



Universal ART for pregnant & postpartum women (Option B+): implications for women's health

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Overview

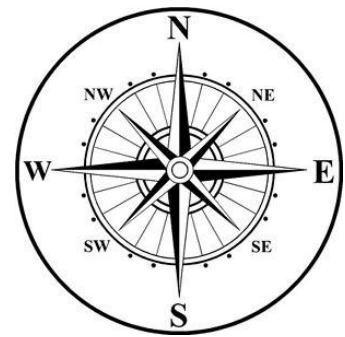
A large wooden sailing ship is shown on the water. Several people are visible on the deck, including a man in a white tank top and a man in dark shorts. The ship's masts and rigging are prominent. In the background, a large, flat-topped mountain is visible under a clear blue sky.

1) *Background – Where are we?*

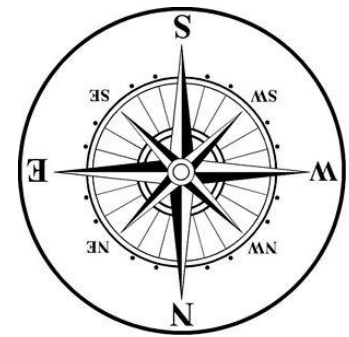
2) *The potential: What can universal ART do for women's health?*

3) *The challenge: are we missing the boat?*

1. Background – Where are we?



Where are we?

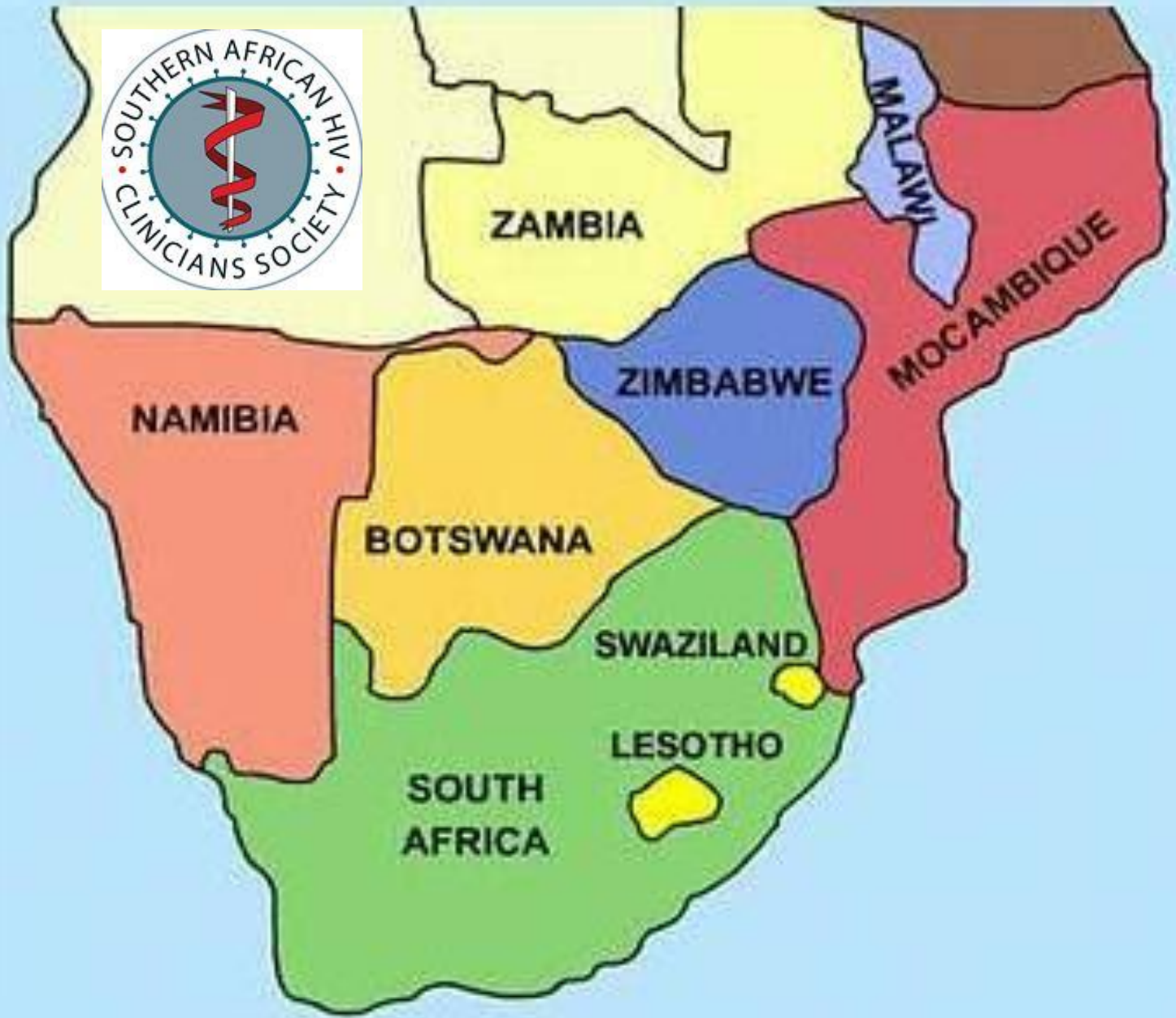


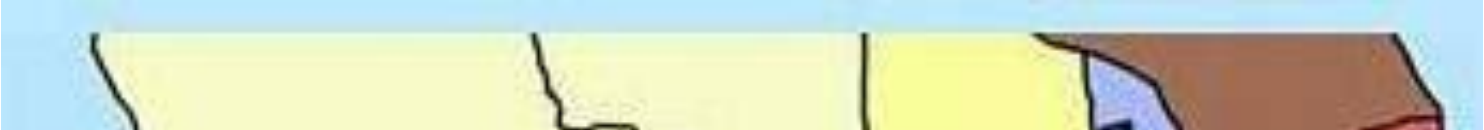
Several years' experience implementing policies of lifelong ART for all HIV+ pregnant & postpartum women (“Option B+”) in southern Africa

– Malawi *2011* → South Africa *2015*


New global policies calling for universal ART for all HIV+ individuals (women, children & men)

– What are the lessons from Option B+ implementation that may foreshadow universal ART?

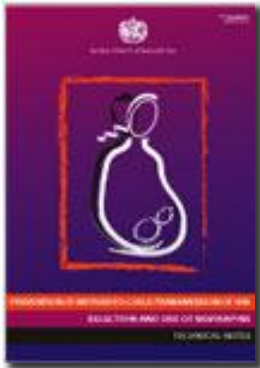




	Total population (millions)	Adult general population HIV+ (%)	HIV+ pregnant women annually (n)	Maternal mortality ratio (per 100 000)	Infant mortality rate (per 1000)	Health expenditure per capita (US\$)
Swaziland	1.4	26%	11 000	389	45	256
Lesotho	1.9	22%	11 000	487	69	123
South Africa	54	16%	240 000	138	34	593
Zambia	15	12%	64 000	224	43	93
Namibia	2.2	16%	8 000	265	33	423
Botswana	2.1	25%	13 000	129	35	397
Zimbabwe	14	17%	75 000	443	47	*
Mozambique	25	11%	100 000	489	57	40
Malawi	18	10%	60 000	634	43	26
UK	64	<0.3%	<1700	9	4	3600
USA	320	<0.3%	<7000	14	6	9200



PMTCT Guidelines have evolved....



2001



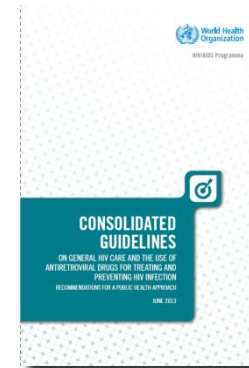
2004



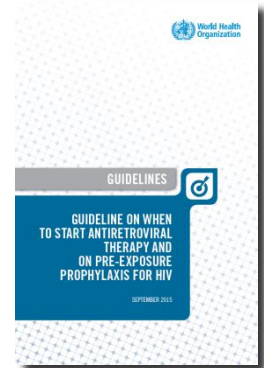
2006



2010



2013

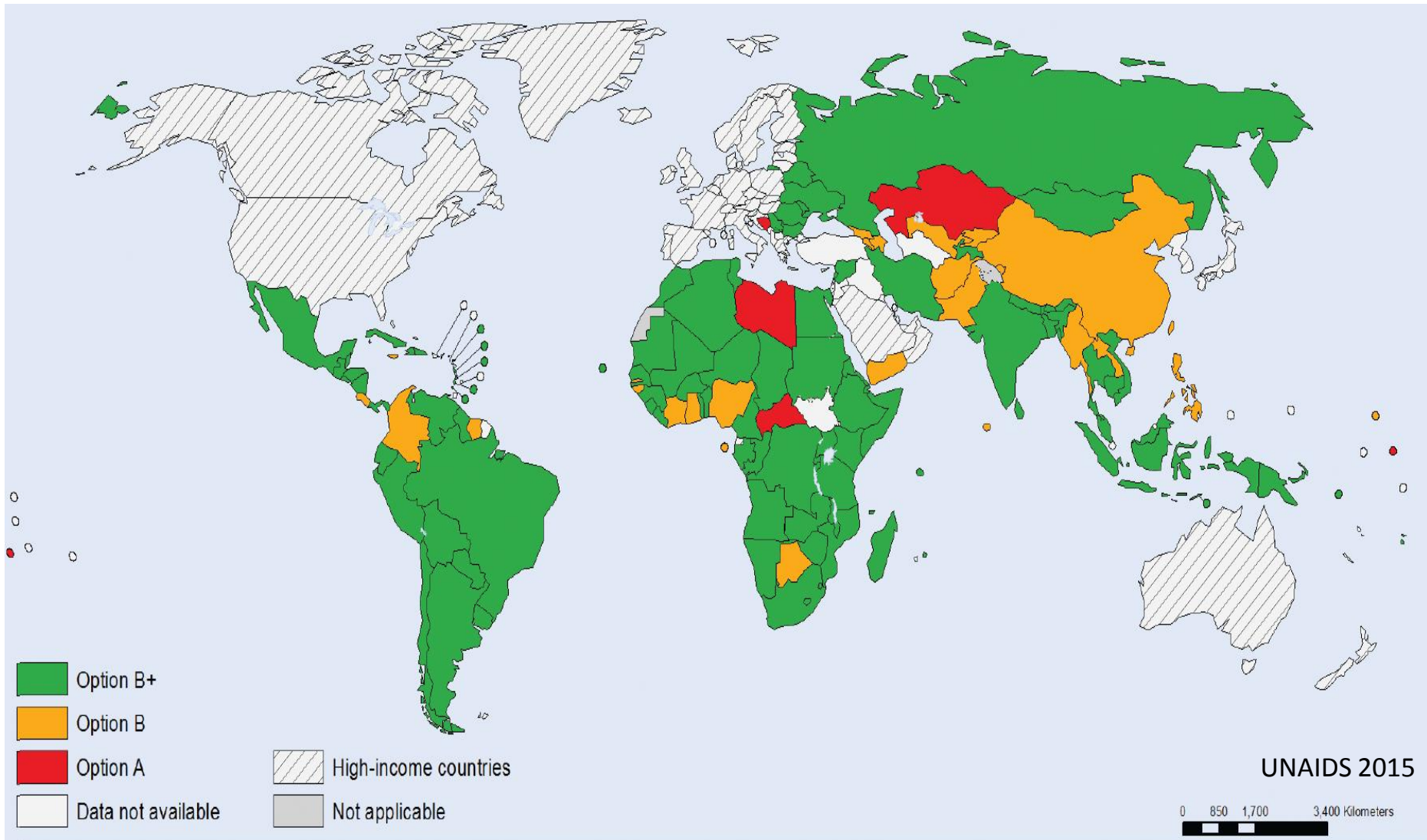


2015

PMTCT	4 weeks AZT; AZT+ 3TC, or SD NVP	AZT from 28wks + SD NVP	AZT from 28wks + SD NVP + AZT/3TC for 7 days	Option A (AZT + infant NVP) <u>or</u> Option B (triple ARVs)	Option B <u>or</u> Option B+ ART for <i>all</i> PW/BF	Option B+ (ART for all)
ART	No recommendation	CD4 < 200	CD4 < 200	CD4 ≤ 350	CD4 ≤ 500	ART for all

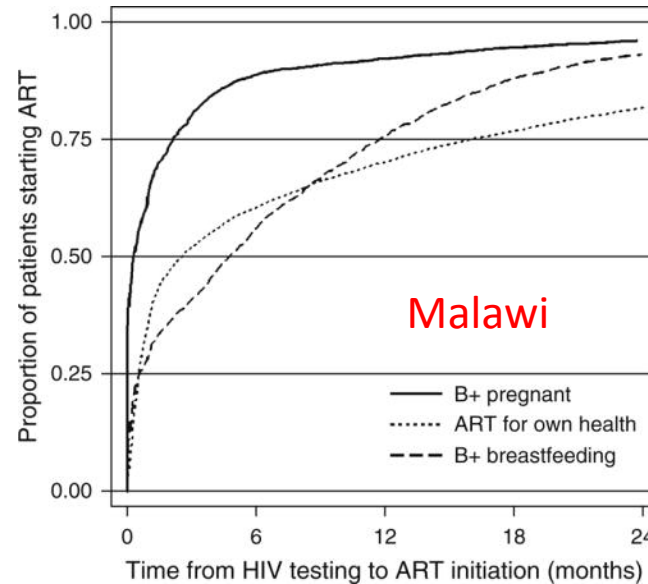
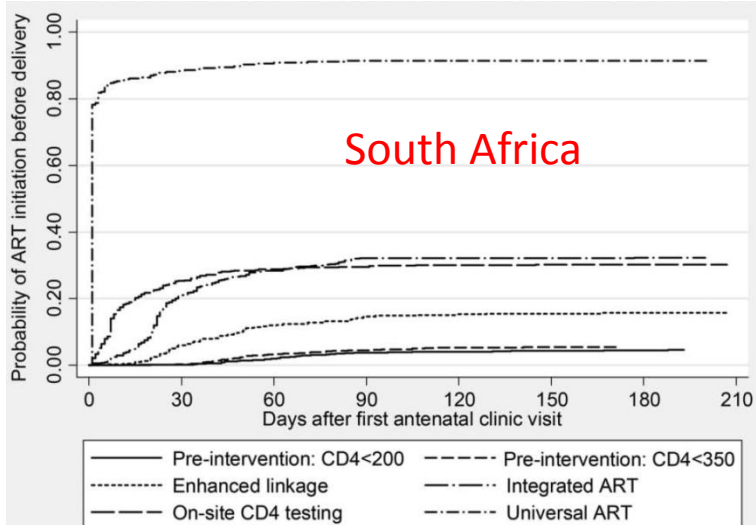
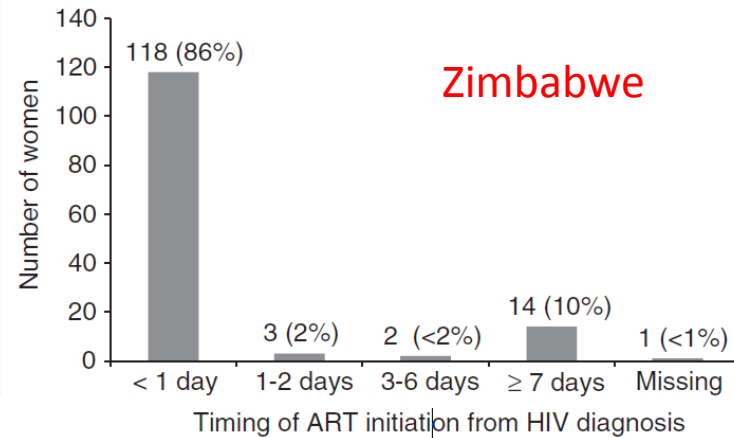
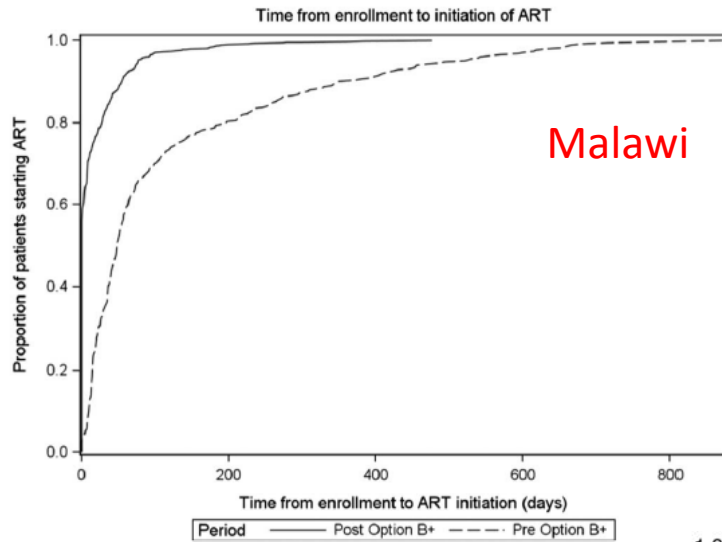
Over time shift towards: more effective ARV regimens, extending coverage throughout MTCT risk period, and recognising ART for the mother's health

.... and lifelong ART for all pregnant & postpartum women is standard policy



**2. What can universal ART do for
women's health -
views from "Option B+"**

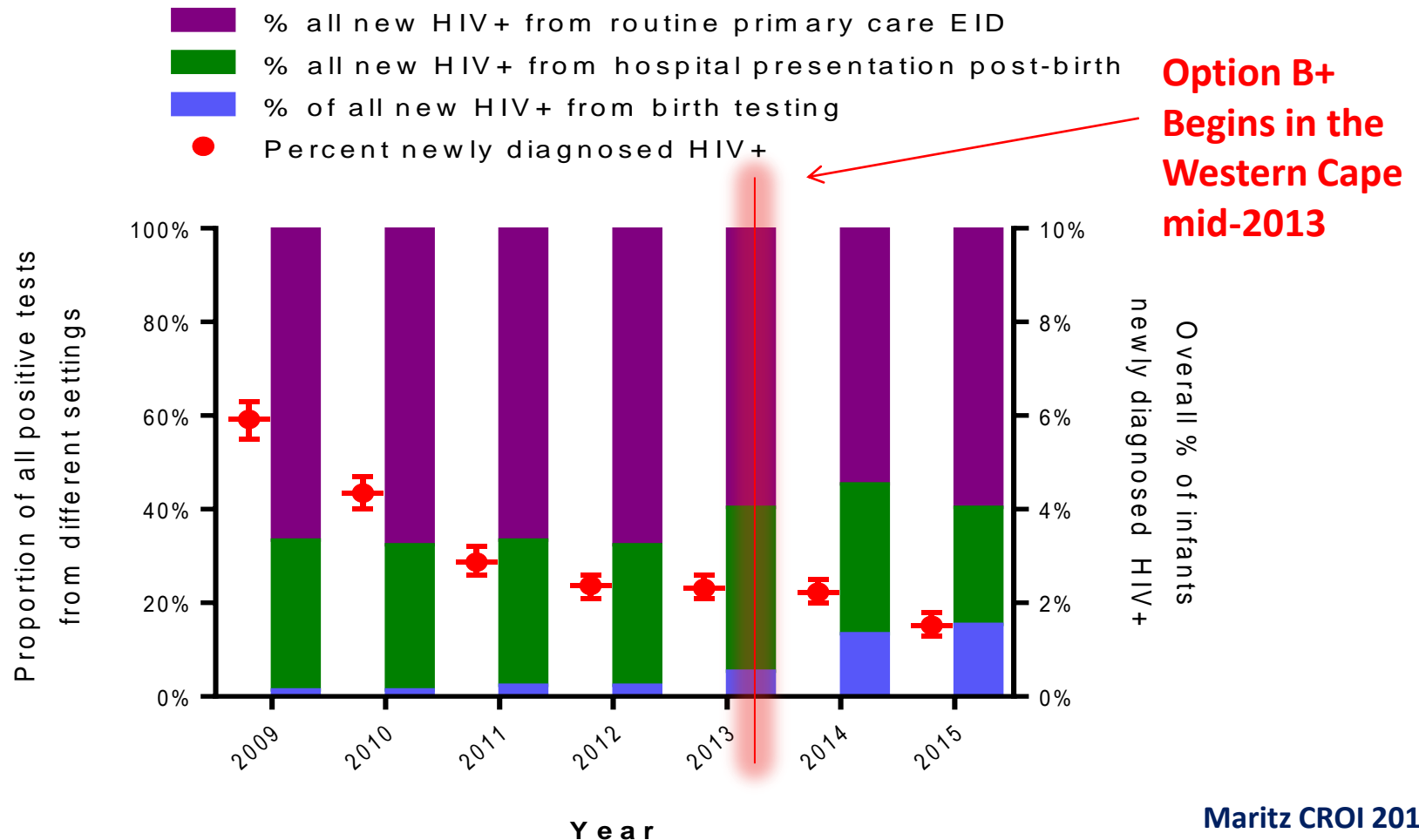
ART initiation simplifies & Delays to initiation decrease



Kim JAIDS 2015
 Tenthani AIDS 2015
 Dzangare TM&IH 2016
 Myer JAIDS 2015

Mother to child transmission drops

Proportion of all positive HIV PCR tests from different clinical settings and decreasing HIV positivity rate in the Western Cape province, South Africa, 2009 – 2015



Long-term maternal health *should* improve across CD4+ cell counts

A Time to First Primary Event

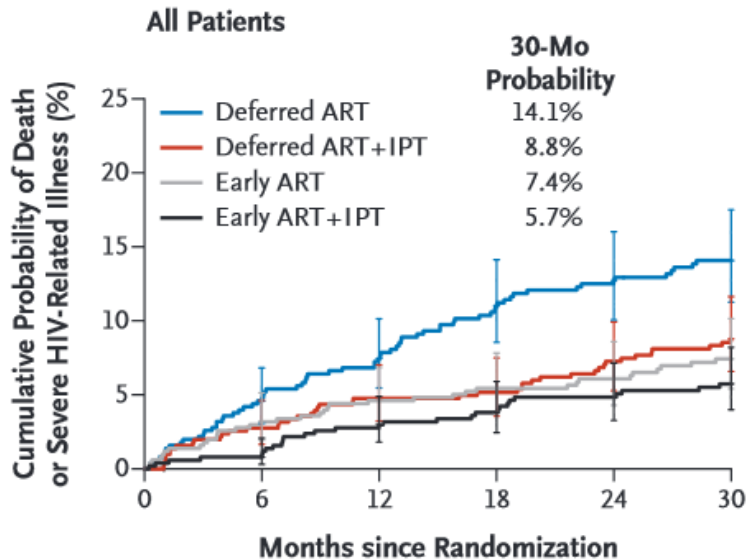
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Trial of Early Antiretrovirals and Isoniazid Preventive Therapy in Africa

The TEMPRANO ANRS 12136 Study Group*

A Primary Outcome



The NEW ENGLAND JOURNAL of MEDICINE

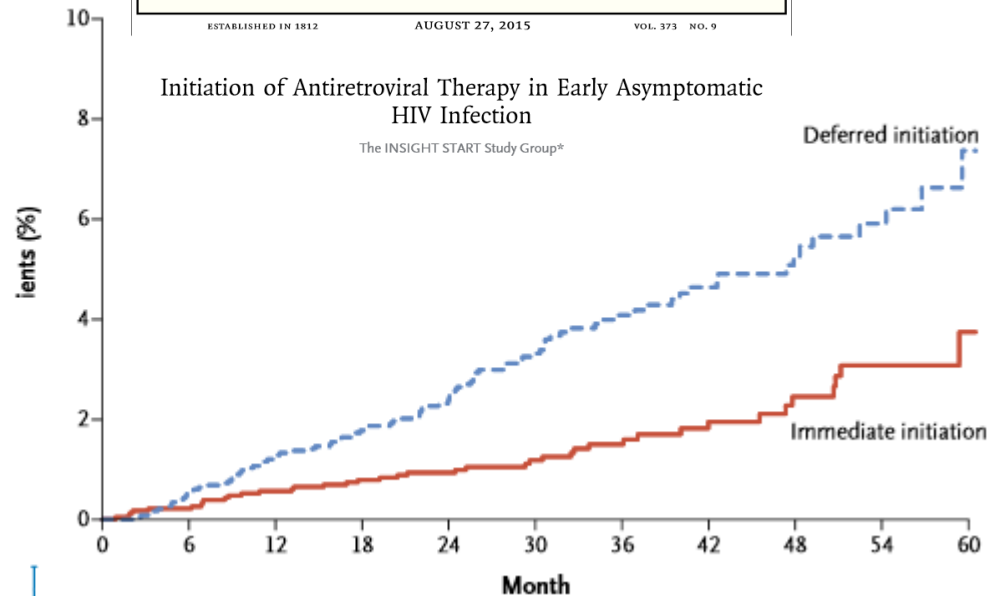
ESTABLISHED IN 1812

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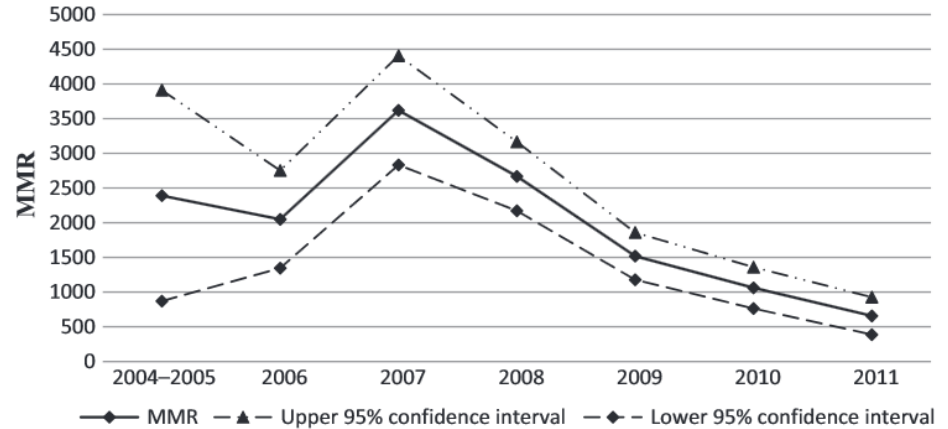
Initiation of Antiretroviral Therapy in Early Asymptomatic HIV Infection

The INSIGHT START Study Group*

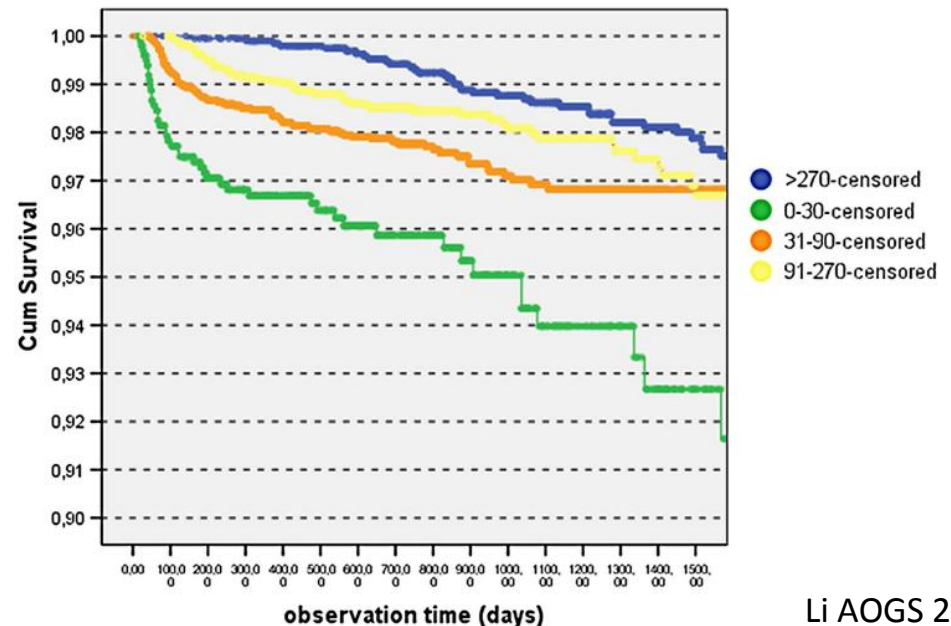


Declines in maternal mortality

Tanzania: 8% reduction in maternal mortality for each additional month on ART before pregnancy

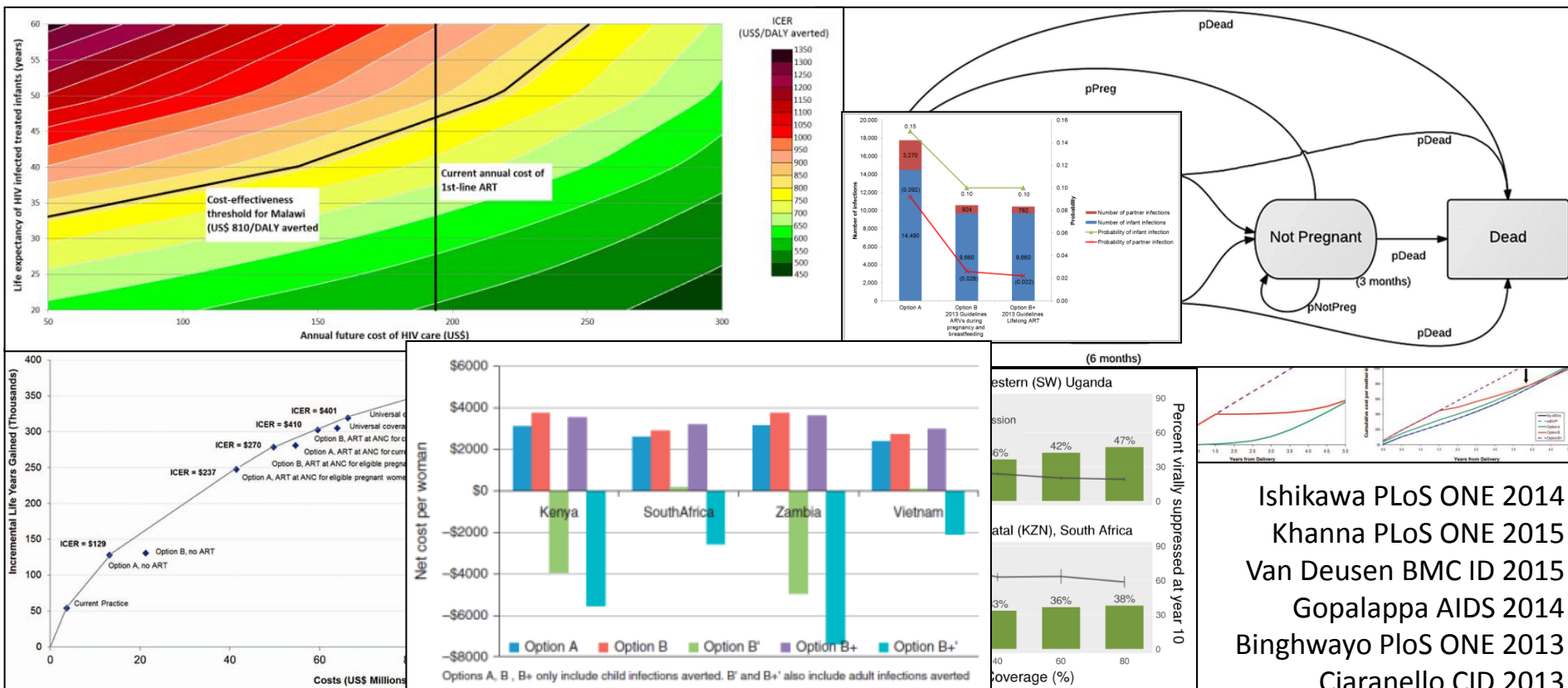


Malawi & Mozambique: increasing duration of pre-pregnancy ART use reduces postnatal mortality independent of CD4 & BMI



Health systems costs & sexual transmission *should* be reduced *

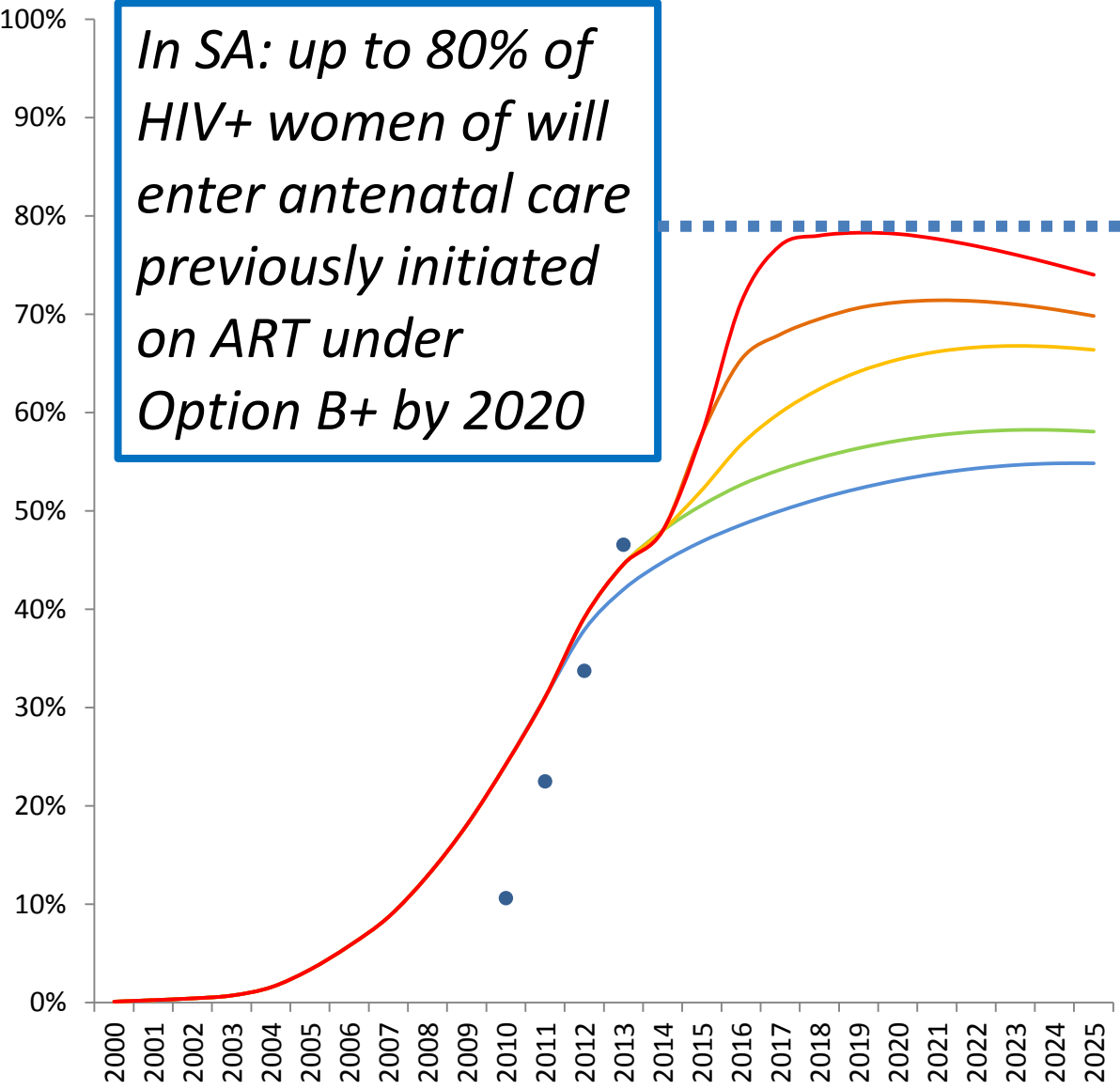
- * Not much empirical data (understandably)
- * Many modelling efforts; all assumption-laden



Ishikawa PLoS ONE 2014
 Khanna PLoS ONE 2015
 Van Deusen BMC ID 2015
 Gopalappa AIDS 2014
 Binghamway PLoS ONE 2013
 Ciaranello CID 2013

Increasing population coverage of ART in women of reproductive age

In SA: up to 80% of HIV+ women of will enter antenatal care previously initiated on ART under Option B+ by 2020



- Gugulethu data
- Current guidelines, pessimistic
- Current guidelines, optimistic
- Option B+
- Option B+, WHO guidelines
- Universal ART

Leigh Johnson, personal communication



3. What are the threats to optimizing women's health under "Option B+"

Are we missing the boat?

Ways to 'miss the boat' #1:

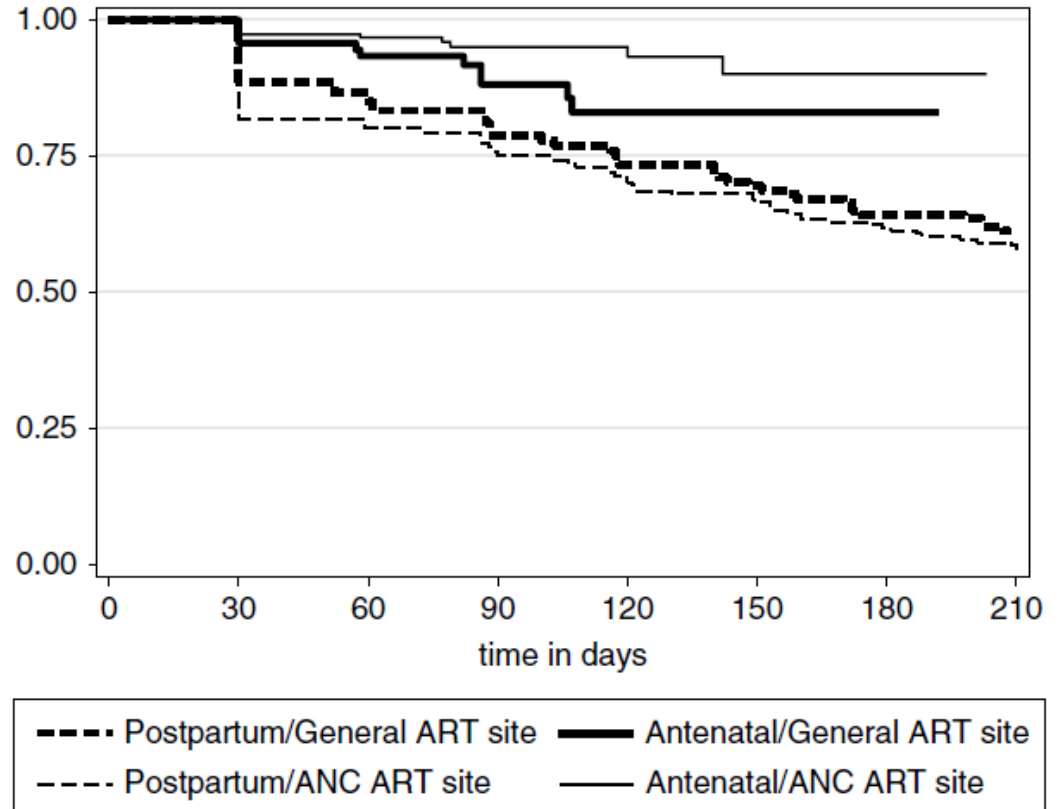
Fail to keep women on ART engaged in HIV care over time

engagement
defaulting
initiate retain
adherence loss
trace
care
attrition outcome mortality
chronic track treatment
retention
transfer compliance
disengage pill-taking
follow-up

Increased disengagement from ART programmes after delivery

Women initiating ART in pregnancy more likely to be lost to follow-up vs non-pregnant women starting ART for their own health

.....Why?



What patient factors contribute to non-adherence & loss to follow-up?

“Risk factor” data heterogeneous, highly contextual

- Younger, recent HIV diagnosis, unintended pregnancy
- ART readiness? Partner involvement? Disclosure?

Qualitative evidence more insightful

- Policies may be universal, but patients are not

IMPLEMENTATION AND OPERATIONAL RESEARCH: EPIDEMIOLOGY AND PREVENTION

“What They Wanted Was to Give Birth; Nothing Else”:
Barriers to Retention in Option B+ HIV Care Among
Postpartum Women in South Africa

Kate Clouse, PhD, MPH,* Sheree Schwartz, PhD, MPH,*† Annelies Van Rie, MD, PhD,*
Jean Bassett, MBBCh,‡ Nompumelelo Yende,‡ and Audrey Pettifor, PhD, MPH*

et al. *Journal of the International AIDS Society* 2015, 18(Suppl 5):20286
[jiasociety.org/index.php/jias/article/view/20286](http://onlinelibrary.wiley.com/doi/10.1002/jia2.20286) | <http://dx.doi.org/10.7448/IAS.18.6.20286>



mentary

Fundamental concerns of women living with HIV around the
implementation of Option B+

Rebecca Matheson^{*1}, Suzette Moses-Burton^{*2}, Amy C Hsieh^{6,*3}, Sophie Dilmitis⁴, Margaret Happy⁵,
Eunice Sinyemu^{6,7}, Sophie O Brion⁸ and Aditi Sharma⁹

Tweya TM&IH 2014

Mattheson JIAS 2014

Clouse JAIDS 2014

Price STI 2014

Hoffman CROI 2016 #792



Ways to 'miss the boat' #2:

**Fail to integrate services for women's health
into HIV care / ART platform**

Service integration

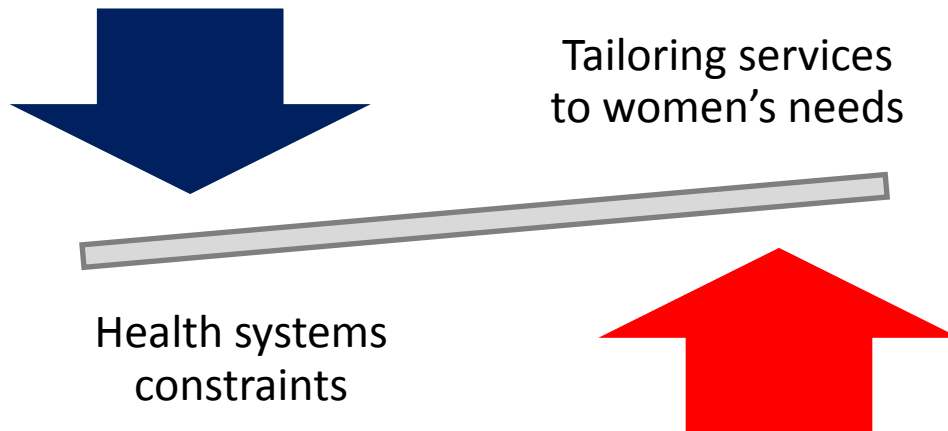


- SRH integration in ART services is fashionable
- **Easier said than done!!!!**
 - Vertically-oriented services are easy & natural
 - Few **models of integration**; fewer **realistic models**
 - “Boutique” programmes proliferate
 - What is scalable in constrained primary care settings?
 - Most work is oriented to single services
 - contraception, cervical cancer, safe conception, IPV, etc
 - Health services and systems are diverse
 - One model of integration will not suit all programmes

How to integrate women's health services into universal ART programmes

Surging interest in models of care for delivering universal ART during pregnancy & postpartum

- What features of services can **address women's needs & promote adherence/retention?**
- How to deliver **ART at scale & with efficiency** in severely resource-limited health systems?



Summary: an unprecedented opportunity

- Option B+ in SA will lead to the vast majority of HIV+ women initiating lifelong ART

If we can keep them adherent & engaged in care...
.... a unique platform to promote women's health services in an at-risk population



Don't Miss The Boat



With thanks to....

Elaine Abrams

Leigh Johnson

Jean Maritz

James McIntyre

Lynne Mofenson

Tamsin Phillips