

# **Progress toward Universal ART Access: Innovations and Treatment 2.0**

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**World Health Organization**  
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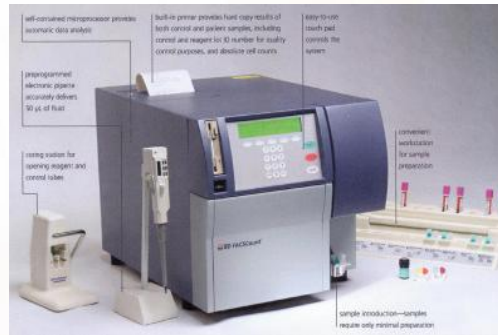
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# The need for scalable, more efficient treatment models

## Simpler drugs



## Point of care diagnostics

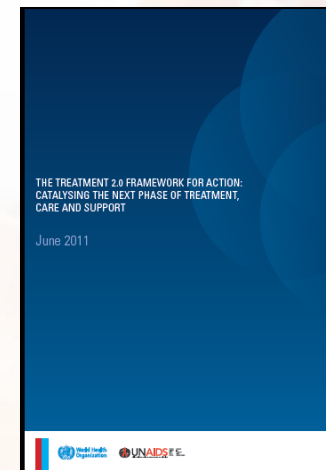
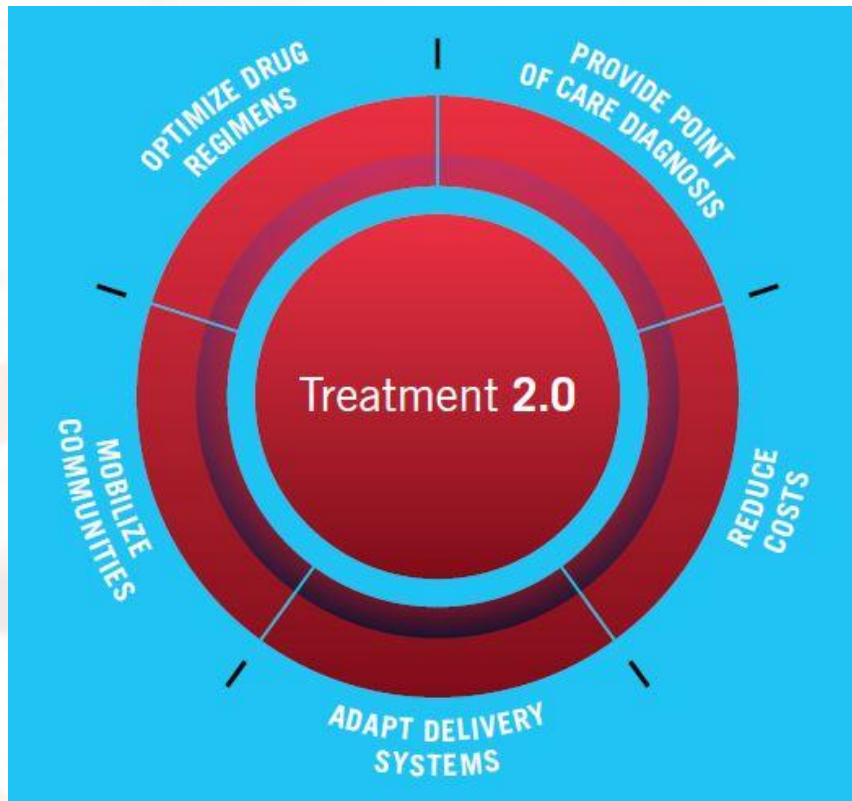


## Community models of testing & care



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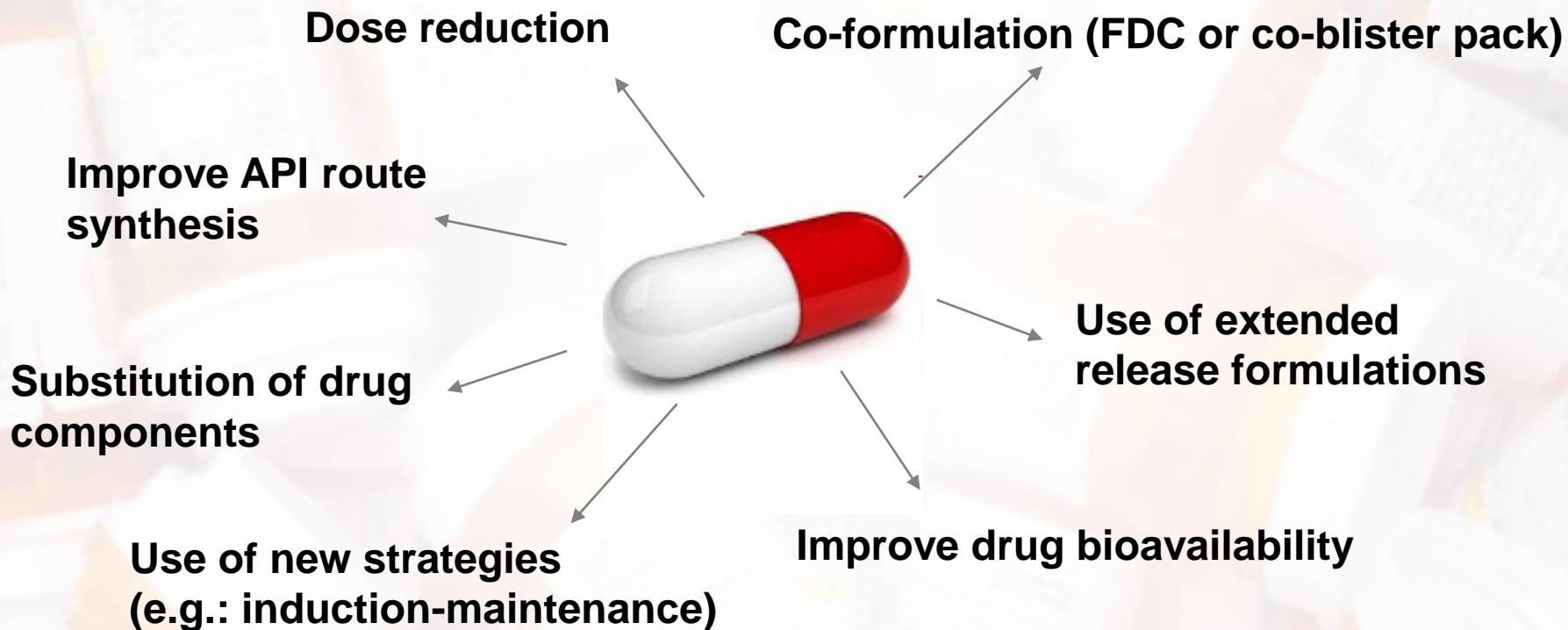
# Treatment "2.0" Strategy : Optimizing Treatment and Promoting Efficiency Gains



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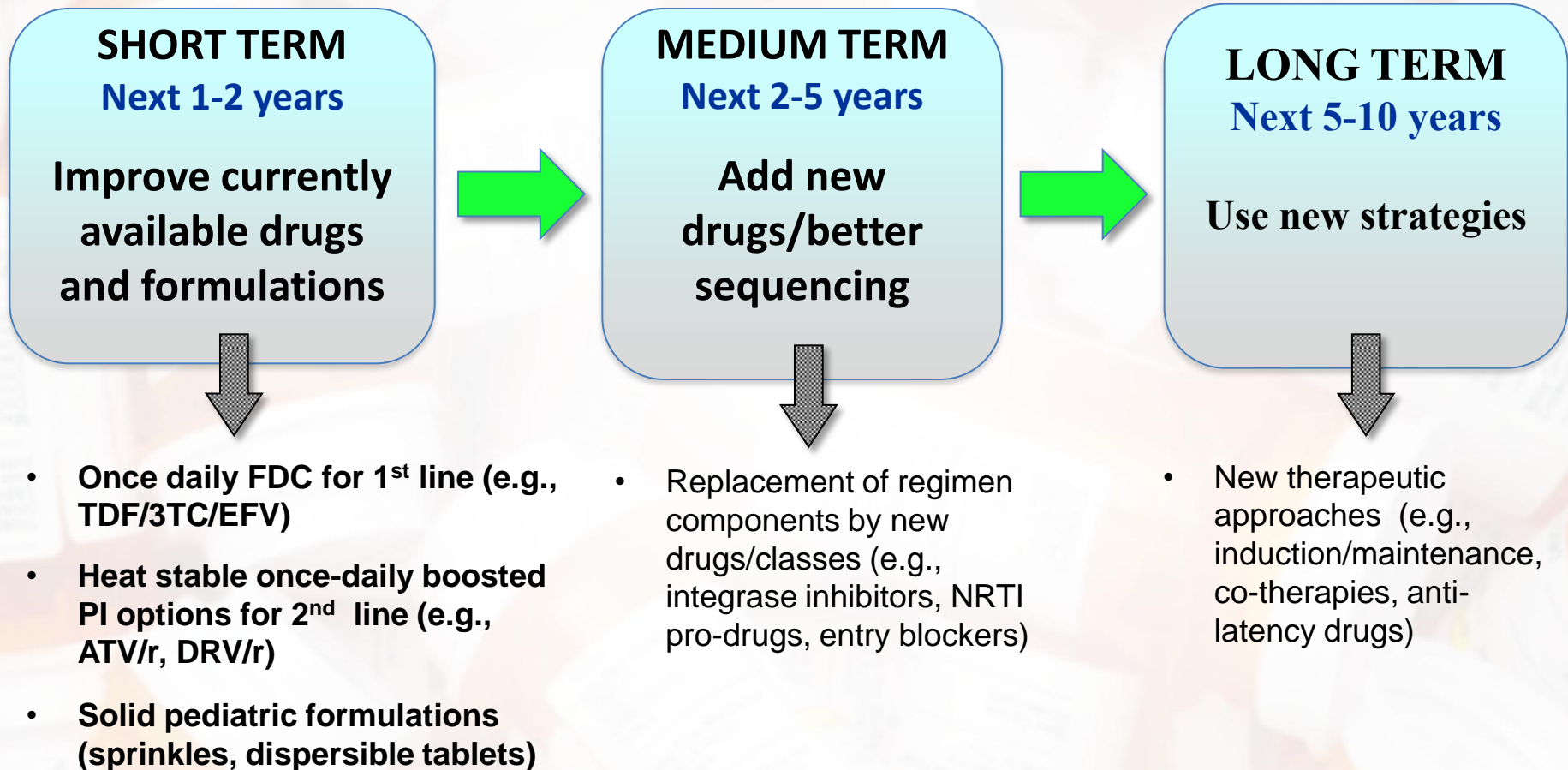
# Optimizing Drug Regimens

## Major Strategies





# Perspectives on ARV drug optimization



WHO Think Tank Meeting on ART Optimization (2012)



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# Looking ahead: Pipeline products summary (drug optimization)

- Improved delivery for tenofovir
  - TAF (prodrug)
  - CMX-157 (long acting)
- Potentially superior/better tolerated option to EFV in first line and/or better sequencing to 2<sup>nd</sup> line
  - DLG (once daily integrase inhibitor)
  - GSK-744 (long acting)
  - DRV/r (heat stable FDC)



# Major Areas for Drug Optimization in HIV Therapy: Expected Impact

Major Areas for Drug Optimization	Short Term	Medium Term	Long Term
Chemistry Process	++	++	++
Fixed Dose Combinations	+++	++	++
Dose Reduction (prodrugs)	+	+++	++
New Formulations	+	+++	++
New Drugs	+	++	+++
New Strategies	+	++	+++



**+** = low/moderate

**++** = high

**+++** = very high

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# Evolution of WHO ART guidelines

Topic	2002	2003	2006	2010	2013
<b>When to start</b>	CD4 $\leq$ 200	CD4 $\leq$ 200	CD4 $\leq$ 200 - Consider 350 - CD4 $\leq$ 350 for TB	CD4 $\leq$ 350 - Irrespective CD4 for TB and HBV	<b>CD4 <math>\leq</math> 500</b> - Irrespective CD4 for TB, HBV, PW and SDC - CD4 $\leq$ 350 as priority
<b>Earlier initiation</b>					
<b>1<sup>st</sup> Line</b>	8 options - AZT preferred	4 options - AZT preferred	8 options - AZT or TDF preferred - d4T dose reduction	6 options & FDCs - AZT or TDF preferred - d4T phase out	<b>2 options &amp; FDCs</b> - TDF and EFV preferred across all populations
<b>Simpler treatment</b>					
<b>2<sup>nd</sup> Line</b>	Boosted and non-boosted PIs	Boosted PIs - IDV/r LPV/r, SQV/r	Boosted PI - ATV/r, DRV/r, FPV/r LPV/r, SQV/r	Boosted PI - Heat stable FDC: ATV/r, LPV/r	<b>Boosted PI</b> - Heat stable FDC: ATV/r, LPV/r
<b>Less toxic, more robust regimens</b>					
<b>3<sup>rd</sup> Line</b>	None	None	None	DRV/r, RAL, ETV	<b>DRV/r, RAL, ETV</b>
<b>Viral Load Testing</b>	No	No (Desirable)	Yes (Tertiary centers)	Yes (Phase in approach)	<b>Yes</b> (preferred for monitoring, use of PoC, DBS)
<b>Better monitoring</b>					





# Expanded testing and linkage to care

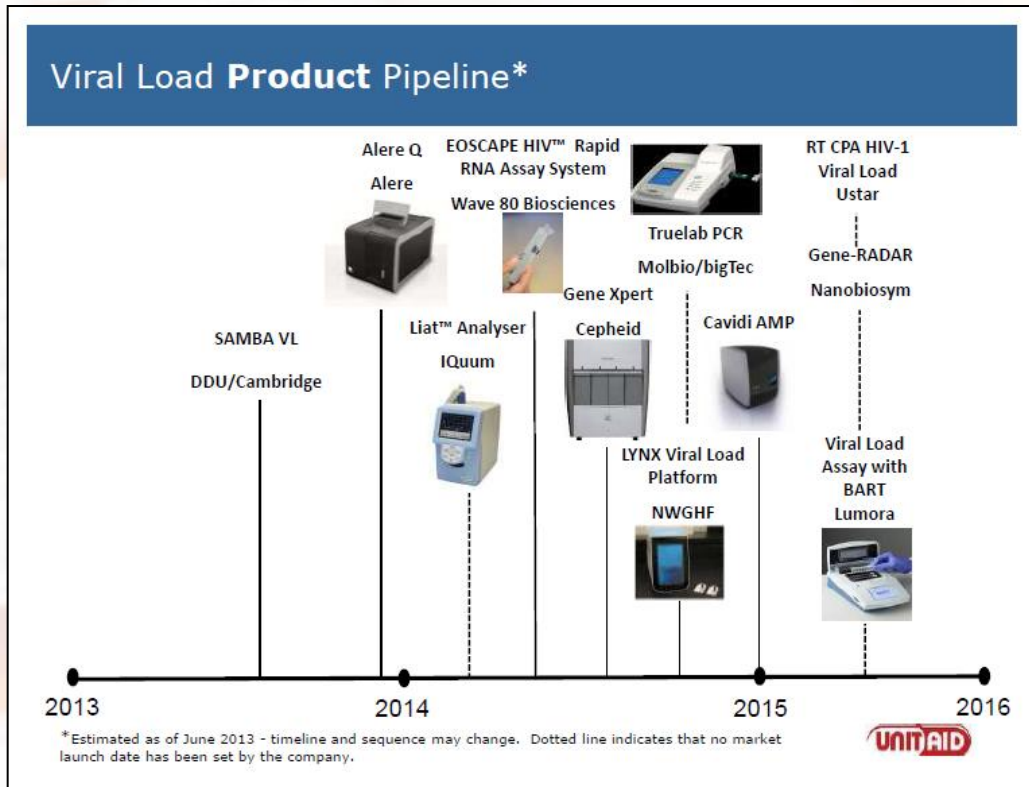
## WHO 2013 Recommendations:

- **Generalized epidemics:** community-based HIV testing in addition to PITC
- **Concentrated epidemics:** community-based HIV testing for key populations in addition to PITC
- Adolescent testing & counseling



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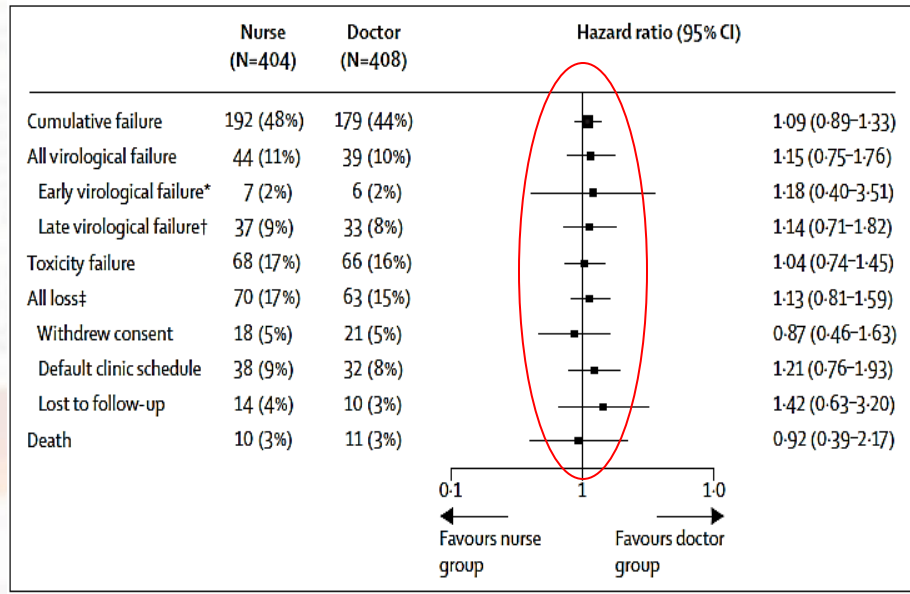
# New perspectives on ART monitoring



- Changing the paradigm: VL for routine monitoring, CD4 where needed
- Preparing for PoC VL: WHO to develop advice on use of different technologies at different levels of the health services



# Task shifting: nurses and non-physician clinicians providing care and treatment



## WHO 2013 Recommendations:

- Trained non-physician clinicians, midwives and nurses can **initiate** first-line ART and **maintain** treatment
- Trained and supervised community health workers can **dispense** ART between clinic visits.





# Decentralization:

## Bringing ART closer to communities



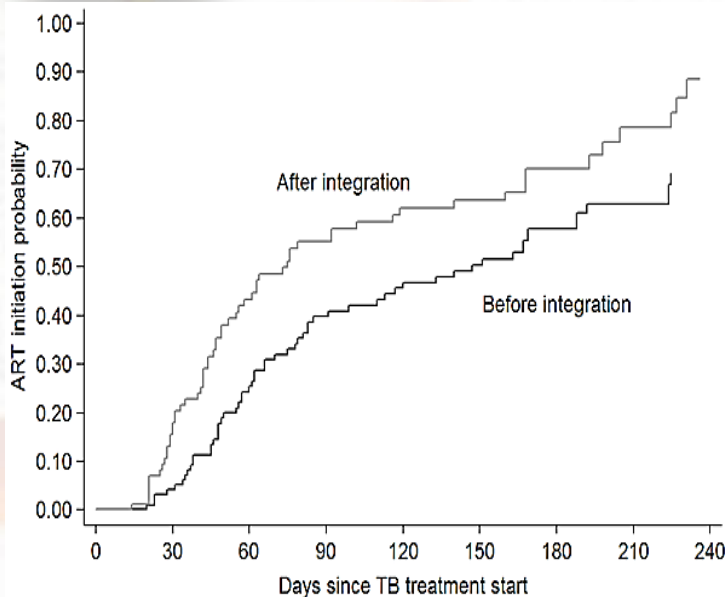
### WHO 2013 Recommendations:

- Initiation and maintenance of ART in peripheral primary facilities
- Initiation of ART in peripheral primary facilities and maintenance at community level between clinic visits.





# Service integration: Responding to co-morbidities and multiple needs



## WHO 2013 Recommendations: Initiate and maintain ART in :

- TB care settings
- MCH/ANC settings
- OST settings with linkage to continued HIV care and treatment

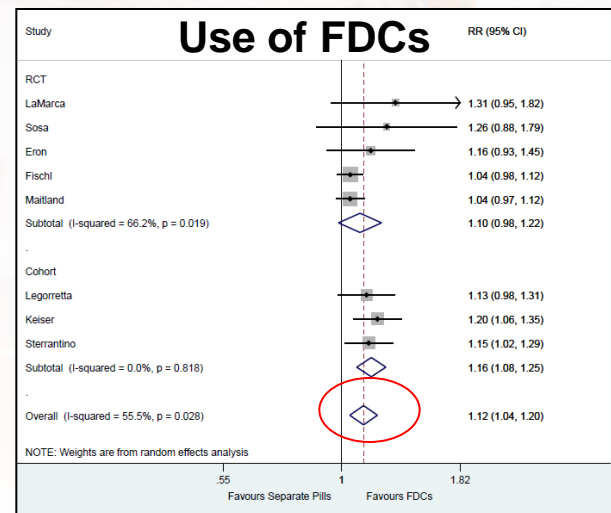


# Adherence support: combinations of interventions



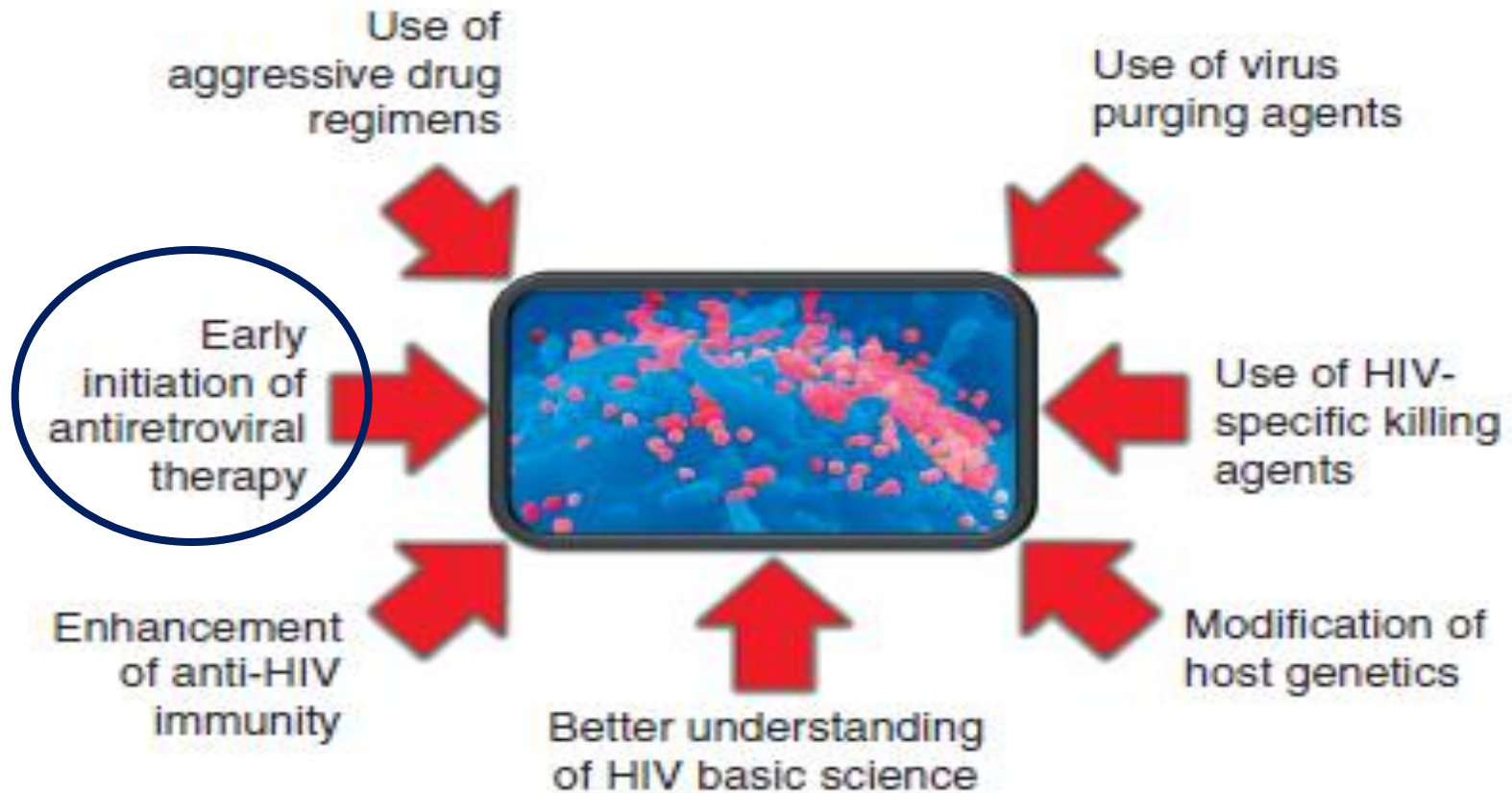
## WHO 2013 Recommendations:

- Minimizing out of pocket payments
- Use of fixed-dose combinations
- Strengthening drug supply system
- Patient counseling and education
- Peer support
- Nutritional support in food insecure settings
- Mobile phone text messages



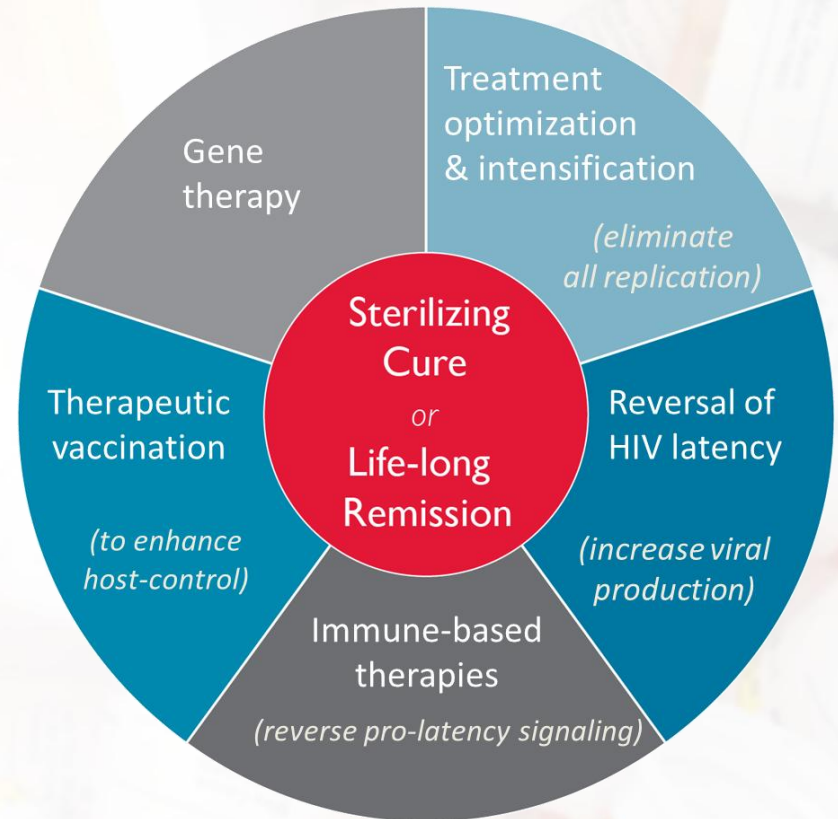
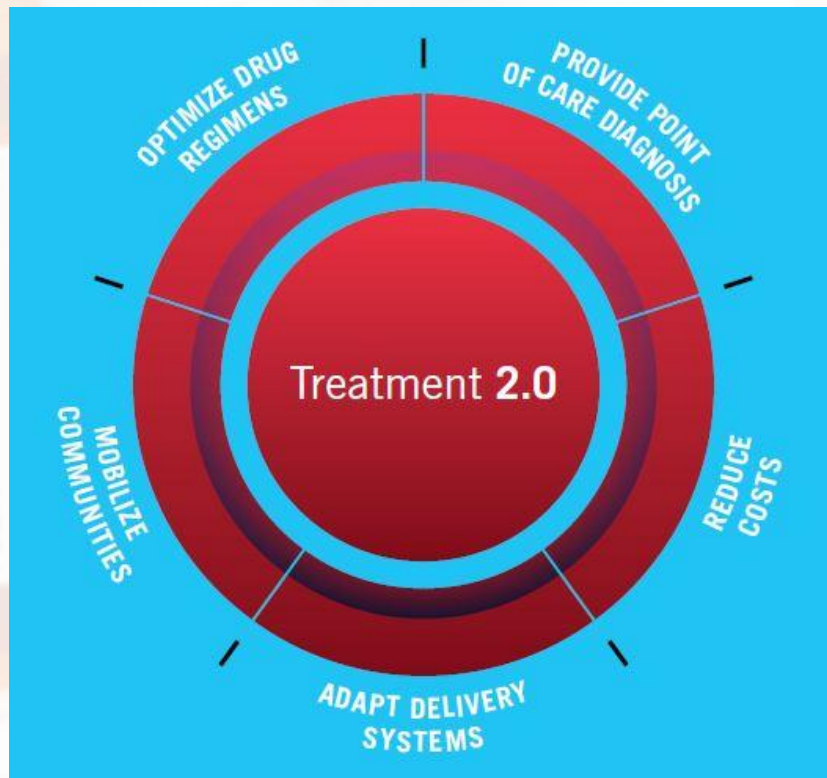
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# Looking ahead: Potential strategies for promote long term remission/eradication (HIV Cure)





# Looking ahead: Combining research agendas





# Panel Discussion

Peter MacPherson

Rosanna Peeling

Roger Teck



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# Backup slides



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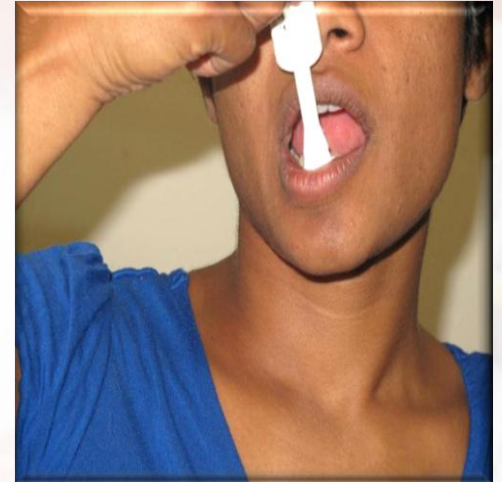
# New areas of WHO work 2013-2015

- HIV Self-testing – Policy Brief
- CD4 monitoring & Viral Load phase-in -- Technical document
- Early Infant Diagnosis (EID) algorithm update in light of infant ‘functional cure’
- Civil society input and demonstration projects on earlier treatment in key populations
  - IDU, MSM, SW, Adolescents, transgender individuals



# Key messages from WHO self-testing meeting & policy brief (April 2013)

- **Promising new approach**
  - Especially for repeat testers
- **Current oral fluid self-tests not give a definitive HIV result.**
  - People with +ve test results must seek confirmation
- **Coercive self-testing of sexual partners, family members, employees remains a human rights concern**



WHO 2013 global consultation on legal, ethical, gender, human rights and public health implications of HIV self-testing, WHO, LSTM & LSHTM, April 2013, Geneva



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