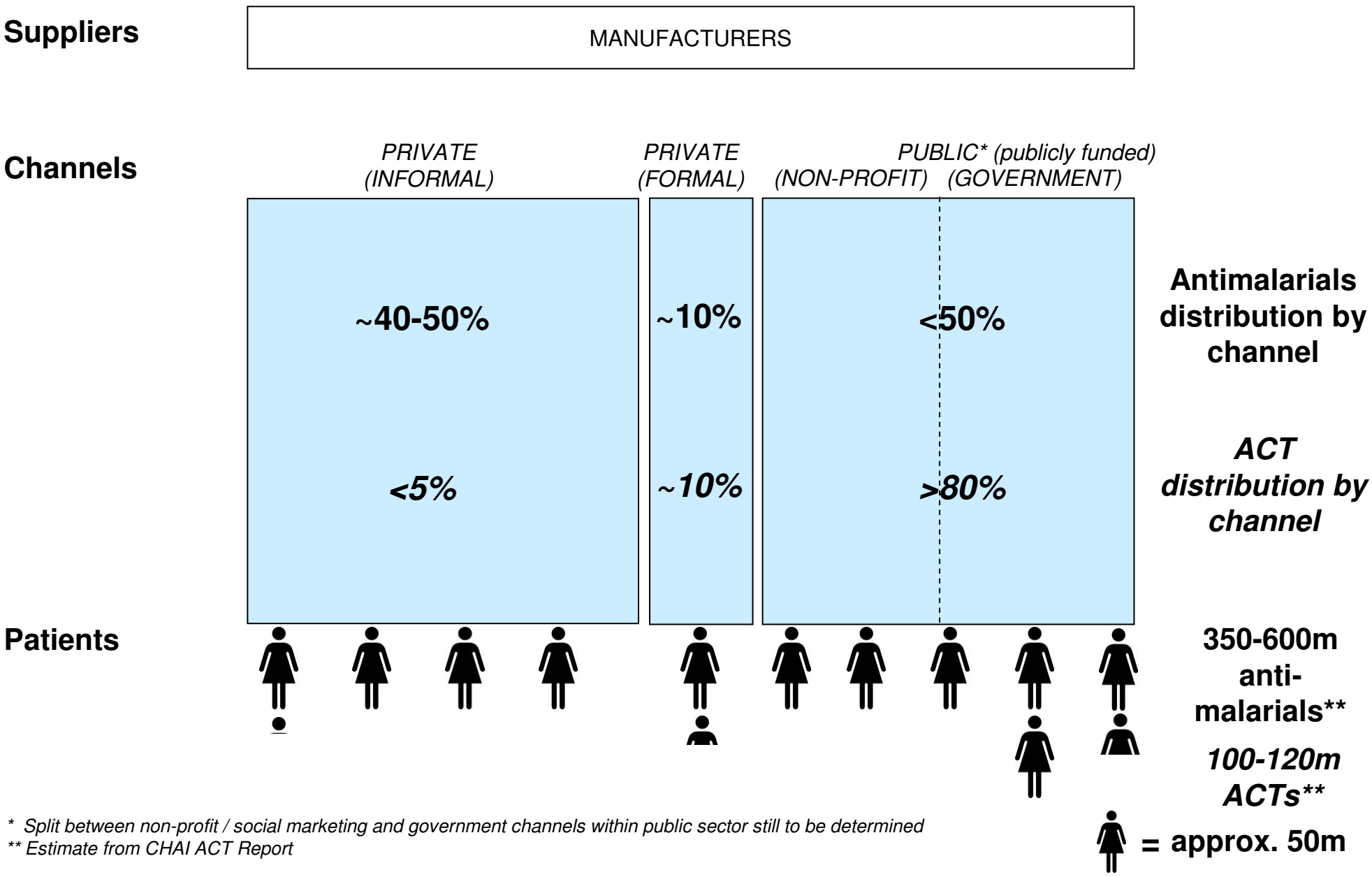
Facility design objective – increase ACT access across multiple channels (1/2)



* *Split between non-profit / social marketing and government channels within public sector still to be determined*

** *Estimate from CHAI ACT Report*

Facility design objective – increase ACT access across multiple channels (2/2)



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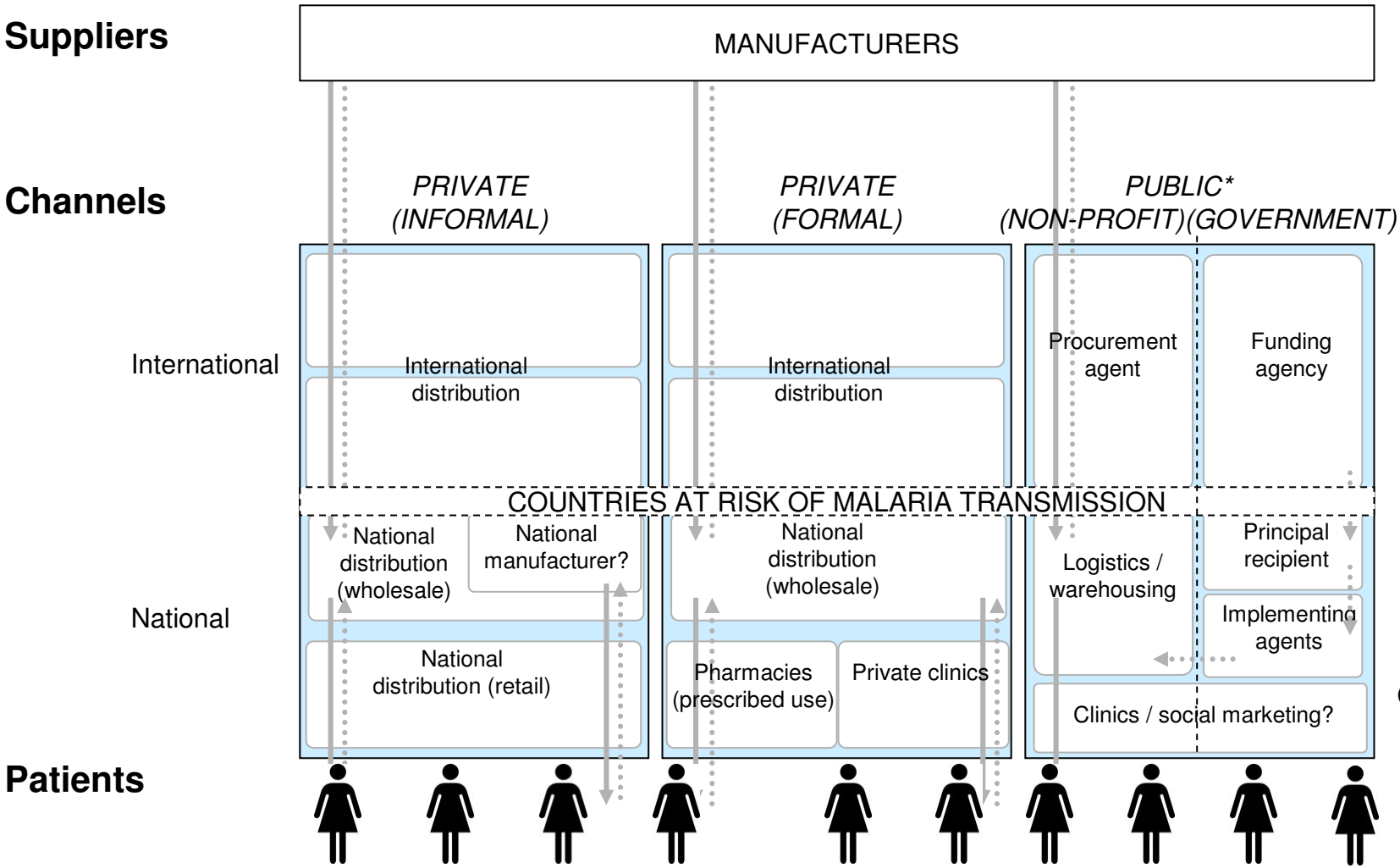
Facility design objective – high-level subsidy overcomes channel complexity (1/2)



Number of international distributors?

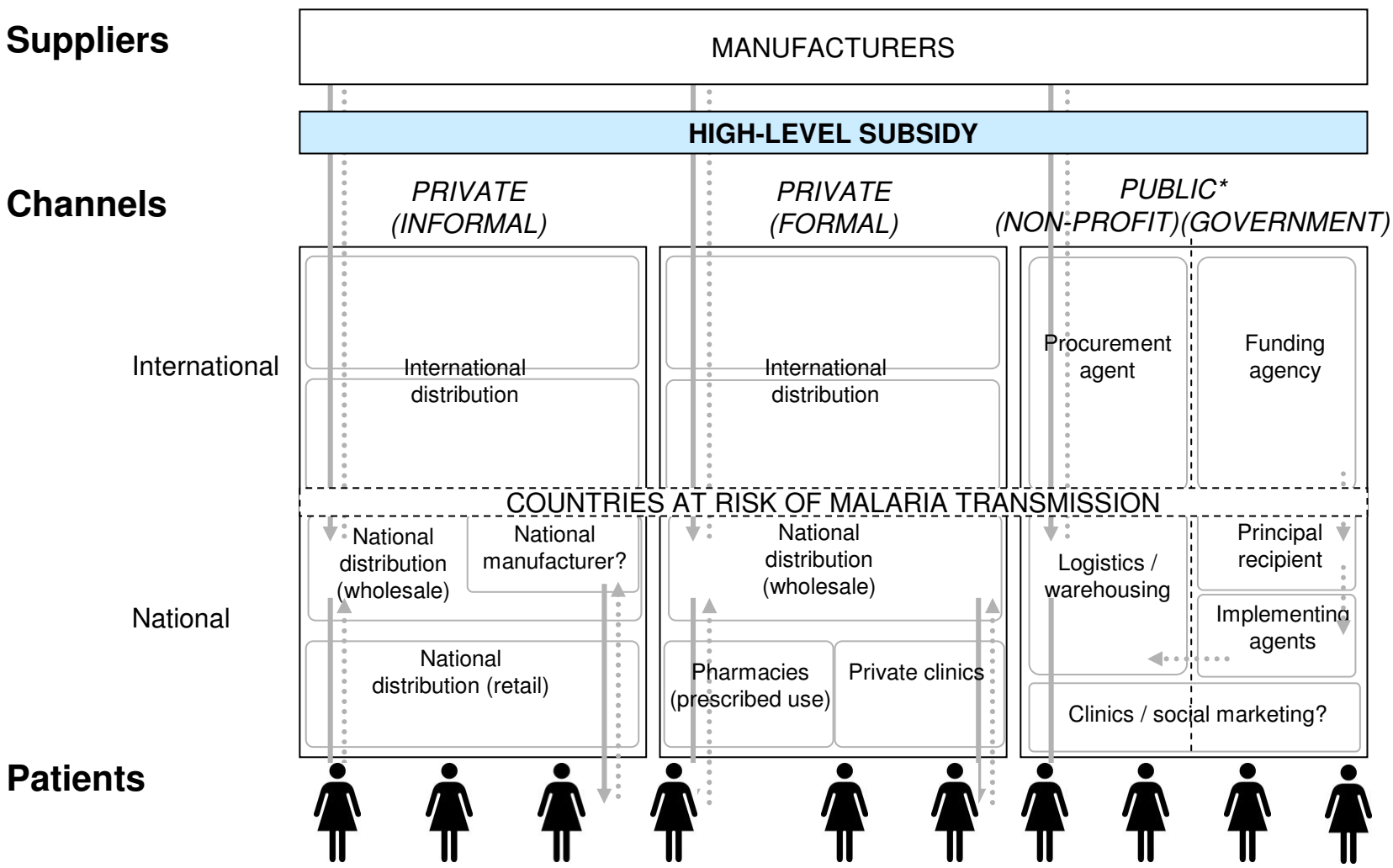
107 countries**

Est. 4 to 50 national distributors per country***

** Split between non-profit / social marketing and government channels within public sector still to be determined*

*** RBM – MERG Taskforce, 2004* **** e.g., 4 wholesalers in Senegal, 50 in Zambia*

Facility design objective – high-level subsidy overcomes channel complexity (2/2)



- **Opens access to all channels and patients**
- **Simple entry point at top avoids complex channel entry**

** Split between non-profit / social marketing and government channels within public sector still to be determined*

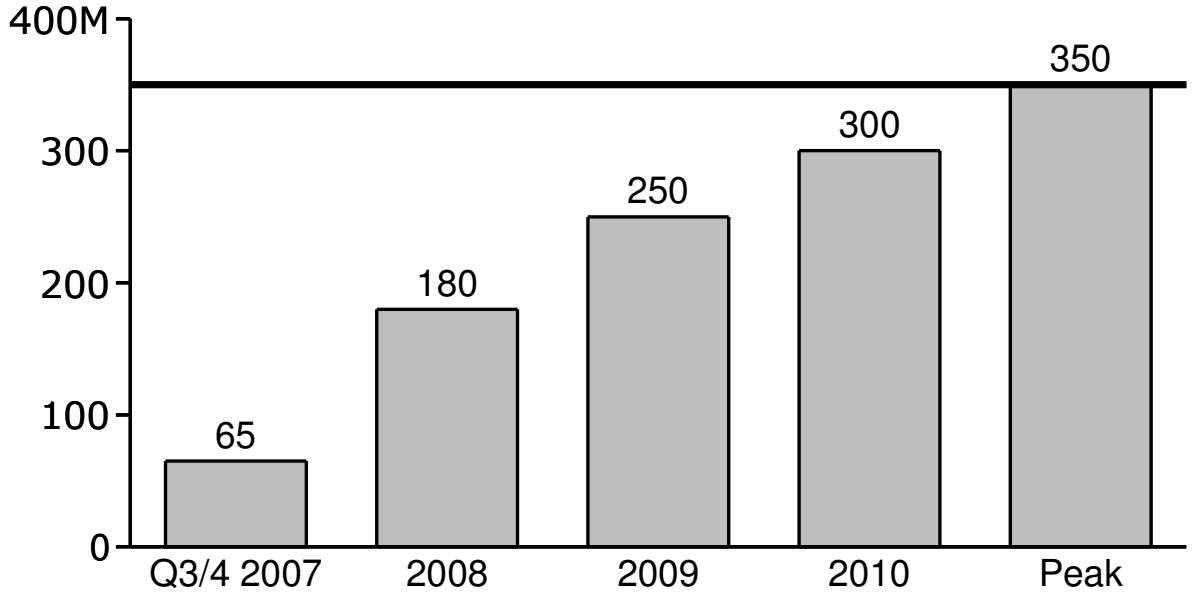
For subsidy calculations, the ACT market is expected to be at the high end of manufacturers' estimates, which range between 200 – 350M treatments per year

AS PER AUGUST 2006

Assumptions

- Demand will lag significantly behind need, due to capacity bottlenecks and slow learning curve of markets
- Volume will increase of 30%-50% per year on 2006 sales, with peak volumes of 300-350M treatments
- After the peak year, volumes may decline slightly due to reduced malaria incidence in areas with high ACT coverage and improved vector control
- Price of USD 0.50 per treatment will undercut price of mono-therapy
- Average price of USD 0.10 will be optimal price point for reaching access goal

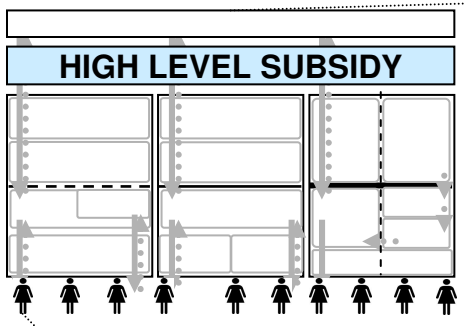
Number of treatments sold



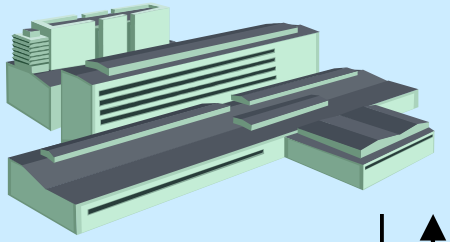
	Q3/4 2007	2008	2009	2010	Peak
Ex-factory price (post-subsidy)	$0.50	$0.40	$0.20	$0.10	$0.10

Source: Proposal to IDPF-UNITAID for High-Level Subsidy for Antimalarial Drugs, Second Draft

Facility design objective – high-level subsidy provides simple, demand-driven payment



Manufacturers
(pooled competition of branded / generic suppliers)



Invoice

Payment

ACT Facility

•Invoice
•Drugs

•Order
•Small payment

Receipt notice

Distributors

Providers / Retail

Lower-priced drugs pulled through multiple channels

Patient

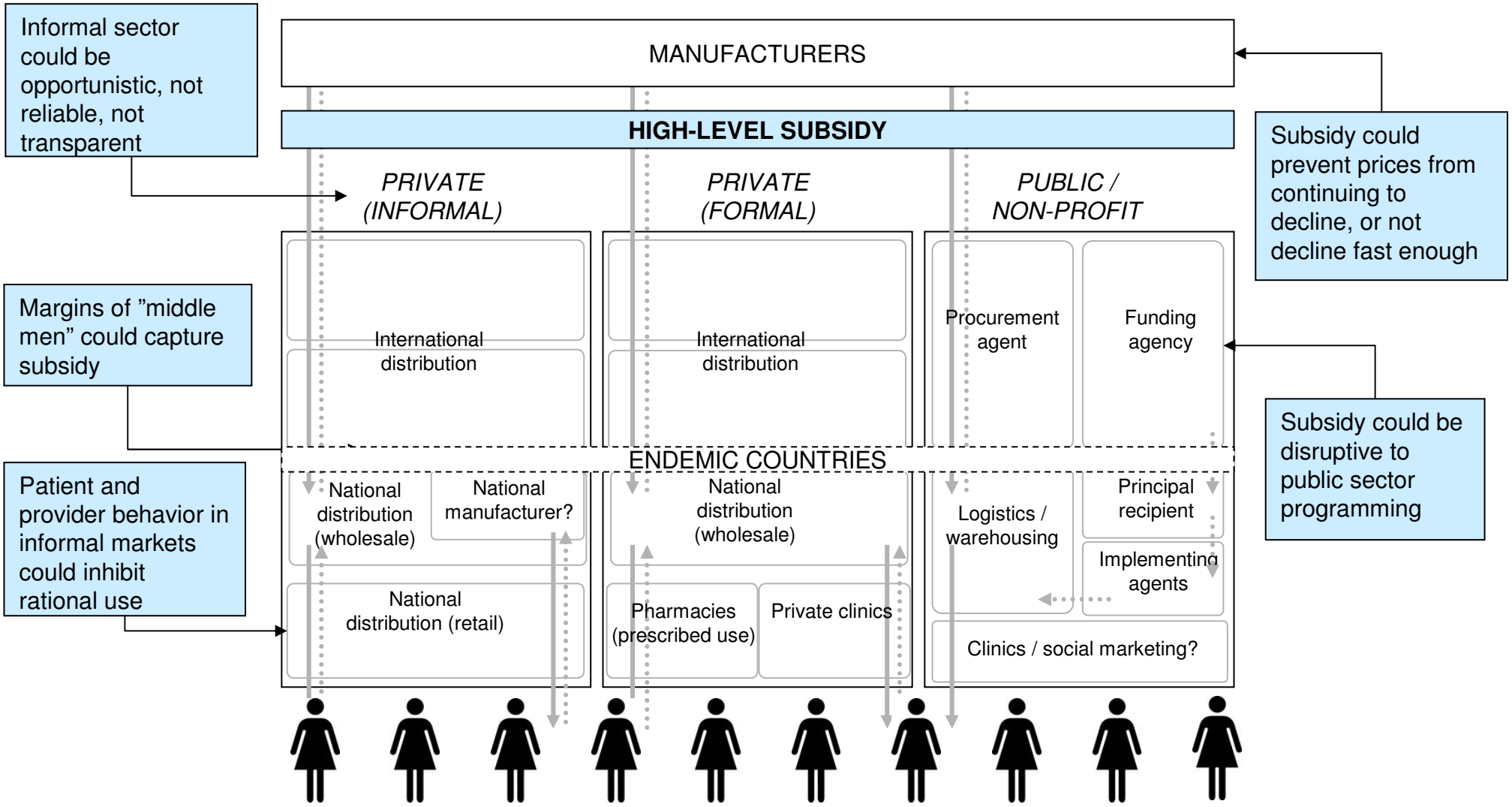
Flows in Italics

Invoice

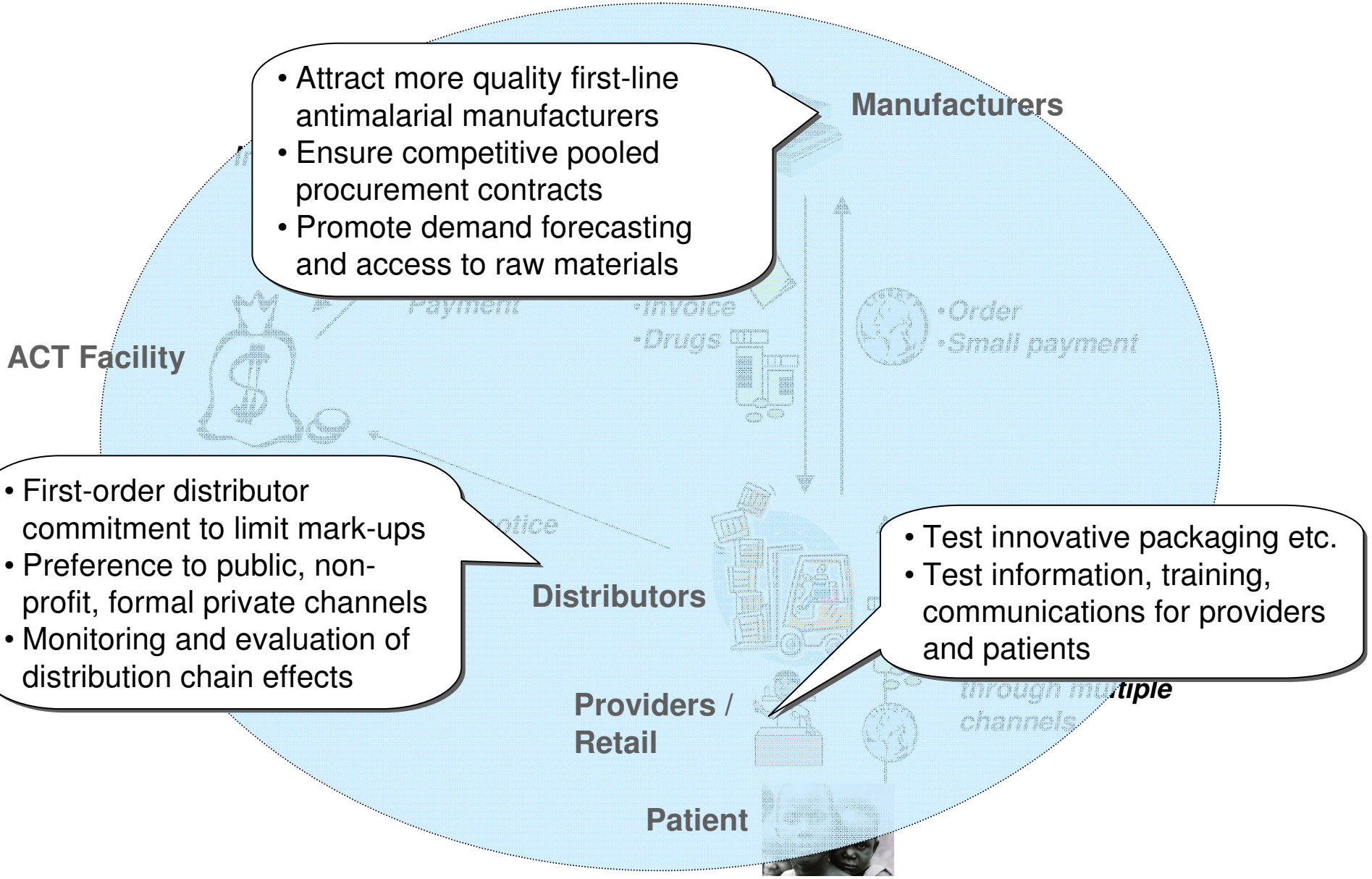
Small payment

Large payment

High-level subsidy raises key implementation issues to address



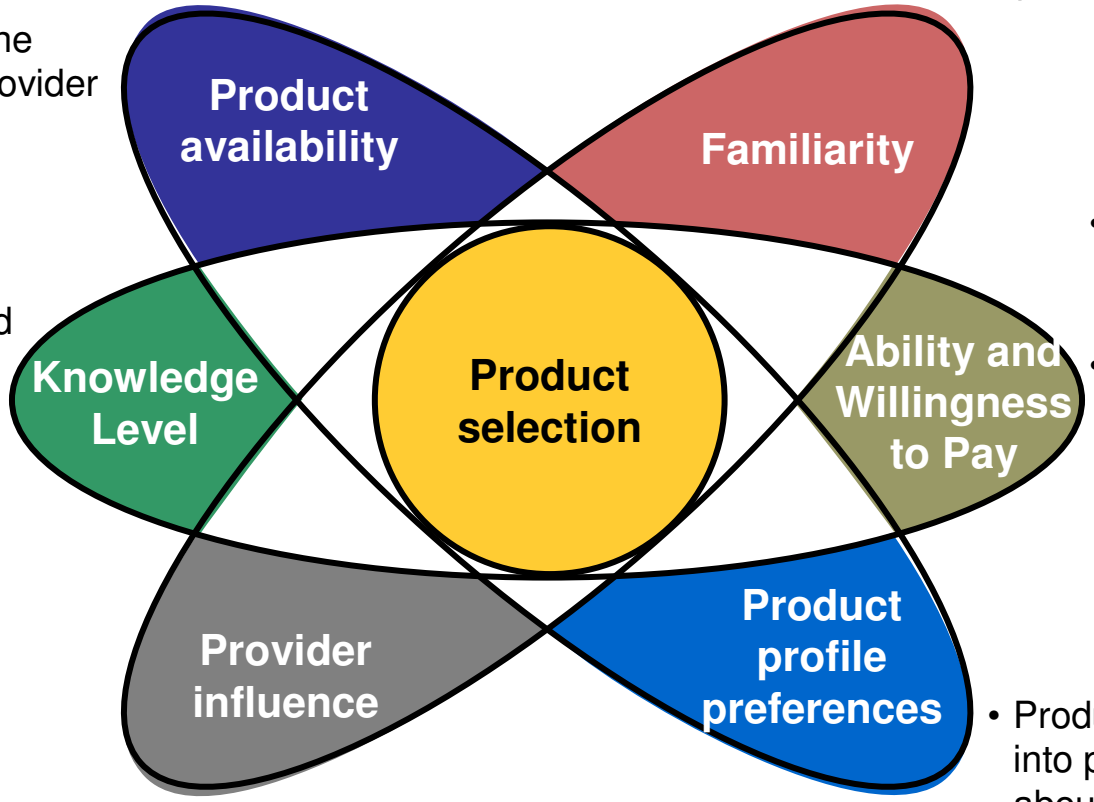
Facility must be structured to promote affordability of ACTs all along supply chain



Uptake of subsidized drugs may be delayed as a range of factors other than price play into selection of first-line antimalarial drugs

- Each provider offers a range of antimalarial treatments
- ACTs may not be the preferred AM for provider

- Patients prefer familiar and trusted options known from the past



- Limited access to information about preferred antimalarial options
- Efficacy limited by inappropriate use

- Cost is a key driver, but relative importance is not well documented
- Ability to pay is influenced by credit availability, ability to pay-in-kind or with loans, gifts, or savings schemes

- More knowledgeable providers demonstrate an ability to influence patient decisions

- Product characteristics play into patients' perceptions about efficacy
- Factors include packaging, dosage, antipyretic action, side-effects, taste

Source: Team analysis, expert interviews

Testing the ACT concept or the operations

Testing options

Pilot: ACT Concept

Purpose:

- The *Concept* of an ACT subsidy needs to be proven

Pilot model:

- The intervention is replicated on a small scale - one country only
- Analysis of the intervention takes place post- pilot
- 'Go/No-Go' decision made at the end of the pilot

ACT risk managed:

- Good use of funder expenditure

Example:

- Progresa Scheme (Mexico)
- Performance based financing of health facilities pilot scheme (Rwanda)

Operational Research: ACT Operations

Purpose:

- The Concept of an ACT subsidy is accepted and *Operational Efficacy* is tested and improved

Operational research model:

- The intervention is introduced in the whole intervention area, but the intervention implementation is staged
- Analysis and improvements continuous through intervention (real-time)
- The intervention is available to all, and operations supported and tested in select countries and results disseminated

ACT risk managed:

- Improved operations and access to ACTs

Example:

- GAVI: funding policies for new- and under utilized vaccines

The subsidy level can be managed over time using a transparent and predictable mechanism to ensure competition and innovation in the market

	Cost based systems		Incentive based systems	
	Fixed subsidy	**Input based subsidy**	**Automatic decrease**	**Bidding rounds**
Description	• The subsidy level set to a fixed price • Review negotiations can be built in	• The subsidy level is indexed to the price of a key input (e.g. Artemisia) • The index value can be set to change over time	• An initial subsidy is set to decrease at a pre defined rate	• Suppliers bid down subsidy level in reverse auction mechanism • Expensive suppliers face penalty or are excluded
Advantages	• Provides certainty for suppliers and funders	• End user prices vary less than under other subsidies	• Forces suppliers to continue to improve efficiency	• Extracts minimum subsidy if designed correctly
Disadvantages	• End user price may vary if raw material price varies • Suppliers are not forced to improve efficiency over time	• Certainty is reduced for funders • May create disincentive to use raw materials more efficiently	• The rate of decrease has to be set correctly – Incorrect reduction may drive up market price or discourage new entry into market	• Risk of mechanism not functioning due to faulty design • Need for in-depth technical expertise in mechanism design and -management
Examples	• Ethanol subsidy (USA)	• Fertilizer subsidies (e.g. India, Malawi)	• Co-payment for vaccines (GAVI) • Renewable energy subsidies (Europe)	• 3G mobile phone licensing auctions (UK, Germany) • Train subsidization (UK)

Each of the Facility organization design elements are being tested in this project

Key Facility organization design elements	Key dimensions	Status
1. Purpose	• To manage the global subsidy of ACTs	Working assumption
2. Roles and Functions	• Efficient internal roles & functions to support global subsidy • Partner with existing health service delivery infrastructure	***Addressed in Break-Out Group***
3. Cost	• Percentage secretariat costs at best-practice for comparable organizations	To be addressed following Roles & Function selection
4. Governance	• Best decision-making structure	***Addressed in Break-Out Group***
5. Host Organization	• Best international support organization	***Addressed in Break-Out Group***
6. Ease of Implementation	• Fast organizational set-up with well-constructed partnerships	To be addressed in next phase

The Facility will perform core functions inside the organization and will partner with the best functional and health system organizations to perform other functions

Secretariat
- Day-to-day subsidy management
- Stakeholder and partner coordination

Financing
- Resource mobilization
- Reporting to donors

Demand Forecasting
- Pricing & volume
- Subsidy adjustment

Procurement
- Procurement agent assessment and selection
- Supplier negotiation
- Contract management
- ACT order management
- Payment management
- Order progress tracking

Quality Assurance
- Supplier pre-qualification
- Pre-shipment manufacturer testing
- Registration of ACTs (where necessary)

Monitoring & Evaluations
- Adherence to contractual agreement
- Program management (financial and drug management, meeting milestones/outputs, etc)
- Impact studies

Auditing
- Manufacturers (drug quality and certification)
- Wholesalers
- Financial audits (outsourced partners)

Logistics
- Shipping and delivery
- Inventory management/warehousing
- Payments of import duties, taxes

Advocacy
- Subsidy advocacy to donors, stakeholders
- Social marketing for beneficiaries

Technical Assistance

Criteria:

- **Is the function core to the key organizational goals?**
- **Do we need control over this function?**
- **Can a partner perform this function more effectively and efficiently?**

ILLUSTRATIVE

IN-FACILITY
- Secretariat
- Financing
- Demand forecasting
- Procurement agent selection

PARTNER WITH BEST FUNCTIONAL ORGANIZATION
- Procurement
- Quality Assurance
- Monitoring & Evaluations
- Auditing

PARTNER WITH BEST HEALTH ORGANIZATION
- Logistics
- Advocacy
- Technical support

Patients suffering from fever may access different treatment options in public and private sector, depending on location

Public facilities are not always accessible

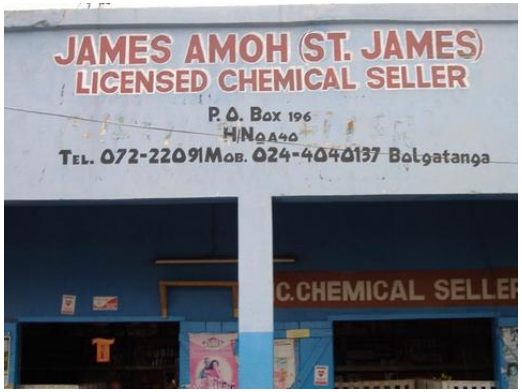
30-40% access

"In coastal Kenya, 87% of rural households live within 1km of a shop, but only 32% within 2km of a government dispensary or private clinic"

"A key...factor is accessibility; shops and vendors selling drugs are often a much more convenient source of drugs than public clinics"

Formal private outlets are more widely accessible

40-50% access



Licensed pharmacy

Licensed pharmacy

A range of informal outlets are nearly always available

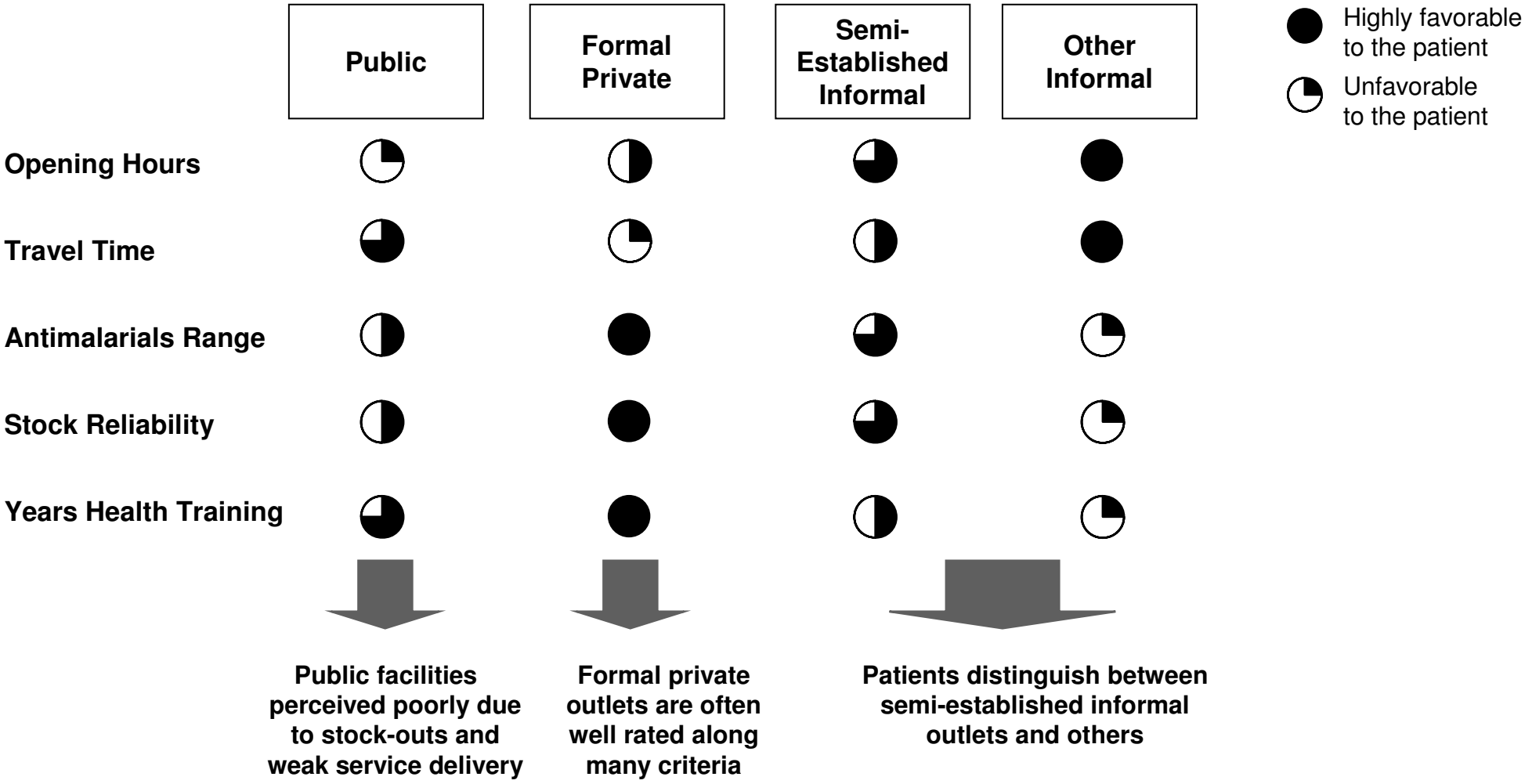
80-95% access

Drug shop

Drug peddler

Source: Range of access estimates based on academic research and interview with subject matter experts. Estimates vary significantly by country

Patients rate channels differently along key selection criteria, with public facilities often viewed negatively and private facilities often seen as best option



Source: Catherine Goodman, *An Economic Analysis of the Retail Market for Fever and Malaria Treatment in Rural Tanzania,* Thesis submitted to the University of London, 2004

ACTs are available, also in the private sector, but prices are prohibitive to rural poor

ESTIMATE

Availability of AM across distribution channels

Average availability / retail price	Coartem ®	Other ACTs**	Artemisin in mono-therapies	SP	CQ
Public *	55% $4.8	30% $1.5	15% $3.3	55% $0.4	30% $0.1
Formal Private*	35% $7.6	55% $5.0	70% $5.3	65% $0.8	65% $0.2
Informal Private *	40% $7.6	65% $7.2	75% $6.2	90% $1.3	50% $0.2

Preliminary market intelligence (app. 200 data points)

- Coartem is mostly available through the public secor
- Un-branded arteminisin therapies have become widely available in private channels
- ACT prices are often prohibitively high
- ACT and monotherapy prices lowest, but still significant, in public / non-profit channels

*Public sector outlets include public hospitals and certain health clinics. Formal private outlets include licensed pharmacies, certain health clinics etc. Informal private outlets include unlicensed street peddlers, drug hawkers etc.
**Other ACTs include artesunate + amodiaquine; artesunate + mefloquine; artesunate + sulfadoxine/pyrimethamine

Source: Field research completed in Rwanda, Burundi, Uganda and Ghana (December 2006/January 2007)

Schedule for this afternoon

14:00-15:30	**Session 1:** Breakout groups: discuss issues and assumptions related to ACT subsidy implementation Chair + Dalberg presenter + 2 technical expert discussants in each breakout group	Four groups: 1. Operational research 2. Local market supply channels 3. Provider / patient behavior 4. Subsidy design / organization
15:30-16:00	Coffee break	
16:00-16:30	**Session 2:** Continue breakout groups, focus on solutions and next steps and identify critical issues for policy makers Provide examples and potential contacts to follow up by consultants/contract researchers	Above four groups reconvene
16:30-18:00	**Session 3:** Groups report back – 15 minutes each, followed by discussion	Moderator: Catherine Hodgkin

Breakout groups – Chairs, presenters and discussants

1. Operational research

- Chair: Jan van Erps - RBM
- Presenter: Peter Tynan - Dalberg
- Discussant: Penny Grewal – MMV (piloting)
- Discussant: Ramanan Laxminarayan – RFF (phasing)

2. Local market supply channels

- Chair: Sergio Spinaci – WHO
- Presenter: Soren Peter Andreasen - Dalberg
- Discussant: Graciela Diap – DNDi (non-premium private sector)
- Discussant: Stephen Jarrett – UNICEF (community based organizations)

3. Provider and patient behavior

- Chair: T.O. Sofola – Ministry of Health, Nigeria
- Presenter: George Khalaf - Dalberg
- Discussant: Desmond Chavasse – PSI
- Discussant: Hellen Gelband - IOM

4. Subsidy design / organization

- Chair: Harry van Schooten – Social and Institutional Development Department, Ministry of Foreign Affairs, The Netherlands
- Presenter: Andrew Stern - Dalberg
- Discussant : Delna Ghandi – DfID (coalition building)
- Discussant : David Mwakyusa – Tanzania (country perspective)

Breakout sessions – Purpose

The purpose of the breakout sessions is **to establish a common expert platform** for the proposed ACT subsidy.

This will help to:

- Specify challenges and issues to address
- Establish work-streams to resolve them
- Put into operation an approach to achieve the subsidy's objectives of better access to ACTs for the poor and a delay in the development of resistance to ACTs

The purpose is **not to debate such as:**

- –Market sizing
- –Demand forecasting
- –Other broader ACT / Anti-malarial drug issues not specific to the Facility
- There are ongoing efforts and other fora for addressing these issues

Breakout sessions – Roles and contributions

Session 1: 14.00 – 15.30

- Chair welcomes group and calls the session to order (5 min)
- Dalberg consultant presents findings and key questions (10 min)
- Discussant 1 responds to presentation and kicks off the debate (5 min)
- Discussant 2 responds to presentation and continues the debate (5 min)
- Chair opens the discussion to the group, maintains order and keeps the discussion on topic (1 hour)
- Chair closes the session and summarizes issues and assumptions (5 min)

Session 2: 16:00 – 16:30

- Chair reassembles breakout groups and sets out the objectives for the session (5 min)
- Chair asks discussants to suggest solutions and next steps and identify critical issues for policy makers (5 min)
- Chair asks the group to provide examples and potential contacts to follow up with (15 min)
- Chair closes the session and summarizes solutions to report back to the plenary group (5 min)

Breakout session key question / issues

1. Operational research

- Which additional design features can be made to manage the operational risk of the ACT subsidy facility during the period of partial introduction?
- Which partners could participate in the early adopter group?
- What are the supporting ACT intervention objectives to test?

2. Local Market Supply Chain

- What is the availability and volumes of first-line antimalarials in different distribution channels?
- What is the anticipated impact of the subsidy on formal and informal distribution channels?
- What will be the cost of distributor mark-ups and how can affordability be promoted?

3. Provider / patient behavior

- What determines patient selection of treatment location?
- What determines patient product selection?
- What are the implications for uptake of subsidized drugs, and which mechanisms may speed up uptake?

4. Subsidy Design / Organization

- What is the most appropriate subsidy adjustment mechanism to ensure innovation and competition?
- What criteria should be used for selecting which roles and functions to perform in-house and which to outsource?
- What criteria should be used to select the governance structure?
- What criteria should be used to select a host organization?

Agenda

- Plenary presentation

- Break-out presentations and discussions
  - Operational research
  - Local market supply channels
  - Provider / patient behavior
  - Subsidy design / organization

Background – Testing is used to manage the risks of introducing a new intervention and to mobilize support for large projects

Why test public health interventions:

- Manage the risks of introducing a new policy, measure, or intervention
- Test the *concept* of an intervention, or the *efficacy* of its operation
- Pace funder expenditures

Knowledge of ACT interventions:

- Global Fund provides ACTs to the public sector through grants in a number of countries
- Small scale private sector subsidization exists in selected countries (e.g. PSI Cambodia and Myanmar)

Potential risks of global ACT introduction:

- Large financial commitment
- Facilitating drug flows through the private sector channel is relatively new

Testing the ACT concept or the operations

Testing options

Pilot: ACT Concept

Purpose:

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Pilot model:

- The intervention is replicated on a small scale - one country only
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ACT risk managed:

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Example:

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ACT risk managed:

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Example:

- GAVI: funding policies for new- and under utilized vaccines

Option 1 – Limited opportunity and high cost to test *concept* of a global subsidy

Testing the concept: context

The effect of the global subsidy on the downstream components of the health supply chain can be tested on a small scale

- End user behavior: how patients will react to cheaper ACTs being available
- Sales behavior: how people selling drugs to patients will react to cheaper ACTs being available

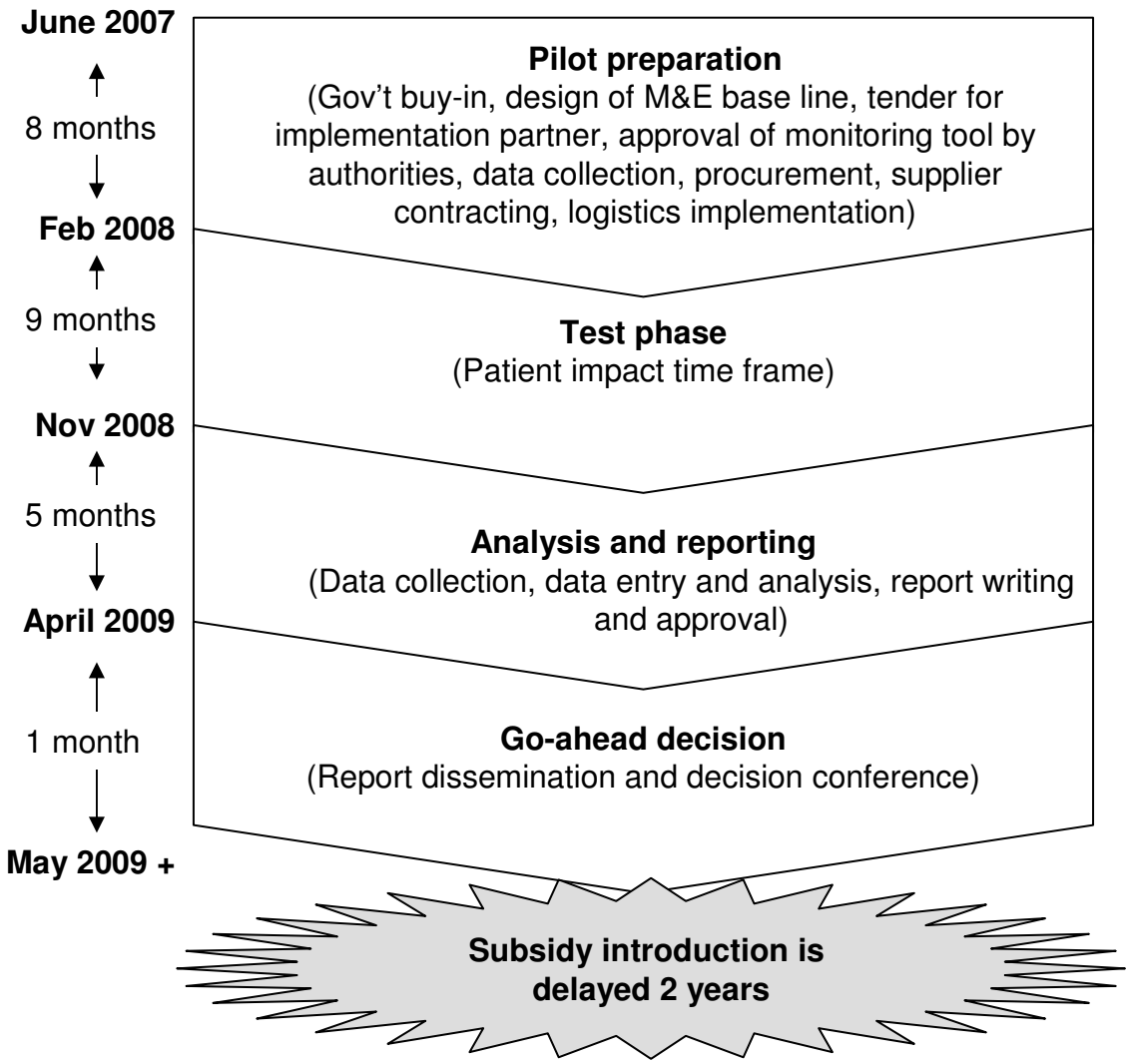
The effect of the global subsidy on the upstream components of the supply chain cannot be tested:

- Manufacturer dynamics will play out only with global volumes
- International reseller actions will not play out in a country pilot

Costs of testing the *concept* of a global subsidy at the country level?

- Forego XX million treatments accessible in most malaria endemic countries
- Increases the risk of resistance due to continued use of monotherapies
- Current momentum in the malaria community is lost and funding is not a global health priority

Time line scenario



Option 2 – Opportunity to conduct operational research into the efficacy of the subsidy once it is available

How can the operations of the subsidy be tested?

Setup:
- The global Facility is created for the test phase:
  - All ACT orders from qualified suppliers receive subsidy payments
  - The organization and supporting infrastructure is put in place
- The level of subsidization is limited during the test phase:
  - Price will be reduced below prices for Artemisinin monotherapies
- The full level of subsidization is enacted when pre-defined goals in operations efficiency have been reached

Management of operational risks:
- Subsidization to monotherapy level limits financial commitments and effects on markets for antimalarials
- Close cooperation with early adopters:
  - Piloting group of funding agencies and countries with strong implementation ownership
  - Development of supporting activities with private sector implementers

Supporting Activities:
- A complementary health supply chain test is developed for the public- and private sector
- The complementary package is continuously shared with the malaria community and refined

How GAVI tested the operations of its new financing strategy:

Description:
- Pentavalent vaccines were previously fully funded by GAVI
- Concerns with existing model:
  - Irrational ordering of vaccines
  - Lack of ownership by Governments
- Subsidy payments were envisaged to align incentives of recipients and to increase country ownership

Perceived risks before introduction:
- Concerns about continued prioritization of vaccination programs
- Concerns about possible delays in introduction of new vaccines
- Supplier concern about increased business risk due to possible default by buyers

Response:
- Concerns regarding risk are addressed using a number of measures:
  - Subsidy payments are related to countries' ability to pay
  - Subsidy payment phased-in over extended period of time
  - GAVI assumes buyer default risk for a limited period of time
- Supply side stimulation measures complement demand side measures

Key questions for break-out group

- Which additional **design features** can be created to manage the **operational risk** of the ACT subsidy facility during the period of partial introduction?

- Which **partners** could participate in the early adopter group?
  - Potential **countries** for early adopter group?
  - Potential **private sector or public health delivery** implementation partners?

- What are the **supporting ACT intervention objectives** to test?
  - The public sector?
  - The private sector?

Agenda

- Plenary presentation

- Break-out presentations and discussions
  - Operational research
  - Local market supply channels
  - Provider / patient behavior
  - Subsidy design / organization

Public, non-profit and private sector channels are all key to access to antimalarials but ACTs are not provided in substantial volumes outside the public sector today

Suppliers

MANUFACTURERS

Channels	*PRIVATE (INFORMAL)*	*PRIVATE (FORMAL)*	*PUBLIC / NON-PROFIT*
Antimalarial drug distribution	**~40-50%** Un-licensed pharmacy / drug shop Grocery / supermarket General store / kiosk Market stall / street peddler / itinerant drug hawker	**~10%** Licensed pharmacy/ drug shop	**<50%** Government clinic / hospital NGO facility
ACT drug distribution	***<5%***	***~10%***	***>80%***

"In Kenya, small general shops provide first-line febrile care for 60%"

"15-80% of AMs are sold via informal channels, depending on the country"

"In Phnom Penh, there are 495 illegal drug sellers and only 298 registered pharmacies"

"In Tanzania there is one retailer selling AMs for every 834 people, vs. one health facility for 4368"

Defining informal channels is a major challenge - there is a huge difference between community health workers and market stalls

ACTs are available, also in the private sector, but prices are prohibitive to rural poor

ESTIMATE

Availability of AM across distribution channels

Average availability / retail price	Coartem ®	Other ACTs**	Artemisin in mono-therapies	SP	CQ
Public *	55% $4.8	30% $1.5	15% $3.3	55% $0.4	30% $0.1
Formal Private*	35% $7.6	55% $5.0	70% $5.3	65% $0.8	65% $0.2
Informal Private *	40% $7.6	65% $7.2	75% $6.2	90% $1.3	50% $0.2

Preliminary market intelligence (app. 200 data points)

- Coartem is mostly available through the public secor
- Un-branded arteminisin therapies have become widely available in private channels
- ACT prices are often prohibitively high
- ACT and monotherapy prices lowest, but still significant, in public / non-profit channels

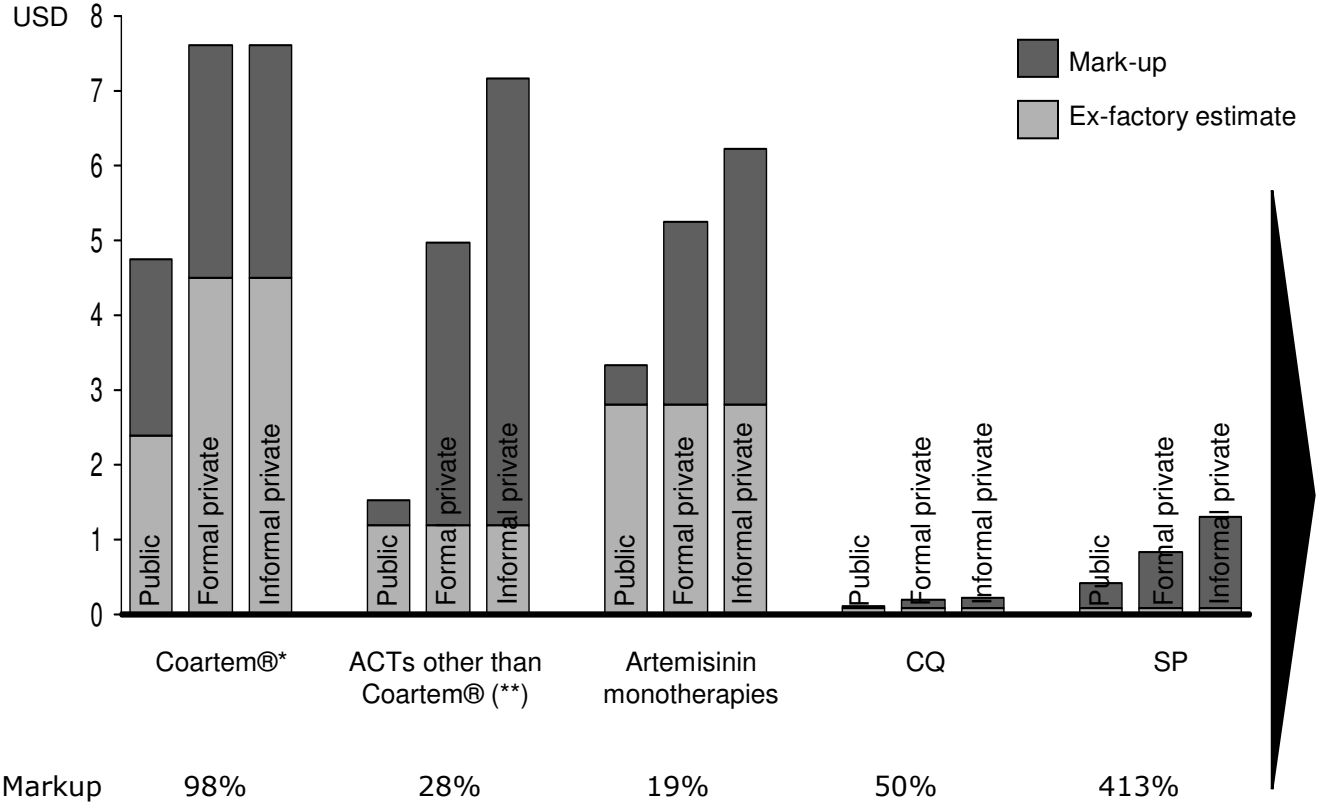
*Public sector outlets include public hospitals and certain health clinics. Formal private outlets include licensed pharmacies, certain health clinics etc. Informal private outlets include unlicensed street peddlers, drug hawkers etc.
**Other ACTs include artesunate + amodiaquine; artesunate + mefloquine; artesunate + sulfadoxine/pyrimethamine

Source: Field research completed in Rwanda, Burundi, Uganda and Ghana (December 2006/January 2007)

Mark-ups in distribution and retail chains must be addressed from both supply and demand side

ESTIMATE

Average Prices and Markups in Public, Private, and Informal Channels



	Coartem®*	ACTs other than Coartem® (**)	Artemisinin monotherapies	CQ	SP
Public Markup	98%	28%	19%	50%	413%
Private Markup	69%	314%	88%	138%	925%
Informal Markup	69%	497%	122%	188%	1,538%

- Public / non-profit channels commonly charge fees to patients
- As initial purchase of Coartem is typically donor-funded, the full USD 5 fee can be regarded as a mark-up
- Informal sector mark-up tends to be higher than formal private sector outlets
- Preliminary evidence indicates that higher private sector markups are driven by higher number of steps in the distribution chain

* Not clear whether reduced (USD 1.0) public sector ex-factory price for Coartem has trickled down yet. This assumes pre-reduction price level

**Other ACTs include artesunate + amodiaquine; artesunate + mefloquine; artesunate + sulfadoxine/pyrimethamine

Sources: Dalberg field research, expert interviews, 'Sources and prices of selected products for the prevention, diagnosis and treatment of malaria', WHO September 2004.

A key challenge is to move ACTs from premium segment to first-line treatment

ACTs are currently premium products with high profitability for distributors

- Prices to patients are based on willingness to pay more than the ex-factory price
- Cost recovery and mark-ups will be added to the ex-factory price along the supply chain
- Each layer of distribution typically adds 25-50% incremental margin
- Public / non-profit channels typically rely on 1-3 layers of distribution
- Private layers typically rely on 2-4 distribution steps, informal sector often even more

ACT subsidy facilitates steps required to broaden access to ACTs

Steps to contain mark-ups

- Streamline distribution chain
- Create greater price transparency
- Increase competition by giving access to low-cost ACTs for all channels
- Open alternative distribution channels
  - Social marketing
  - Community-based treatment
  - Franchise drug stores
- Price regulation

Source: Team analysis, expert interviews

Key questions for breakout group

- Questions for discussion
  - What will happen if ACT prices come down to USD 0.5 for all sectors (or even 0.2, 0.1…)?
  - Is it possible to maintain a premium-branded ACT segment?
  - What are key interventions to ensure that maximum benefits will be passed on to patients in each sector?
- Research questions
  - What are the volumes of antimalarials sold in different channels?
  - What are the true margins in different channels?
  - What is the quality of ACTs in circulation?

Agenda

- Plenary presentation

- Break-out presentations and discussions
  - Operational research
  - Local market supply channels
  - Provider / patient behavior
  - Subsidy design / organization

Patients suffering from fever may access different treatment options in public and private sector, depending on location

Public facilities are not always accessible

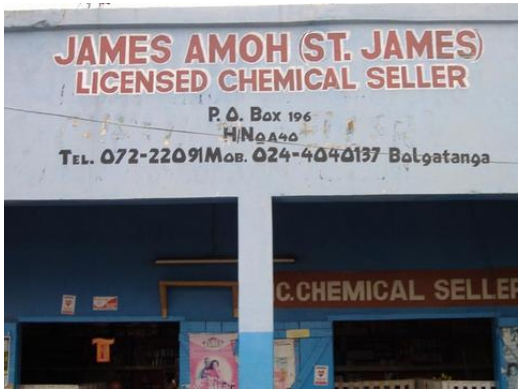
30-40% access

"In coastal Kenya, 87% of rural households live within 1km of a shop, but only 32% within 2km of a government dispensary or private clinic"

"A key...factor is accessibility; shops and vendors selling drugs are often a much more convenient source of drugs than public clinics"

Formal private outlets are more widely accessible

40-50% access



Licensed pharmacy

Licensed pharmacy

A range of informal outlets are nearly always available

80-95% access

Drug shop

Drug peddler

Source: Range of access estimates based on academic research and interview with subject matter experts. Estimates vary significantly by country

Patients select among accessible providers based on a range

Key Factors in Provider Selection

- **Cost** (e.g., drug and other costs such as consultation or lab fees, ability to purchase partial dose, use of credit or payment-in-kind)
- **Convenience** (e.g., travel time, opening hours)
- **Drug availability and range** (e.g., number of AMs stocked, frequency of stock-outs)
- **Provider knowledge, training and qualifications**
- **Perceived quality of stock** (e.g., drugs sold packaged/labelled)
- **Service Delivery** (e.g., treatment by staff, wait times)

"I come to this local drug shop because it is the closest to my home and the other options are too far and difficult to reach." *Interview with patient in Ghana*

"I always come to this public health clinic. Although there are other places closer to my home, I trust the people here…I've been coming here for a long time now and they know me" *Interview with patient in Sierra Leone*

"When I have serious pain or bad fever then I come here [public health clinic]. Otherwise for regular every-day medicine I go to the shop near my house" Patient interview

Public health clinic

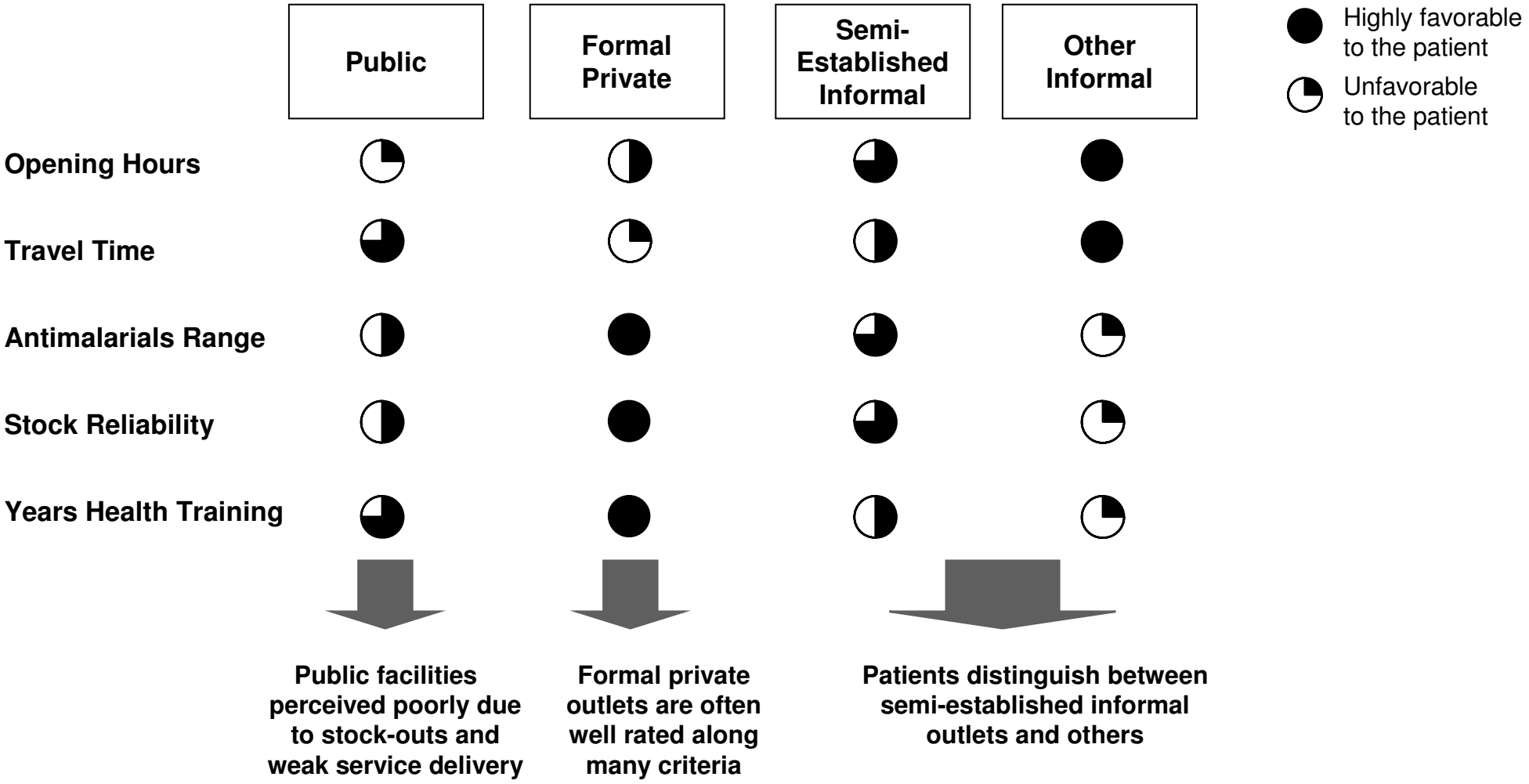
Pharmacy

Drug shop

Peddler

Source: Dalberg field research

Patients rate channels differently along key selection criteria, with public facilities often viewed negatively and private facilities often seen as best option

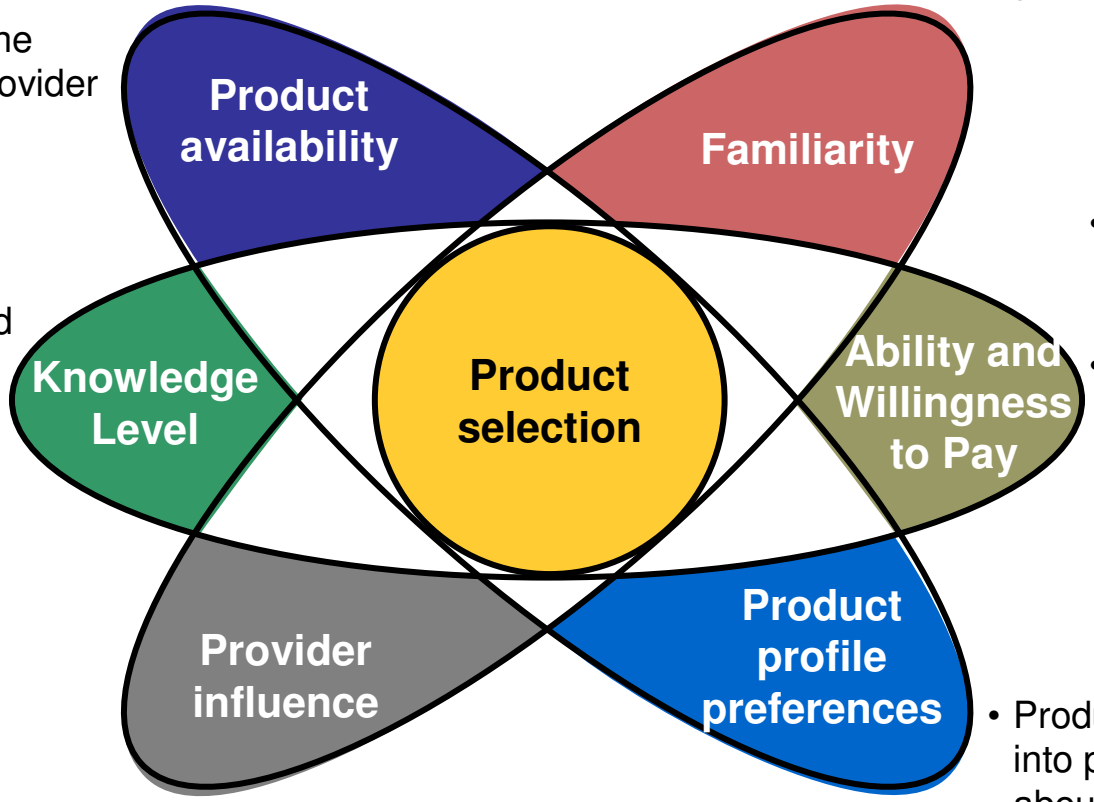


Source: Catherine Goodman, *An Economic Analysis of the Retail Market for Fever and Malaria Treatment in Rural Tanzania,* Thesis submitted to the University of London, 2004

Uptake of subsidized drugs may be delayed as a range of factors other than price play into selection of first-line antimalarial drugs

- Each provider offers a range of antimalarial treatments
- ACTs may not be the preferred AM for provider

- Patients prefer familiar and trusted options known from the past



- Limited access to information about preferred antimalarial options
- Efficacy limited by inappropriate use

- Cost is a key driver, but relative importance is not well documented
- Ability to pay is influenced by credit availability, ability to pay-in-kind or with loans, gifts, or savings schemes

- More knowledgeable providers demonstrate an ability to influence patient decisions

- Product characteristics play into patients' perceptions about efficacy
- Factors include packaging, dosage, antipyretic action, side-effects, taste

Source: Team analysis, expert interviews

Social marketing efforts can illustrate ways in which the benefit of a subsidy can be effectively delivered to the patient at point of purchase

PSI Experiences Relevant to ACT Subsidy

- PSI utilizes the private sector to address developing world health problems by selling products and services at subsidized prices to motivate commercial sector involvement.
- Programmes in over 60 countries focused on malaria, reproductive health, child survival and HIV have demonstrated that appropriately designed subsidy programs can have significant impact on morbidity and mortality
- Specific to malaria, PSI has distributed more than 5.5M subsidized doses of ACTs through the private sector in Myanmar, Cambodia, Nigeria, and Madagascar
- Through these programmes, PSI has:
    - Identified effective mechanisms by which to drive subsidy benefits down to the patient at point-of-purchase, even in private channels
    - Gained experience in changing patient treatment seeking behaviors

Lessons Learned

- ACTs can successfully be delivered through the private sector
- 4 principles are key to success:
    - Pre-packaged treatments tailor-made to local conditions
    - Delivery through private sector
    - Extensive use of communications campaigns
    - Monitoring of programme effectiveness in terms of 1) equity of access, 2) adherence to treatment and 3) resistance markers

Source: Interview with PSI

Key questions for breakout group

- What determines patient selection of **treatment location**?
- What determines patient **product selection**?
- What are the implications for **uptake of subsidized drugs**, and which mechanisms may speed up uptake?

Agenda

- Plenary presentation

- Break-out presentations and discussions
  - Operational research
  - Local market supply channels
  - Provider / patient behavior
  - Subsidy design / organization

Each of the subsidy design elements are being tested in this project

Key subsidy design elements	Key dimensions	Status
1. Injection point	• Buyers are subsidized (co-payments to orders) • Globally applied at manufacturer level	Working assumption
2. Eligible products	• All products fulfilling agreed pre-qualification norms	Working assumption
3. Target market price	• Pricing relative to other antimalarials • Relative subsidization of different ACT products	Addressed in Piloting Break-Out Group
4. Setting and adjusting subsidy levels over time	• Cost-based subsidy adjustment • Incentive-based subsidy adjustment	***Addressed in this Break-Out Group***
5. Testing the global subsidy	• Testing the operations of the global subsidy • Developing a complementary package of activities	Addressed in Piloting Break-Out Group
6. Monitoring and Evaluation	• Operation of the subsidy • Access indicators at the country-level	To be addressed in next phase
7. End of subsidy	• Time-based phase-out • Needs-based phase-out	To be addressed in next phase

The subsidy level can be managed over time using a transparent and predictable mechanism to ensure competition and innovation in the market

	Cost based systems		Incentive based systems	
	Fixed subsidy	**Input based subsidy**	**Automatic decrease**	**Bidding rounds**
Description	• The subsidy level set to a fixed price • Review negotiations can be built in	• The subsidy level is indexed to the price of a key input (e.g. Artemisia) • The index value can be set to change over time	• An initial subsidy is set to decrease at a pre defined rate	• Suppliers bid down subsidy level in reverse auction mechanism • Lowest subsidy amount paid to all suppliers
Advantages	• Provides certainty for suppliers and funders	• End user prices vary less than under other subsidies	• Forces suppliers to continue to improve efficiency	• Extracts minimum subsidy if designed correctly
Disadvantages	• End user price may vary if raw material price varies • Suppliers are not forced to improve efficiency over time	• Certainty is reduced for funders • May create disincentive to use raw materials more efficiently	• The rate of decrease has to be set correctly – Incorrect reduction may drive up market price or discourage new entry into market	• Risk of mechanism not functioning due to faulty design • Need for in-depth technical expertise in mechanism design and -management
Examples	• Ethanol subsidy (USA)	• Fertilizer subsidies (e.g. India, Malawi)	• Co-payment for vaccines (GAVI) • Renewable energy subsidies (Europe)	• 3G mobile phone licensing auctions (UK, Germany) • Train subsidization (UK)

Each of the Facility organization design elements are being tested in this project

Key Facility organization design elements	Key dimensions	Status
1. Purpose	• To manage the global subsidy of ACTs	Working assumption
2. Roles and Functions	• Efficient internal roles & functions to support global subsidy • Partner with existing health service delivery infrastructure	***Addressed in this Break-Out Group***
3. Cost	• Percentage secretariat costs at best-practice for comparable organizations	To be addressed following Roles & Function selection
4. Governance	• Best decision-making structure	***Addressed in this Break-Out Group***
5. Host Organization	• Best international support organization	***Addressed in this Break-Out Group***
6. Ease of Implementation	• Fast organizational set-up with well-constructed partnerships	To be addressed in next phase

The Facility will perform core functions inside the organization and will partner with the best functional and health system organizations to perform other functions

Secretariat
- Day-to-day subsidy management
- Stakeholder and partner coordination

Financing
- Resource mobilization
- Reporting to donors

Demand Forecasting
- Pricing & volume
- Subsidy adjustment

Procurement
- Procurement agent assessment and selection
- Supplier negotiation
- Contract management
- ACT order management
- Payment management
- Order progress tracking

Quality Assurance
- Supplier pre-qualification
- Pre-shipment manufacturer testing
- Registration of ACTs (where necessary)

Monitoring & Evaluations
- Adherence to contractual agreement
- Program management (financial and drug management, meeting milestones/outputs, etc)
- Impact studies

Auditing
- Manufacturers (drug quality and certification)
- Wholesalers
- Financial audits (outsourced partners)

Logistics
- Shipping and delivery
- Inventory management/warehousing
- Payments of import duties, taxes

Advocacy
- Subsidy advocacy to donors, stakeholders
- Social marketing for beneficiaries

Technical Assistance

Criteria:

- **Is the function core to the key organizational goals?**
- **Do we need control over this function?**
- **Can a partner perform this function more effectively and efficiently?**

ILLUSTRATIVE

IN-FACILITY
- Secretariat
- Financing
- Demand forecasting
- Procurement agent selection

PARTNER WITH BEST FUNCTIONAL ORGANIZATION
- Procurement
- Quality Assurance
- Monitoring & Evaluations
- Auditing

PARTNER WITH BEST HEALTH ORGANIZATION
- Logistics
- Advocacy
- Technical support

The Facility will adopt the best available governance structure for the subsidy management

	OPTION 1: Fully Integrated Structure	OPTION 2: Independent governance: Prominent Individuals	OPTION 3: Independent governance: Donor-Based	OPTION 4: Independent governance: Mixed
Description	• Owned by an existing organization (WBG, WHO) and will be governed by its Board/governance structure	• Governed by prominent individuals with expertise in the organizational issues	• Diverse Board but stronger emphasis is on donor representation	• Diverse Board made up of donors, technical experts and beneficiaries
Advantages	• No investment needed in setting up a new Board and/or governance structure	• Flexibility • Selection of appropriate skill-set	• Flexibility • Ease of decision making due to lean size	• Flexibility • Balance and representation
Disadvantages	• Limited flexibility • High risk of capture by owner • Lack of donor representation	• Lack of stronger donor representation might limit resource mobilization ability	• Lack of beneficiary and technical expert representation might limit the Board's capacity to understand issues	• Difficulty in decision making due to large size
Examples	• WBG program • WHO program	• IAVI	• UNITAID	• GAVI • GDF: Stop TB • Global Fund

What criteria should be used to select the best governance structure?

- What type of expertise and support does the Facility require from the Board – technical or financial?
- How much operational flexibility does the Facility require?
- How fast would the facility need to take decisions?
- How involved should the Board be in day-to-day operations?

The Facility will select a host organization that provides the highest level of support without compromising flexibility

	OPTION 1: Fully Integrated in Existing Organization	OPTION 2: Hosting Agreement with public sector	OPTION 3: Hosting Agreement with private sector	OPTION 4: Independent hosting
Description	• Secretariat is a new division within an existing organization	• Independent Secretariat hosted in an existing public sector organization (e.g., WHO, WBG, etc)	• Independent Secretariat hosted in a private sector organization	• Independent organization created to host the Secretariat
Advantages	• No investment in setting up new structures	• Directly available systems, process and capacity • UN benefits (laissez-passer, tax status) • Stronger legal protection	• Directly available systems, process and capacity • Fast processes • Low risk of political capture	• Full independence allows for fast and streamlined implementation
Disadvantages	• Limited flexibility • High risk of capture by host	• Limited flexibility and speed due to bureaucracy and need to follow host governance procedures • High risk of capture by owner	• No UN benefits • Possibly less appealing to donors	• High upfront investment • High operating costs due to lack of economies of scale • No UN benefits
Examples	• WBG program • WHO program	• RBM in WHO • Stop TB in WHO	• TBC	• IAVI • MMV • Global Fund

What criteria should be used to select the most appropriate host of the organization ?

- Which existing organization has the greatest operational and mission synergies with the subsidy facility?
- What option will allow the greatest flexibility while offering the most benefits?
- Is there a private sector option?

Key questions for breakout group

Subsidy Design:

- What is the most appropriate **subsidy adjustment mechanism** to ensure innovation and competition?

Facility Organization:

- What **criteria** should be used for selecting which **roles and functions** to perform in-house and which to outsource?
- What **criteria** should be used to select the **governance structure**?
- What **criteria** should be used to select a **host organization**?