



# CHALLENGES IN DISPENSING AND DISTRIBUTION OF PAEDIATRIC ARVs TO END USERS



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Hii dawa  
ni ya nini?



What is this  
medicine for?

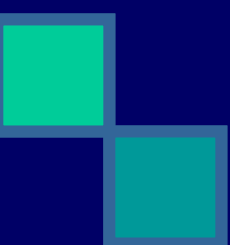



# Joy for the adults

- Reasonable drug prices and still falling...
  - Increasing availability
  - FDCs
  - Standardized drug regimens
  - Funds Galore!
  - Increasing prescriber knowledge and experience
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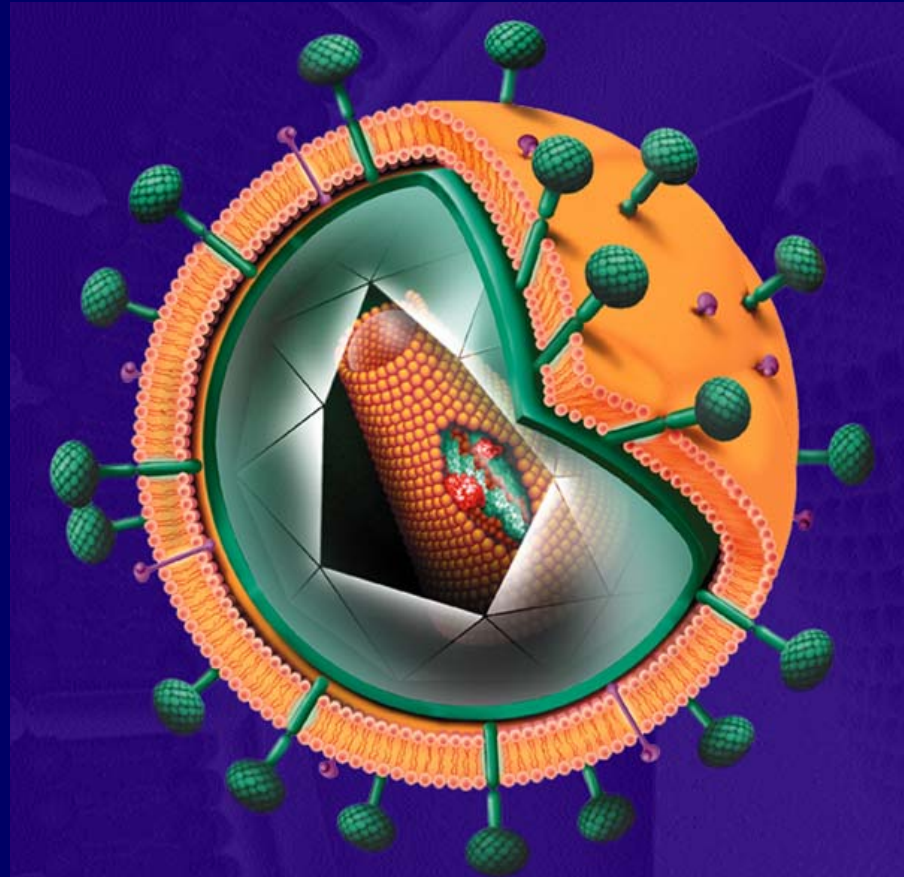


# Not so for the young ones.....

- Prices of paediatric formulations higher
  - Few options to choose from
  - unlicensed use
  - No FDCs yet!
  - Limited prescriber and dispenser knowledge
- 
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# Prescribing challenges

- Body Weight
- Body Surface area
- Complex combination regimens



- ① Cap Crixivan 800mg BD  
together with Stezrin 100mg BD  
x 1/2
- ② Cap Zerit 40mg BD
- ③ Tab Videx 100mg BD } x 1/2
- ④

BD instead of TID dosage

Not recommended together; wrong STOCRIN dosage

VIDEX dosage 125mg  
or 200mg bid

• Possible that the prescription should have been  
CRIXIVAN 800mg + RITONAVIR 100mg BID =  
boosted PI regimen

✓ Gpivir 160 mg BD  
 ✓ Norvir 100 mg BD  
 ✓ Zalcitabine 80 mg BD  
 ✓ Zalcitabine 40 mg BD  
 • Sparanox 100 mg x 1/2  
 • Weferin 25 mg alternate  
 days x 1/2 Add 94 E

Wrong dosage:  
 1000mg; or  
 CRIVAN 800mg?

Interaction with  
 NORVIR

Contact Dr. Atieno Goo

# ANTIRETROVIRAL DRUGS IN PAEDIATRICS



**Gertrude's  
Garden  
Children's  
Hospital**

**KENYA'S ONLY PAEDIATRIC HOSPITAL**

## Dosing tools needed

- Simple guidelines for prescribers and dispensers

# Who is a dispenser?

A prescriber  
is anyone  
who  
recommends  
treatment



A dispenser  
is anyone  
who gives  
out treatment


# dispensing challenges

- Dose measurement-  
*what is a teaspoonful?*
- When the dose is  
8.3mls?
- Stability after opening
- Taste! E.g Nelfinavir  
powder
- *Reformulation from  
Adult medicines*






# Reformulation from adult medicines

- Dosing Errors
  - BAD Taste (Yuck!)
  - Stability in? Water, milk, apple sauce
  - Care giver as compounder
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*Adult Medicines are not designed for reformulation/paediatric use*

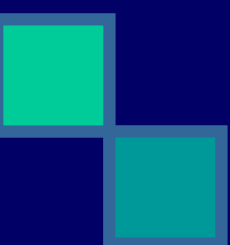



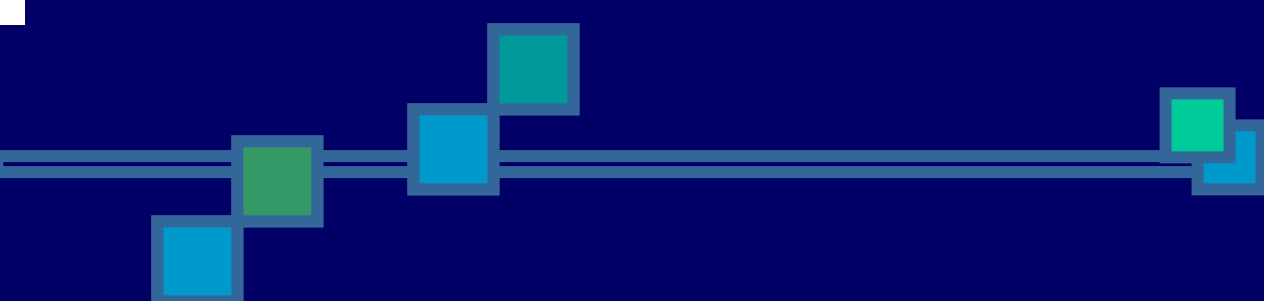
# Other dispensing challenges 1

- When the child is in school
  - Nameless disease-Psychosocial support
  - Parent/caregiver-child relationship
  - Sick parents, unmotivated care givers
  - Food insecurity
  - Structuring meals and life around medications
  - The older child...how to involve them
- 




## Other dispensing challenges 2

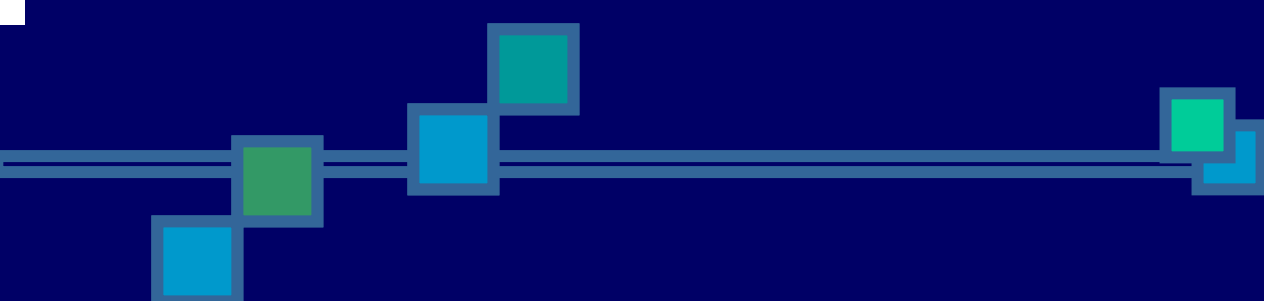
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- Inadequate counseling from the start
  - Moving from one center to another
  - Patient Medication Record
  - Patients expectations of ARV is “magic”
- 



# How will you know all this when.....

- You have too many other patients to attend to?
  - You have no “private” place to talk with parent/child?
- 

Must address Human resource capacity and healthcare infrastructure



These issues are not unique to ARV medicines only....

- It is the same for medicines for opportunistic infections



# Distribution challenges

- 
- Cost
  - Frequent stock outs in the market
  - Inability to forecast demand
  - Poor distribution network
  - Differential pricing
  - Few dispensing outlets
  - Black market-unregulated imports
- 

# The goal is

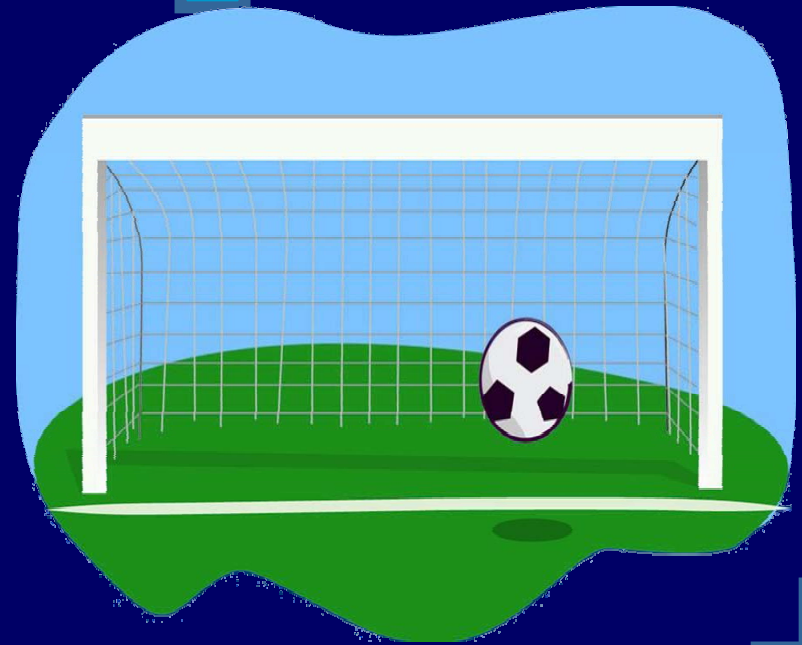
## Liquid dosage forms

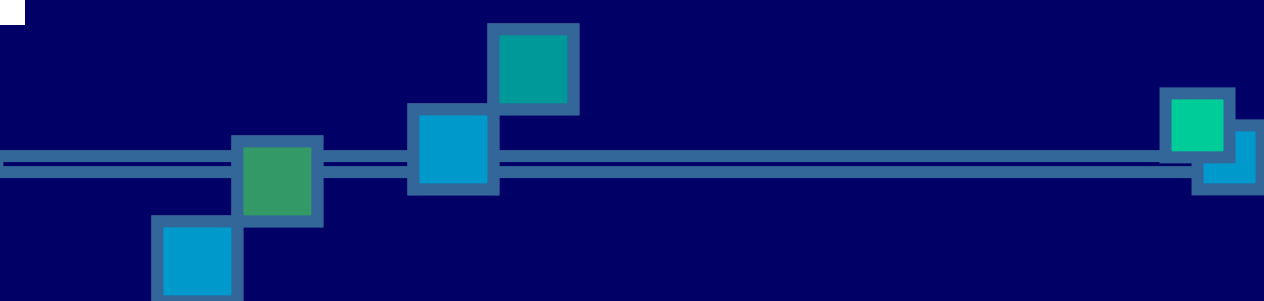
- Optimal strength/ml
- Pack size
- **Measuring devices**

## Solid dosage forms


- **Dispersible tablets**
- **Chewable tablets**
- **FDCs**

*Simple regimens and Taste considerations*





# The case for paediatric solid dosage forms

- Examples; Amoxicillin, Paracetamol
  - Low acquisition cost
  - Low logistical costs
  - Stability/storage
  - Easy to work with
- 

Who will make them?

# Take home message



- Do away with teaspoonful
  - Liquid medicine bottle tops can be calibrated as measuring devices
- Explore paediatric solid dosage forms
  - Dispersible tablets
  - Chewable tablets
- Palatability very important for children