

Evidence-Based Pharmaceutical Policy: Public Procurement Databases Provide Insight to Global Antiretroviral Prices

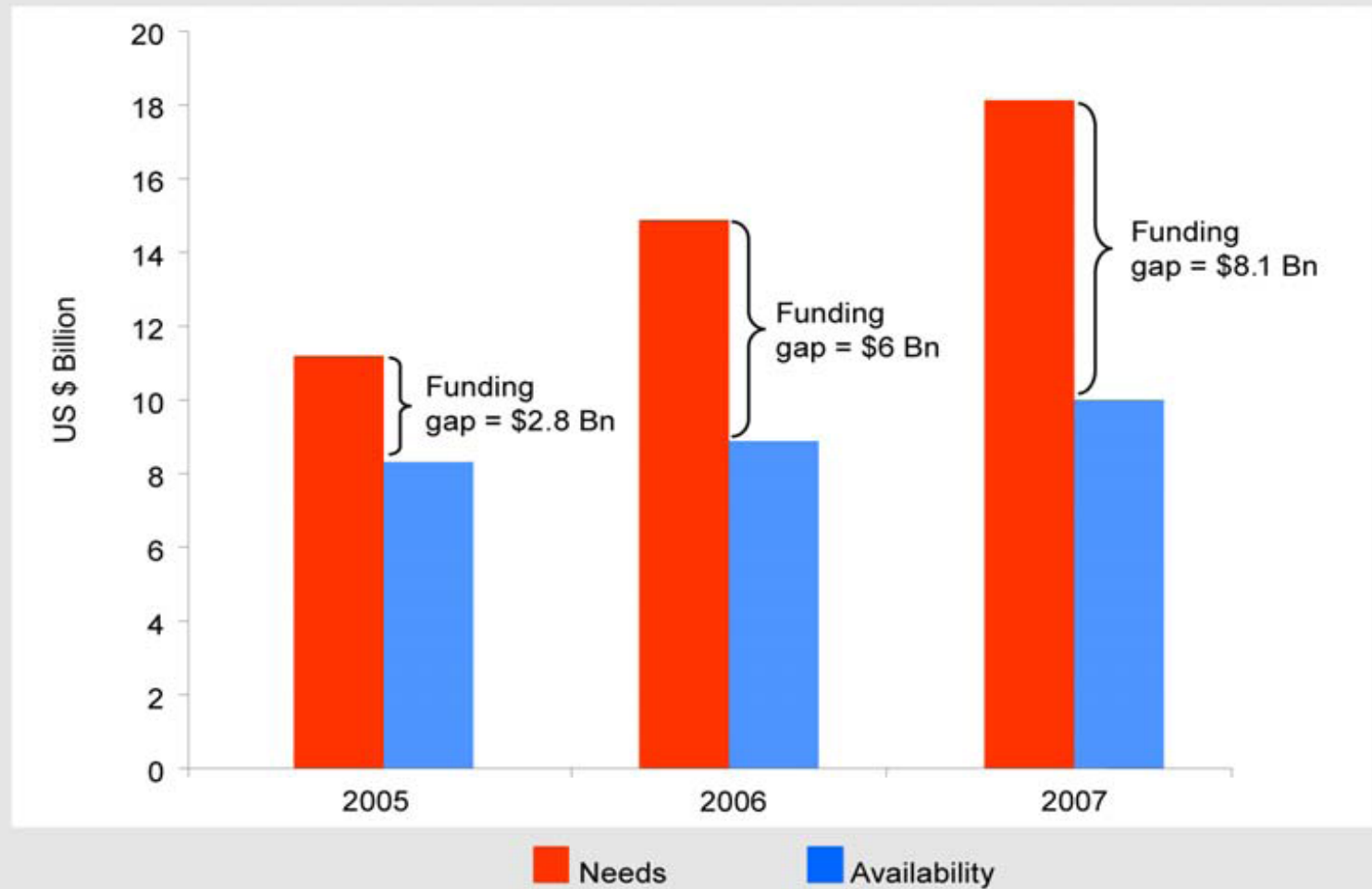
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Geneva Health Forum



Funding gap between resource needs and resource availability 2005-2007



Source: UNAIDS 2008

2006: 2million on antiretroviral therapy (ART), 5 million need ART

2010: projected 16 million need ART;

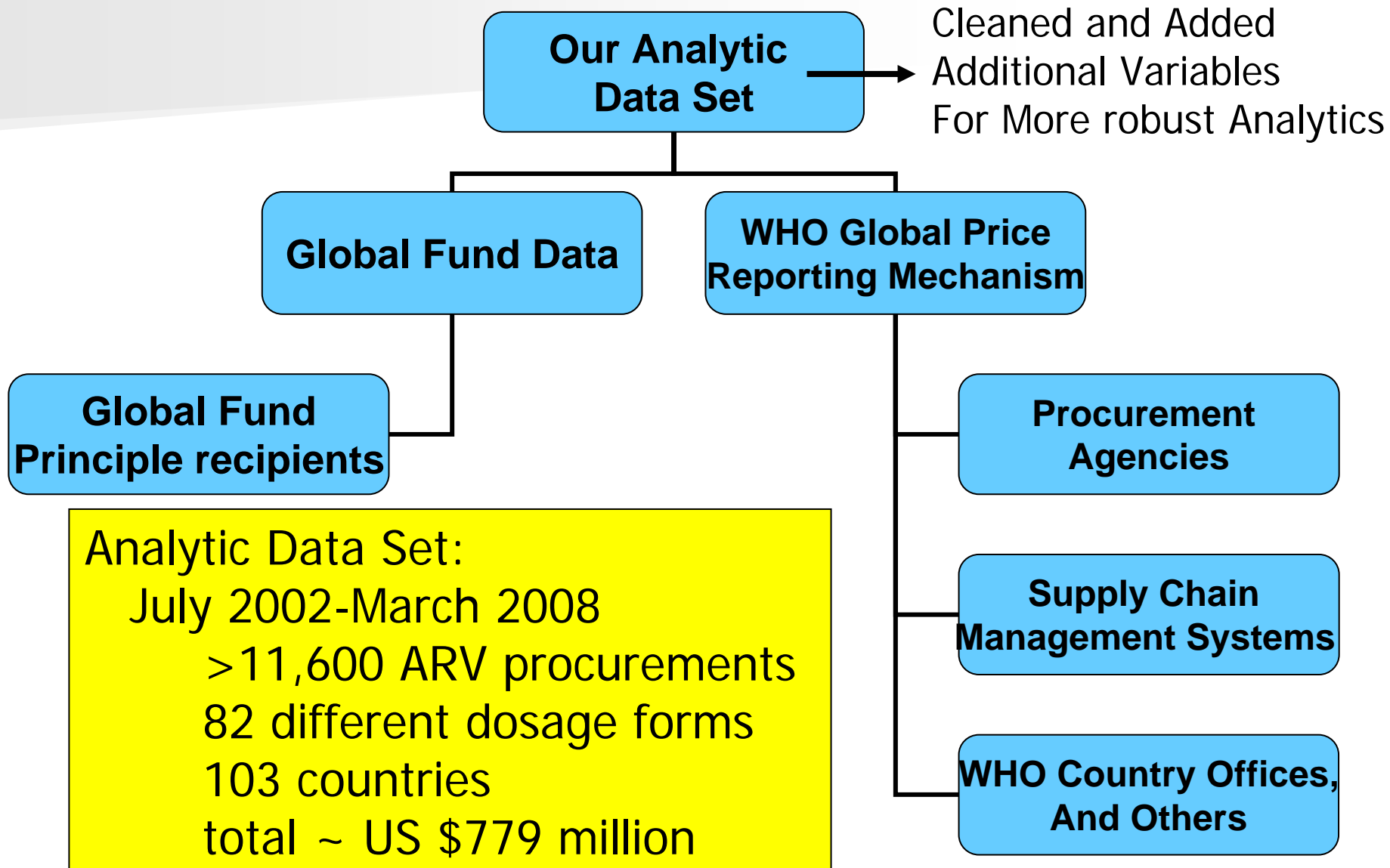
2015: projected 26 million need ART

Source: UNAIDS 2008

Interventions Needed to Reduce Costs of Antiretroviral (ARV) Medicines to Achieve Universal Access

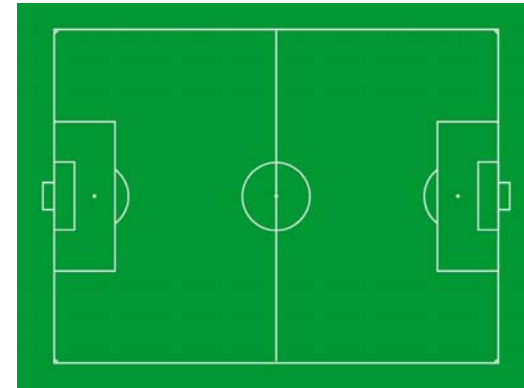
- But what interventions?
- Research is scarce in the area of drug prices
- Most policy and program decisions pertaining to supply chain management (procurement, etc.) are NOT evidence based
- We analyzed existing publicly available ARV procurement data to gain insights on potential policy and health systems interventions towards improving access to ART

Public Sources of ARV Procurement Data



Background to Procurement Practices

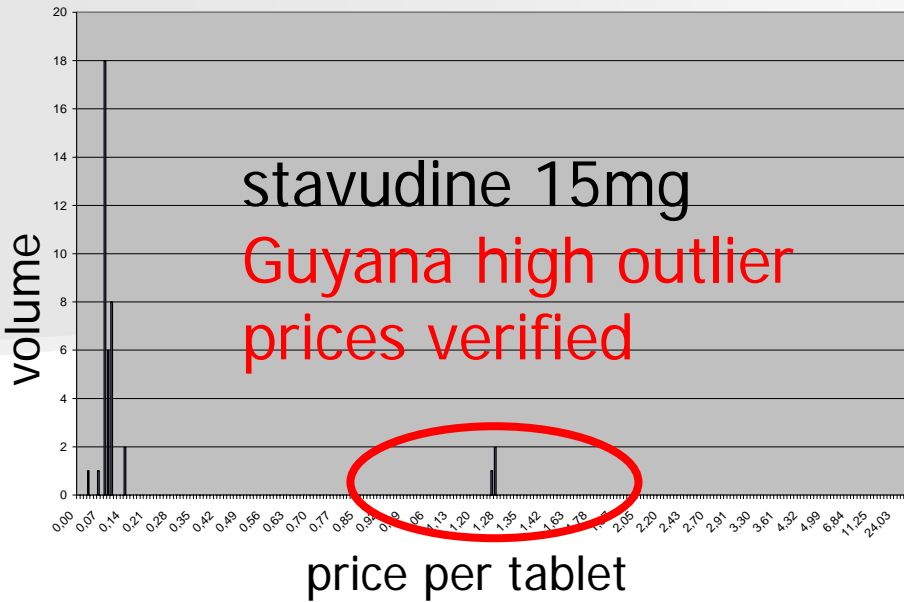
- Countries typically struggle with medicine procurement
 - Unreliable suppliers, unknown medicine quality
 - Insufficient funds and financial systems
 - No clear idea of fair, market price (information asymmetry)
 - Result is enormous variation in price within and across countries
- Global Fund (GF) Offers Level Playing Field
 - “Sufficient” financing
 - Public posting of prices paid by all recipients
 - Limited # pre-qualified ARVs and suppliers
 - Expect little price variation in this environment



Research Objectives

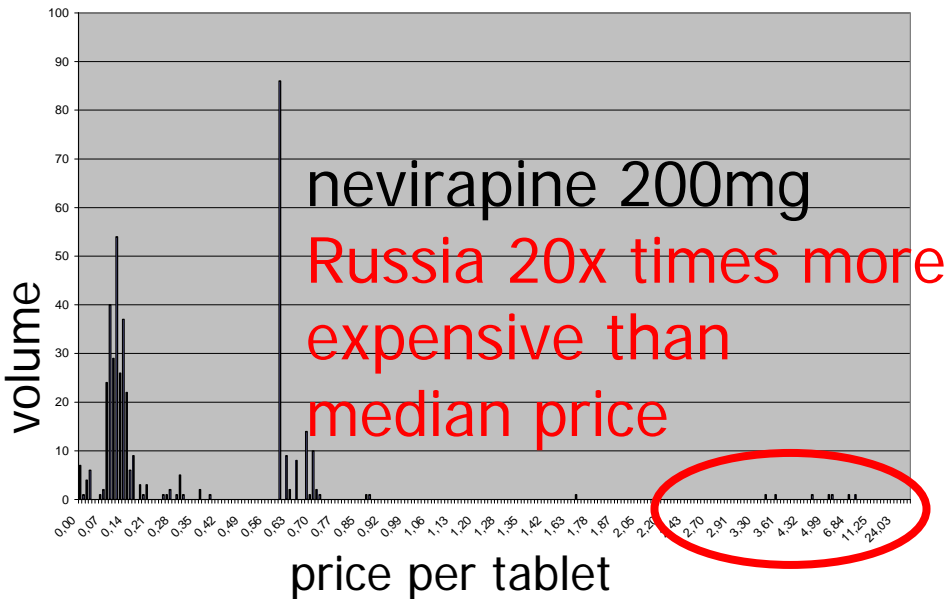
1. Compare procurement “performance” of countries, defined by ARV prices paid
2. Test Common Procurement Assumptions
 - Higher volume means lower price (buy more, pay less)
 - Differential prices for branded ARVs are great deals
 - Countries who belong to Clinton HIV/AIDS (CHAI) Consortium consistently pay less for generic ARVs than countries who are not part of the CHAI consortium

stavudine 15mg

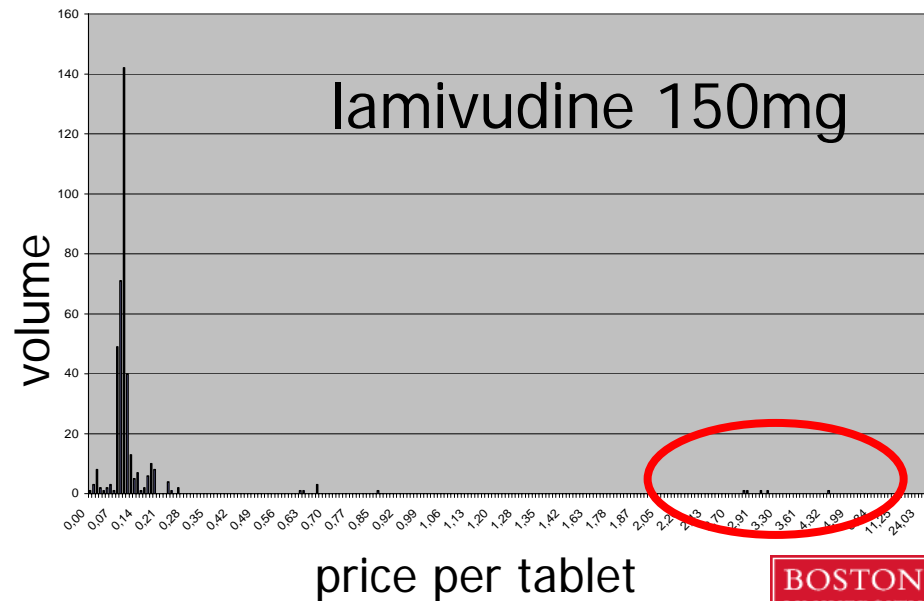


1. Substantial variability in prices paid within and across countries

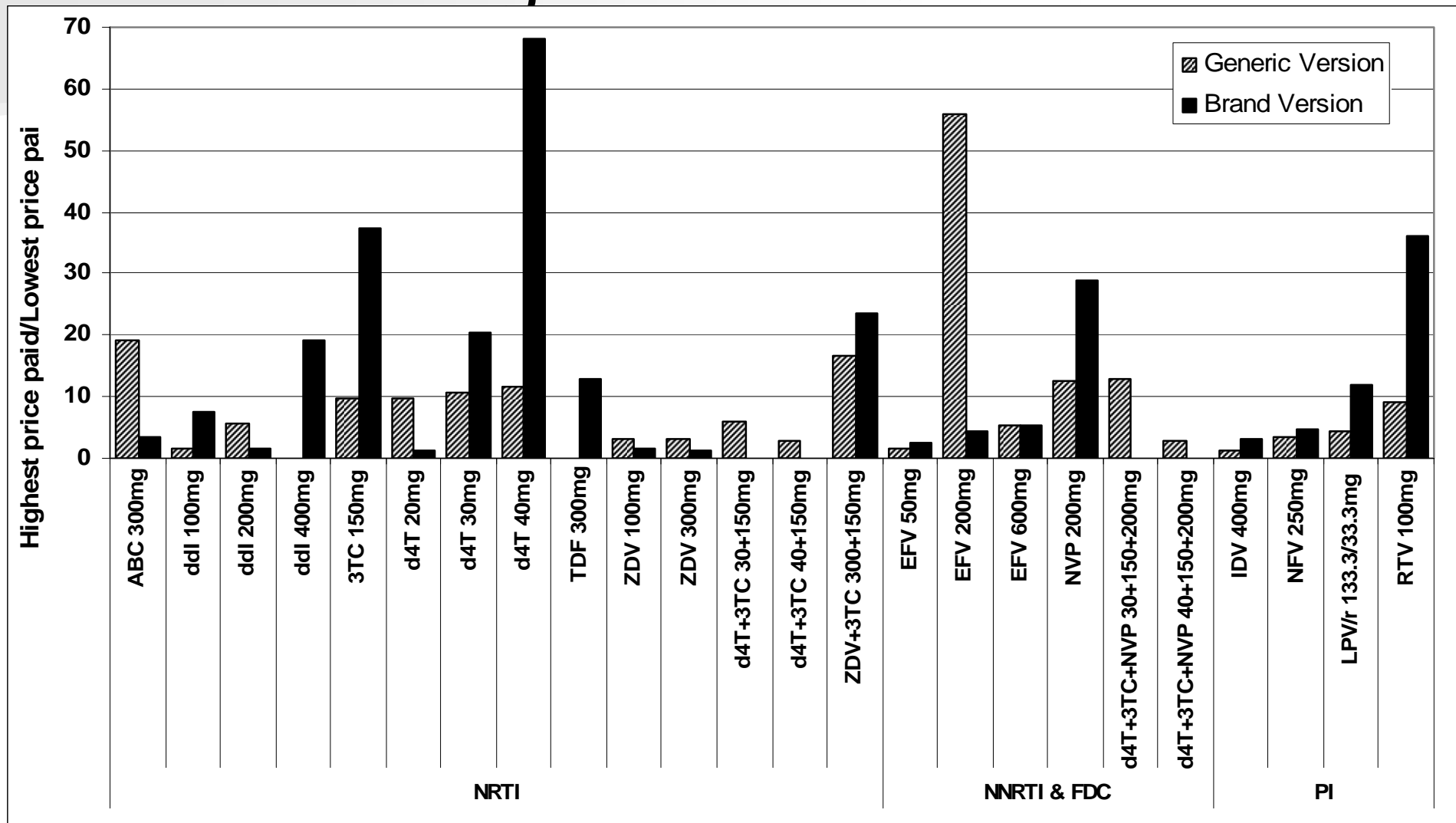
nevirapine 200mg



lamivudine 150mg

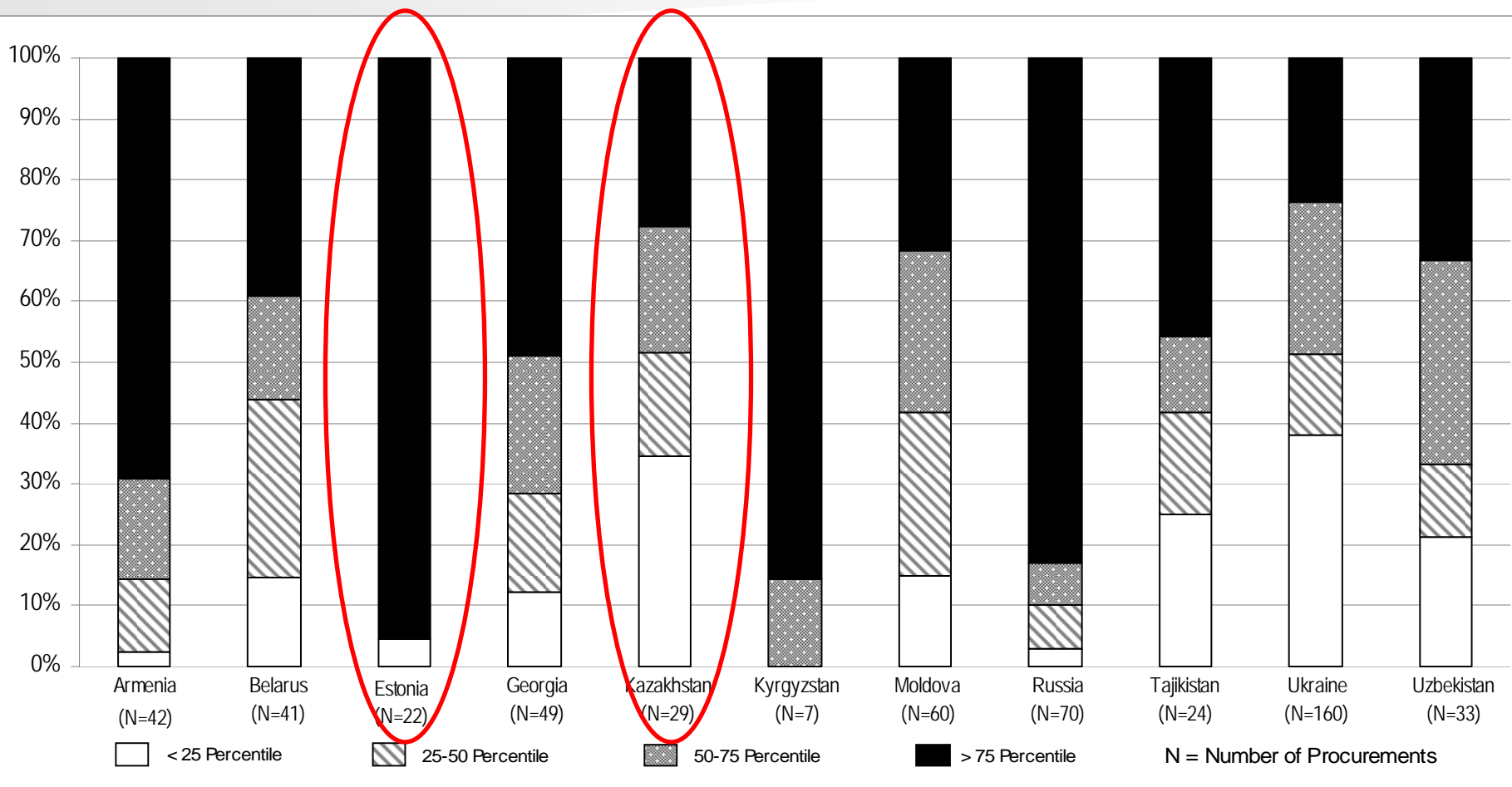


Extreme Price Variability: Ratio of Highest Price/Lowest Price



July 2006-June 2007

Country Benchmarking on Prices Paid for ARVs: Percent of Purchases in Global Interquartile Distribution of Prices, July 2002-March 2008



Countries of the Former Soviet Union, Solid Dosage Forms only

Total Amount Spent Above Global Median* & Number of People Who Could be Treated if ARVs had been Purchased at Global Median Prices (7/06-6/07)

Country	Total Amt. Paid Above Global Median	# People Treated d4T/3TC/NVP
Armenia	<p style="text-align: center; font-size: 24px; font-weight: bold;">Currently only 24,000 people on ART in countries of the Former Soviet Union</p>	
Belarus		
Estonia		
Georgia		
Kazakhstan		
Moldova		
Russian Federation	\$13,620,404	143,373
Tajikistan	\$ 3,912	42
Ukraine	\$ 3,410,063	35,895
Uzbekistan	\$ 112,854	1,188
Total	\$18,848,497	198,405

*\$US price paid/tablet – global median price/tablet) x (# tablets purchased)

2. Test Common Procurement Assumptions

- Created a regression model with 7 variables:
 - volume (divided in tertiles)
 - year of procurement
 - INCO terms (describes add-on costs; shipping, etc.)
 - generic/brand
 - CHAI-eligible
 - Differential price-eligible
 - Country World Bank income stage

Higher Volume does NOT mean Lower Price

	High Volume	Middle Volume	Low Volume
Efavirenz 600mg	Ref	3.75%	6.85%
Lop+rit 133.3+33.3mg	Ref	12.18%	23.87%
Sta+lam+nvp 40+150+200mg	Ref	12.87%	19.03%
Zidovudine 300mg	Ref	4.02%	4.40%

Only 4 of 24 dosage forms showed volume-price association

Remaining 20 Dosage Forms

No Price-Volume Association

Abacavir 300mg

Didanosine 100mg

Didanosine 200mg

Didanosine 400mg

Efavirenz 50mg

Efavirenz 200mg

Indinavir 400mg

Lamivudine 150mg

Nelfinavir 250mg

Nevirapine 200mg

Ritonavir 100mg

Stavudine 20mg

Stavudine 30mg

Stavudine 40mg

Sta+lam 30+150mg

Sta+lam 40+150mg

Sta+lam+nvp

30+150+200mg

Tenofovir 300mg

Zidovudine 100mg

Zid+lam 300+150mg

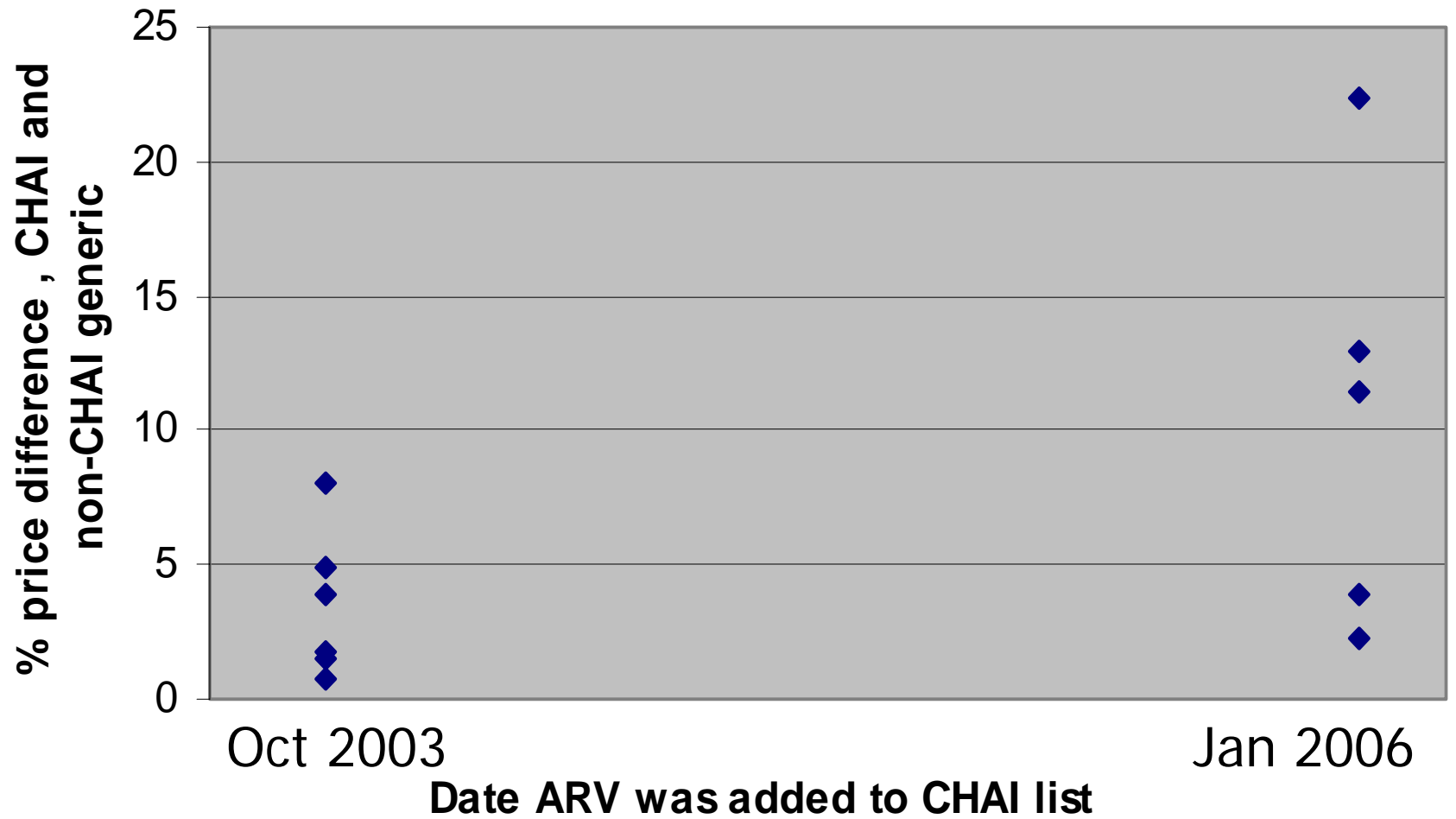
Differential Prices (DP) for Brand ARVs Are Seldom Cheaper than Generics

- 19 ARVs available under DP scheme
 - Most were less expensive than brand prices when DP not available
- 7 of the 19 DP-ARVs compared to generic prices
 - 5 of these 7 DP ARVs more expensive than generics

CHAI Generic Prices Are NOT Always Lower than Non-CHAI Generic Prices

- 11 generic CHAI and non-CHAI comparisons
 - 1 (EFV 600mg) CHAI 22% less expensive Non-CHAI
 - 4 ARVs CHAI 8-13% less expensive Non-CHAI
 - 6 ARVs CHAI price was <5% less than non-CHAI

CHAI Inferences: CHAI Setting Market Prices for All?



Is CHAI having spillover effect onto entire market? More research is needed

Summary and Conclusions (1)

- Public procurement data can inform policy and program decisions at donor and country levels
 - No longer need to rely on assumptions to guide policy; can use evidence
- Consensus needed for all donors (PEPFAR, World Bank) to mandate public disclosure of procurement data
 - Only Global Fund has such a policy
- Wide price variation across countries suggests ARVs can be obtained at lower prices
 - Investigate low prices to inform best practices and high prices to understand reasons, then intervene
 - Country benchmarking offers easy means to monitor performance

Summary and Conclusions (2)

- Larger purchase volumes may NOT result in lower prices
 - Other factors may be more closely related to price: lack of awareness of fair market prices, timeliness of payment, lead times, supplier relationships, middle-man policies, brand preferences, etc.
- Differential prices for branded ARVs have little to offer in a competitive generic market
- CHAI offers substantial discounts for generic ARVs immediately after negotiations with producers; but these discounts dissipate over time
 - More work is needed to better understand market effects

Acknowledgements

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