

Rationalization of the Pediatric Antiretroviral Formulary to Optimize Pediatric Antiretroviral Treatment in Malawi

Presented by: Nandita Sugandhi M.D.
6th International Workshop on HIV Pediatrics
July 18-19, 2014
Melbourne, Australia

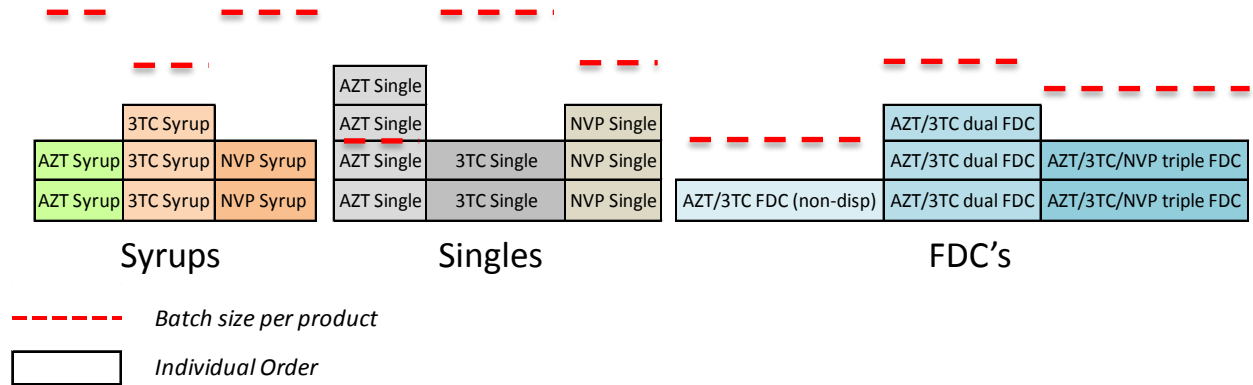


Consolidating procurement simplifies supply chains and increases demand

Example: AZT+3TC+NVP regimen for 3 - 24.9 kg weight band

Product Fragmentation

- Multiple formulations procured for one regimen
- Difficult to achieve minimum batch size per product

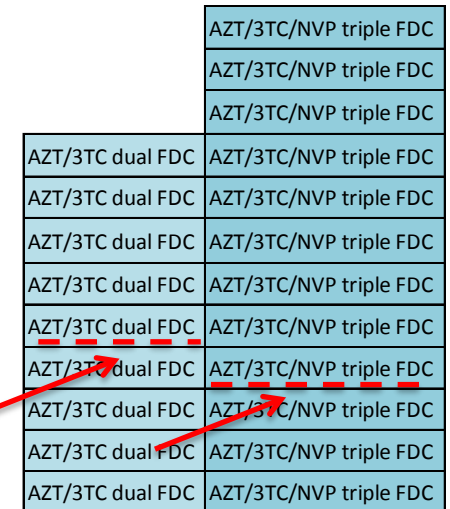


Product Consolidation

- Improve patient outcomes
- Limit supply risks, meet minimum batch size
- Decrease costs



Minimum batch size



FDC's

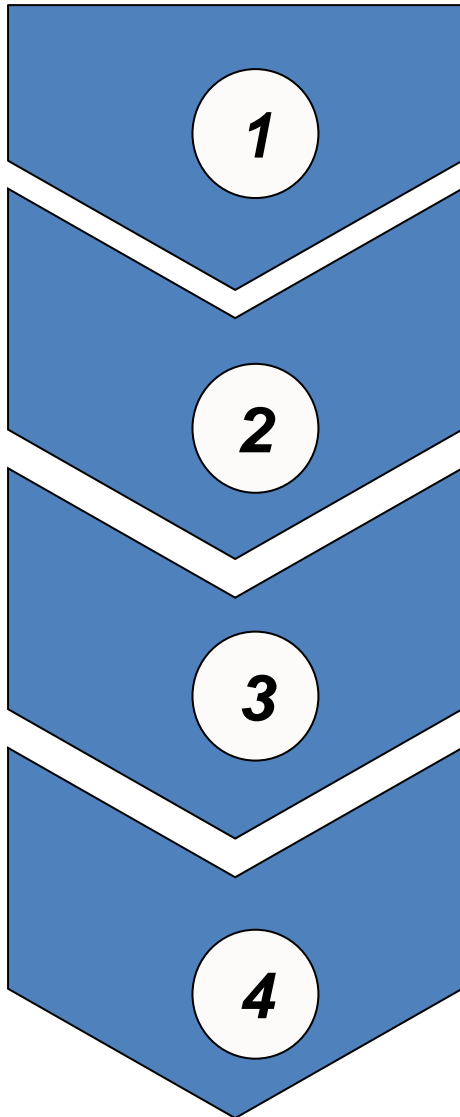
In 2010, Malawi procured 23 different formulations, including ddi



ARV Formulations procured in 2010 by Malawi:

3TC (150mg)
3TC (150mg) + AZT (300mg)
3TC (30mg) + ABC (60mg)
3TC (30mg) + AZT (60mg)
3TC (30mg) + AZT (60mg) + NVP (50mg)-Dispersible Tablets
3TC (30mg) + d4T (6mg)
3TC (30mg) + d4T (6mg) + NVP (50mg)
3TC (50mg/5ml)
3TC (60mg) + d4T (12mg)
3TC (60mg) + d4T (12mg) + NVP (100mg)
ABC (20mg/ml)
ABC (300mg)
AZT (100mg)
DDI (125mg)
DDI (200mg)
DDI (25mg)
EFV (200mg)-Tablets
EFV (50mg)-Capsules
LPV/r (200/50mg)
LPV/r (80 + 20 mg / ml)
LPV/r (100/25mg)
NVP (200mg)
NVP (50mg/5ml)

Malawi's Optimization Opportunities



Limit use of syrups

Limit use of single tabs and capsules

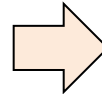
Replace 50mg EFV cap with EFV
200mg scored tablet

Consolidate around one pediatric d4T
FDC

Between 2010 and 2012 Malawi reduced the total number of pediatric ARV formulations procured from 23 to 8

ARV Formulations procured in 2010

3TC (150mg)
3TC (150mg) + AZT (300mg)
3TC (30mg) + ABC (60mg)
3TC (30mg) + AZT (60mg)
3TC (30mg) + AZT (60mg) + NVP (50mg)-Dispersible Tablets
3TC (30mg) + d4T (6mg)
3TC (30mg) + d4T (6mg) + NVP (50mg)
3TC (50mg/5ml)
3TC (60mg) + d4T (12mg)
3TC (60mg) + d4T (12mg) + NVP (100mg)
ABC (20mg/ml)
ABC (300mg)
AZT (100mg)
DDI (125mg)
DDI (200mg)
DDI (25mg)
EFV (200mg)-Tablets
EFV (50mg)-Capsules
LPV/r (200/50mg)
LPV/r (80 + 20 mg / ml)
LPV/r (100/25mg)
NVP (200mg)
NVP (50mg/5ml)



ARV Formulations procured in 2012


3TC (30mg) + ABC (60mg)-Dispersible Tablets
3TC (30mg) + AZT (60mg)
3TC (30mg) + AZT (60mg) + NVP (50mg)-Dispersible Tablets
3TC (30mg) + AZT (60mg)-Dispersible Tablets
3TC (30mg) + d4T (6mg)
3TC (30mg) + d4T (6mg) + NVP (50mg)
EFV (200mg)-Tablets
LPV/r (100/25mg)

Assessing impact of Malawi's pediatric ARV formulary rationalization: Cost of AZT/3TC/NVP for a 10-14kg child

Methodology:



 UNITAID-CHAI Data

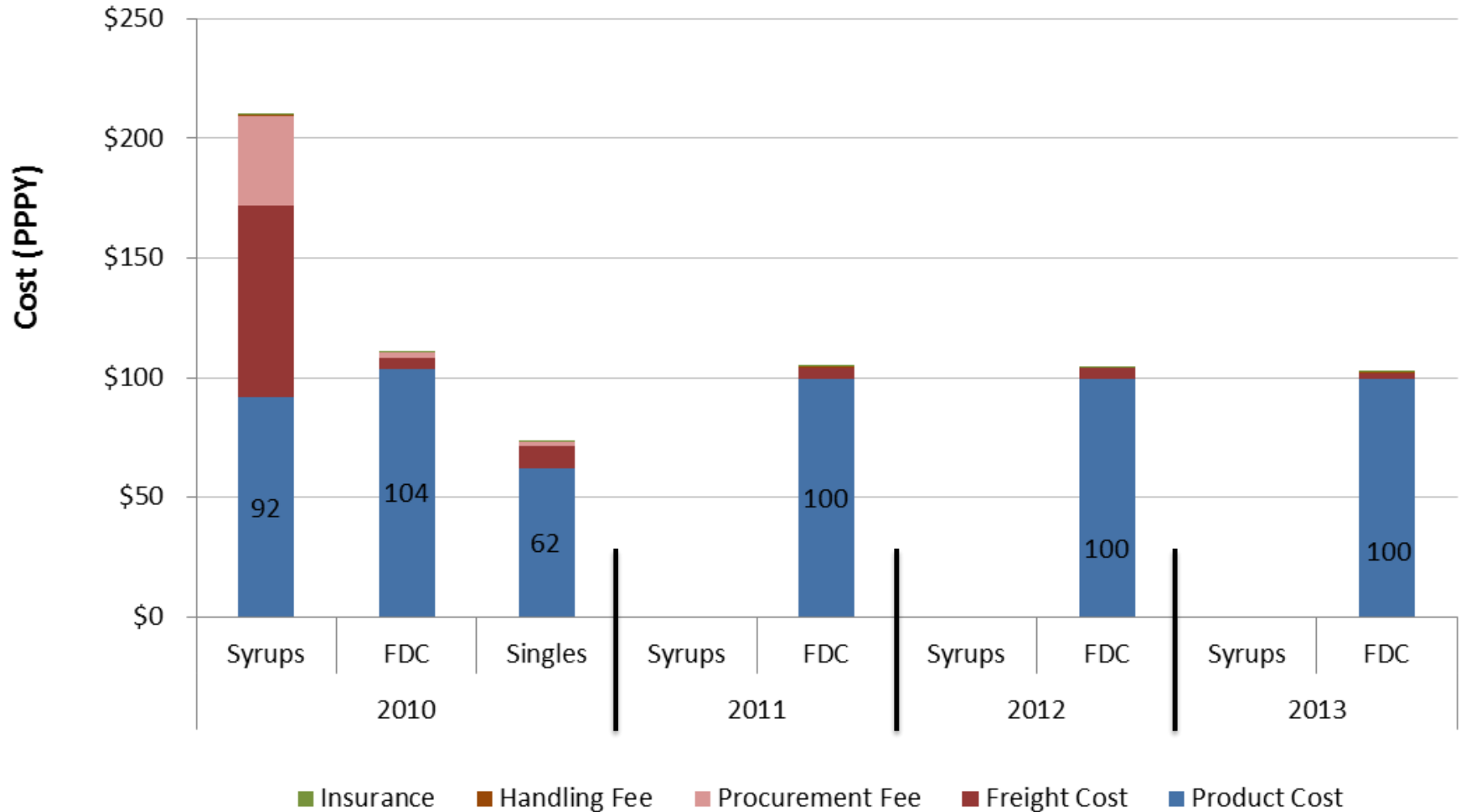
 Calculations

For each item, PPPY costs were derived for the following cost components: product cost, freight cost, procurement fee, handling fee, insurance fee

Lead times were defined as the number of days elapsed between procurement order date and the invoice date

Results of rationalization: Total unit cost savings of over 70% between 2010 and 2013

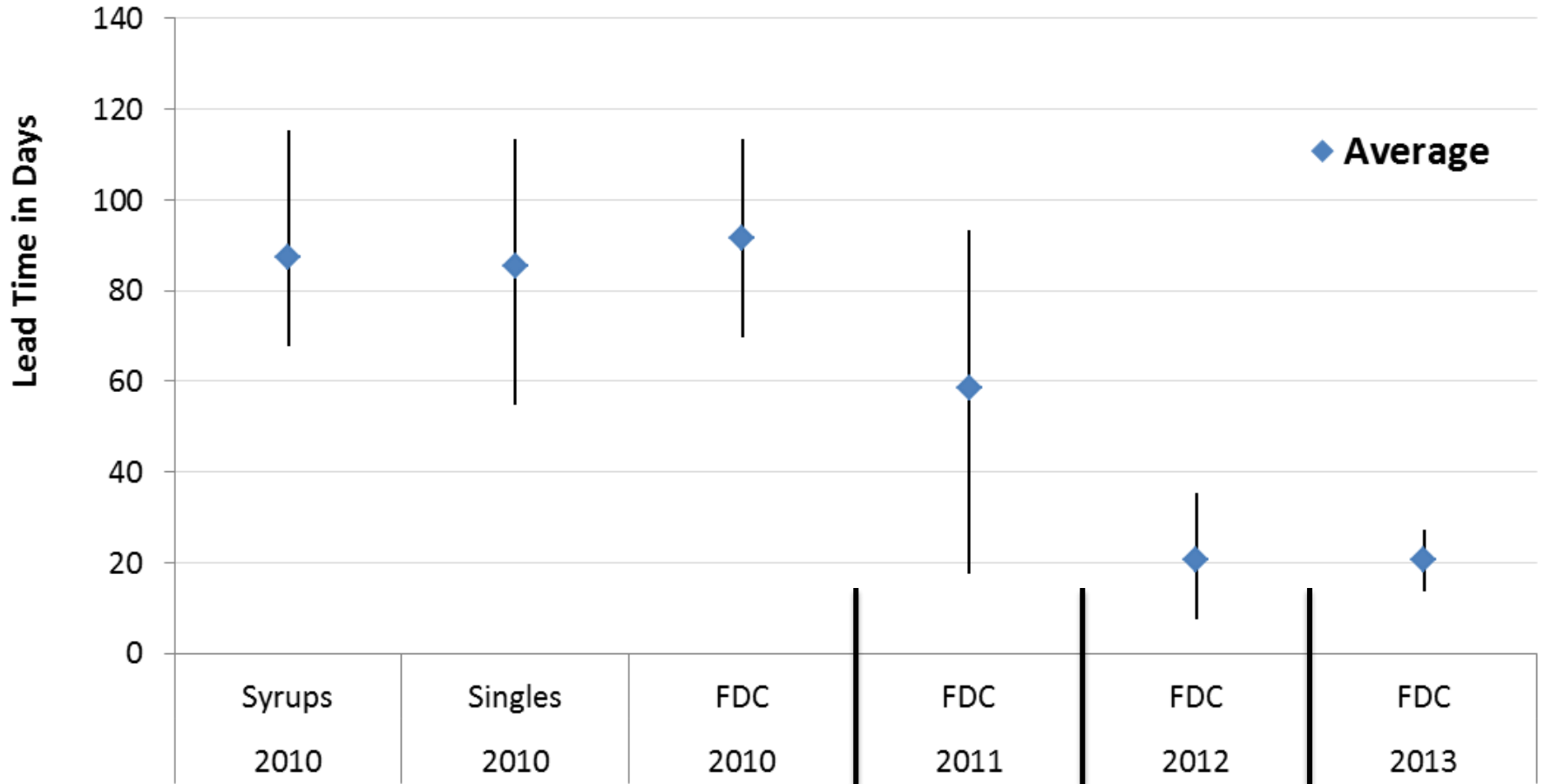
Syrup to FDC Cost Reduction for AZT/3TC/NVP



Data from CHAI-UNITAID Pediatric ARV Donation Program

Results of rationalization: Reduction in lead times

Syrup to FDC Lead Times Reduction for AZT/3TC/NVP



2013 IATT Optimal Paediatric ARV Formulary

Drug Class	Drug	Formulation	Dose
NRTI	AZT	Oral liquid*	50 mg/5mL
NNRTI	EFV	Tablet (scored)	200 mg
NNRTI	NVP	Tablet (disp, scored)	50 mg
NNRTI	NVP	Oral liquid*	50 mg/5mL
PI	LPV/r	Tablet (heat stable)	100 mg/25mg
PI	LPV/r	Oral liquid	80 mg/20 mg/mL
FDC	AZT/3TC	Tablet (disp, scored)	60 mg/30 mg
FDC	AZT/3TC/NVP	Tablet (disp, scored)	60 mg/30 mg/50 mg
FDC	ABC/3TC	Tablet (disp, scored)	60 mg/30 mg
FDC	ABC/AZT/3TC	Tablet (non disp, scored)	60 mg/60 mg/30 mg

* Oral liquids to be used to provide infant prophylaxis for PMTCT

Acknowledgments and Thanks

CHAI

- Marianne Gauval
- Vadim Shepel
- Umesh Warty



UNICEF

- Atieno Ojoo

UNITAID

Virology Education

