



Southern African HIV Clinicians Society

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**Our Issues, Our Drugs,
Our Patients**

www.sahivsoc.org
www.sahivsoc2016.co.za

Supporting ART adherence

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HIV Foundation
15 April 2015



Benefits of ART:

- For individuals: HIV becomes a manageable chronic illness
- For sexual partners: risk of transmission is reduced (includes PrEP)
- For countries: maintains a healthy & economically active population

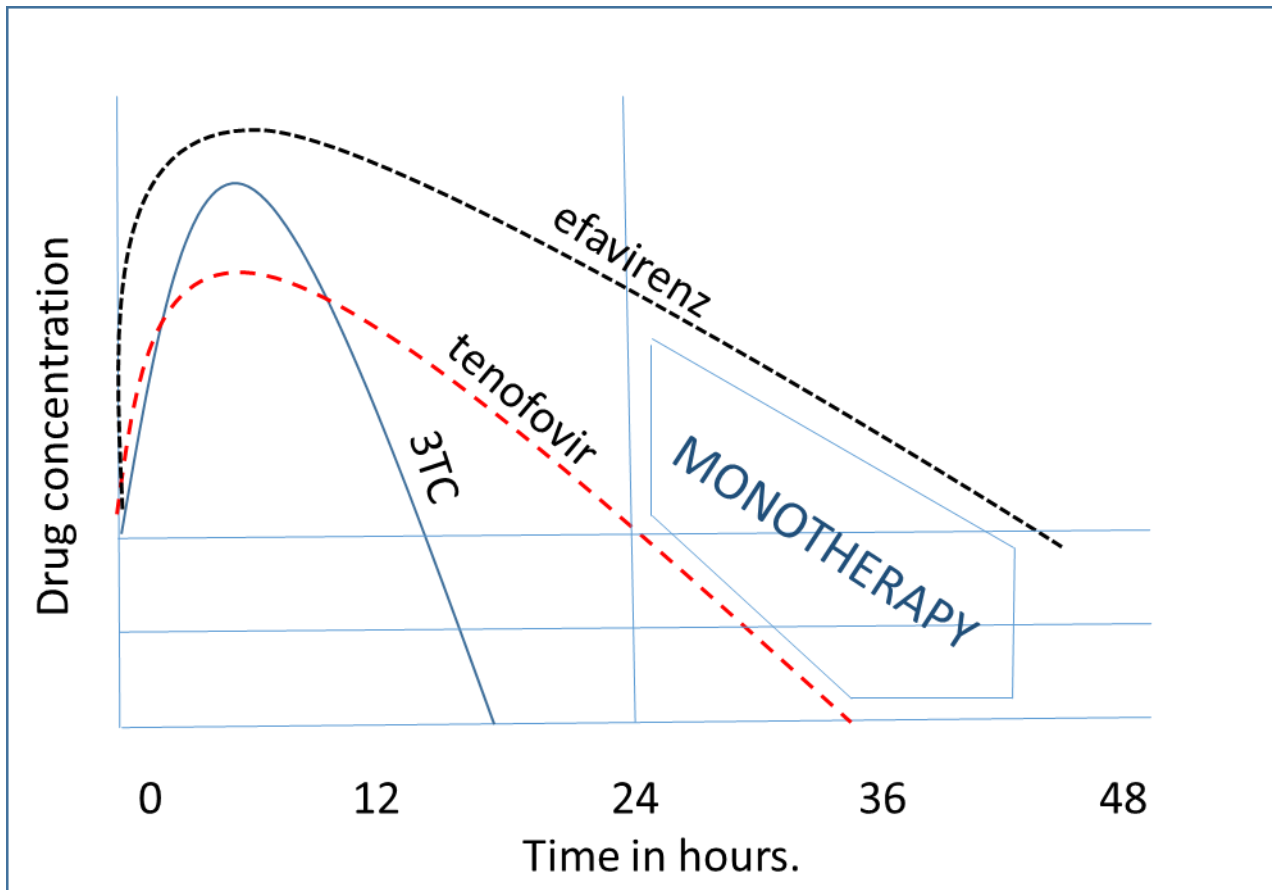


Difficulties of ART:

Seem to focus on individuals...

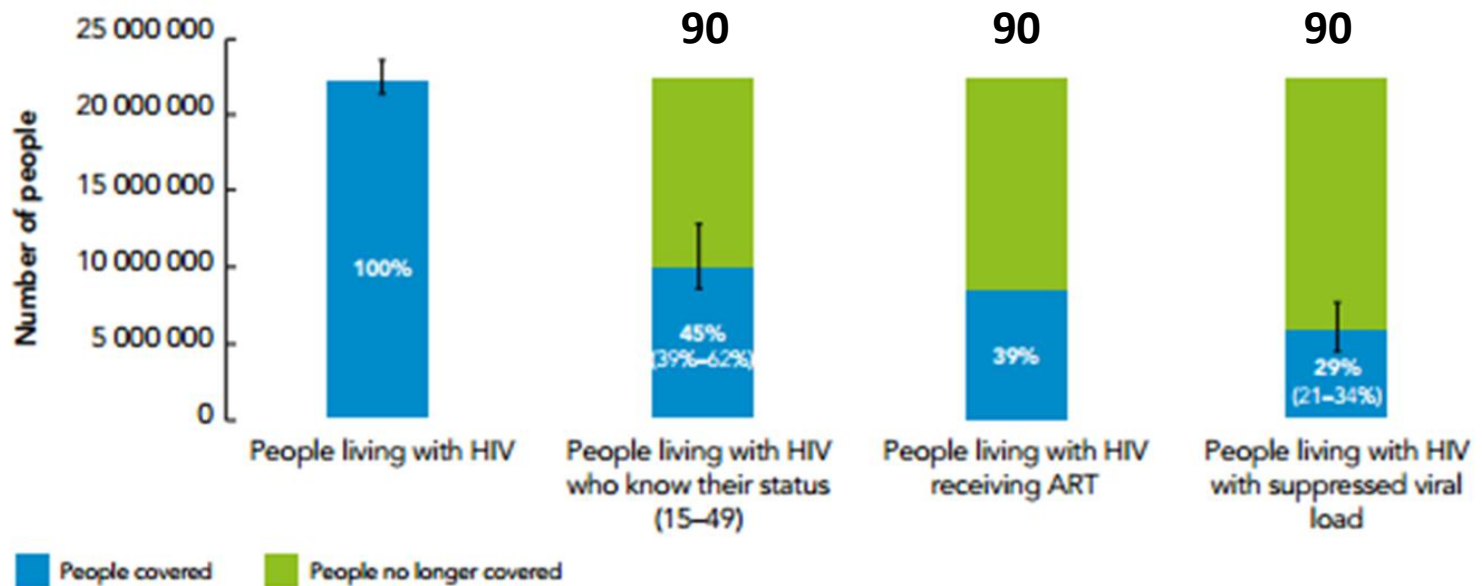
- Choice to start ART (**initiation**);
- Daily dosing of medication as treatment or PrEP, possible side effects (**implementation**);
- Need for long-term relationship with health care system (**persistence**).

Impact of missed doses



The third 90...

Abbreviated HIV treatment cascade for adults in sub-Saharan Africa aged 15 years or more, 2013



UNAIDS 2013 estimates



2016

Rates of failure (implementation):

Figure 3. Kaplan–Meier failure estimate for time to first, then second consecutive HIV RNA level >1,000 copies/ml

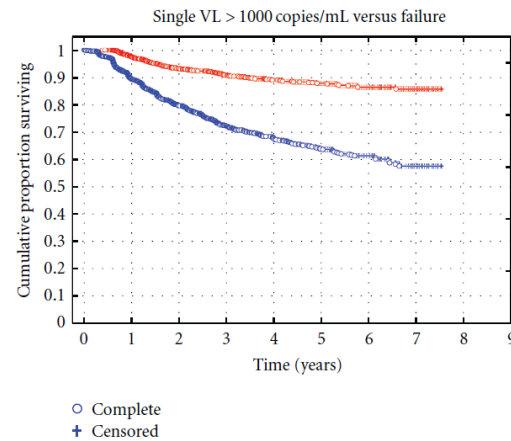
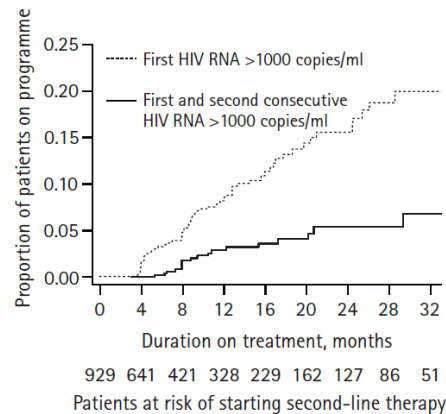
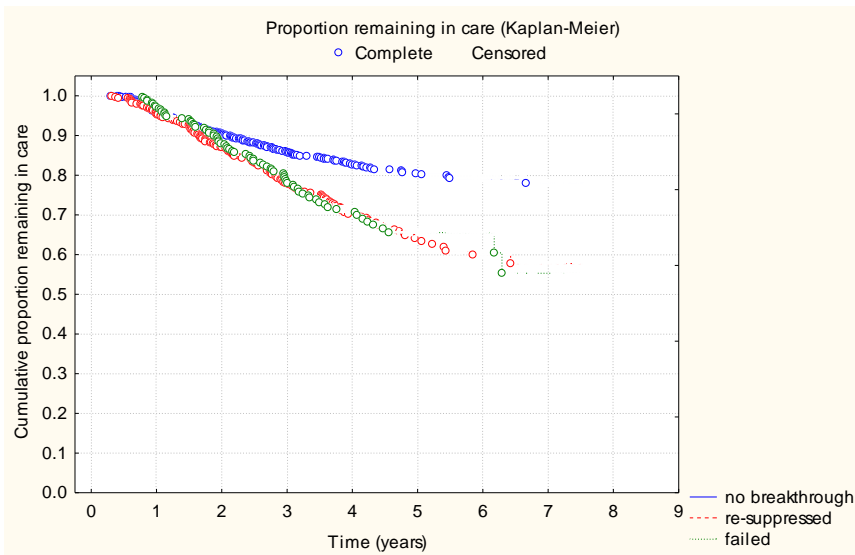


FIGURE 2: A Kaplan-Meier survival curve depicting risk of an initial virological breakthrough (first viral load >1000 copies/mL after initial suppression—lower curve) and subsequent risk of virological failure (second consecutive viral load >1000 copies/mL—upper curve). Of those with virological breakthrough an expected 66% will resuppress after an adherence intervention.

Orrell, AIDS Research and Treatment 2011

Retention in care (persistence):



Orrell, AIDS Research and Treatment 2011

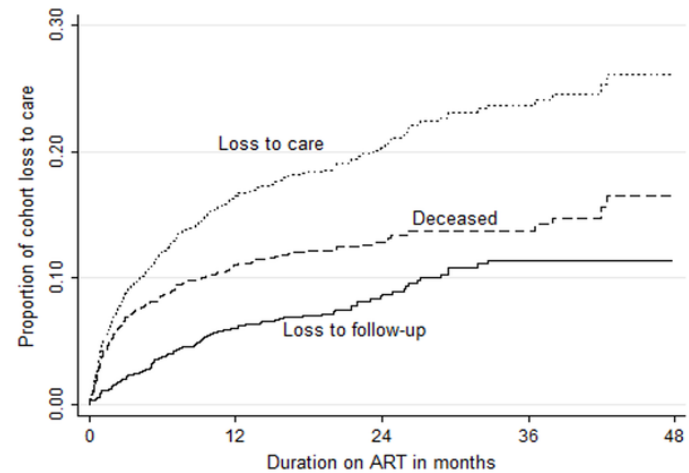
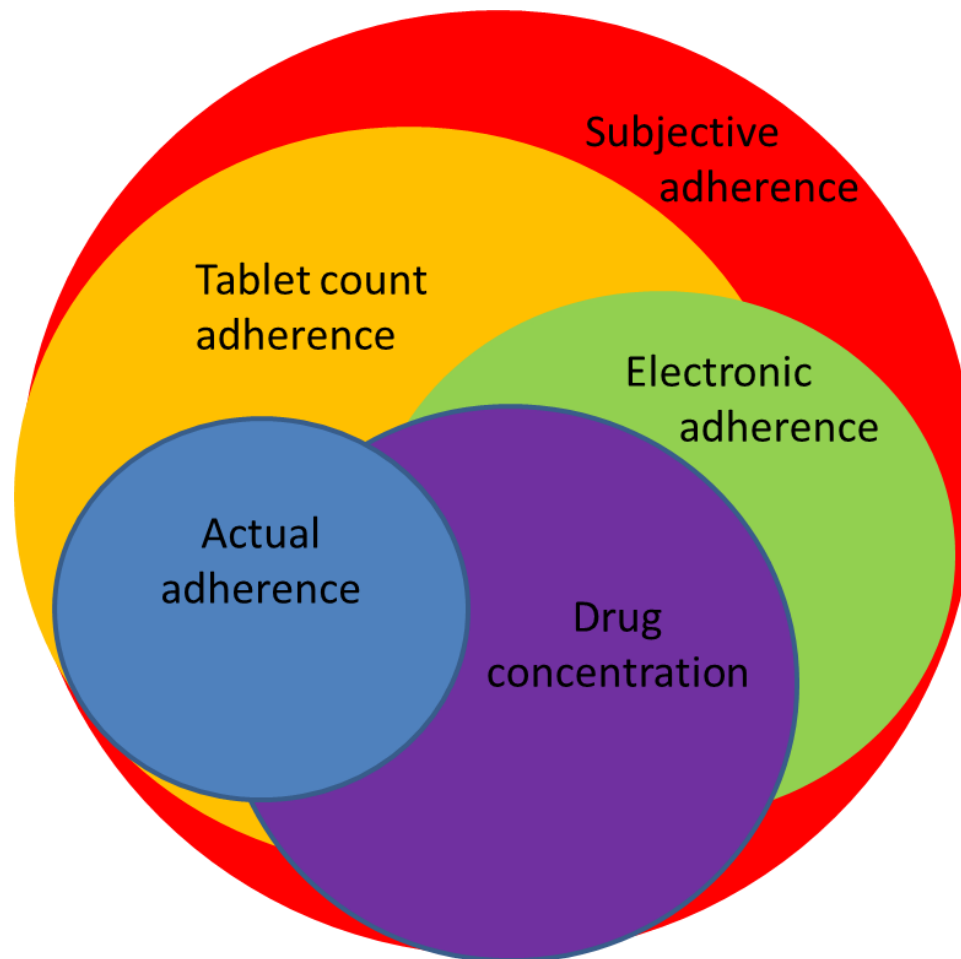


Figure 1. Kaplan-Meier estimates of LTFU, mortality and loss to care by months.
Boyles Plos One 2011 (Eastern Cape)

First, we need to assess adherence...



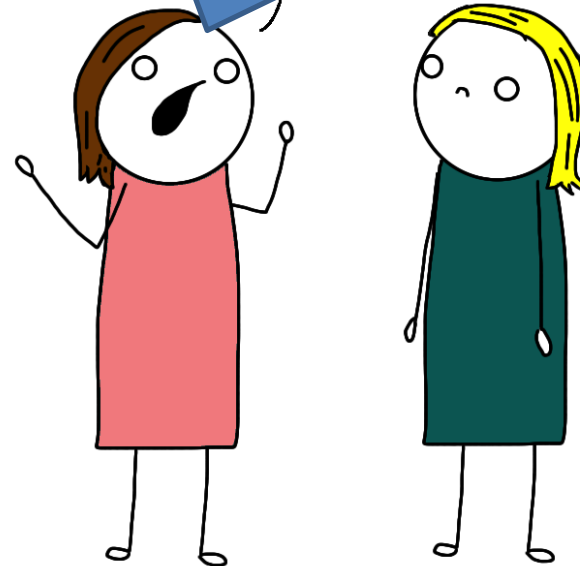
Assessing adherence

Self-report:

Important to ask, but
not often accurate.

Can try: VAS scales,
motivational
interviewing.

Yes, doctor, I
have taken ALL
my medicine...



Assessing adherence...



Pharmacy refill:

Were the correct number of bottles of ART collected over the past 4 or 12 months?

Many sites collect electronic dispensing data – but it is not well used.

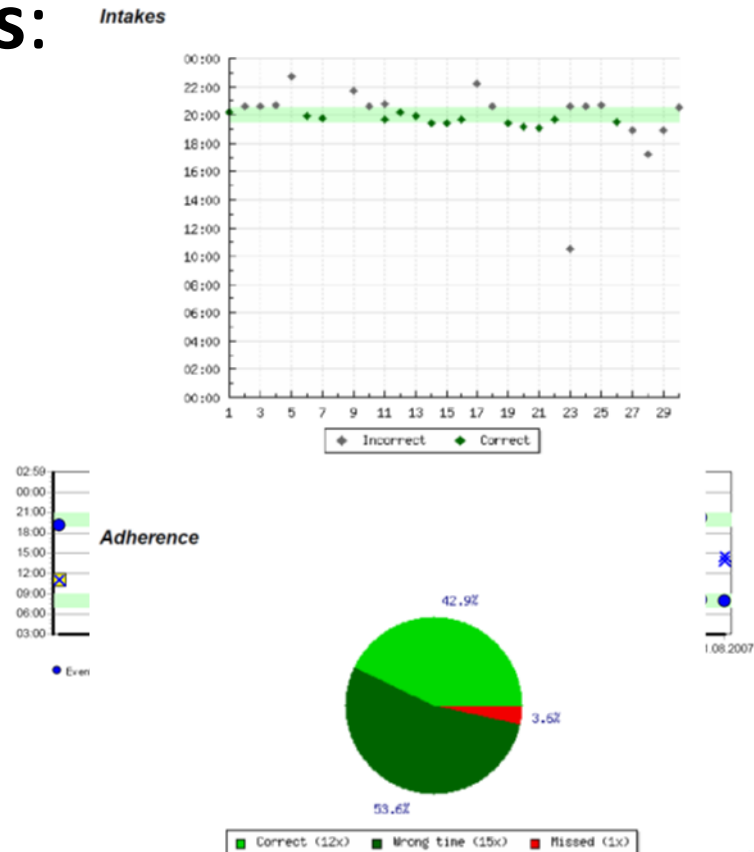
Assessing adherence...

Electronic methods:

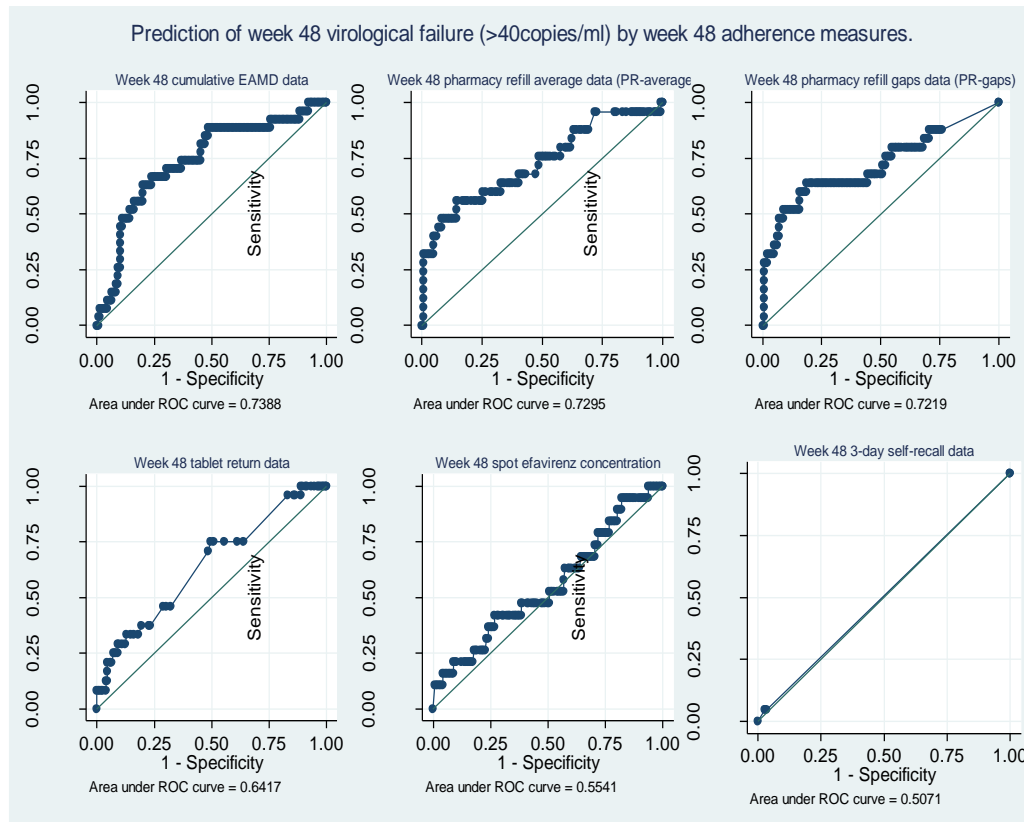
MEMs caps:
Retrospective
data

Wisepill:
Real-time data

Dosing as recorded using the Wisepill® electronic pillbox.



Adherence measures vs. failure...



- at week 48
- failure defined as >40 copies/ml.

Measure:	EAMD	PR-ave	PR-gap	TR	EFV	SR
AUC ROC:	0.74	0.73	0.72	0.64	0.55	0.51
95%CI:	0.63-0.84	0.61-0.85	0.59-0.85	0.52-0.76	0.40-0.70	0.46-0.56

Orrell, CROI 2016



Then we need to support individual adherence – what works?

- Education / counselling methods
- Electronic intervention
- Healthcare system restructure
- Economic-based interventions

Education / counselling methods:

Education:

An exchange of information to increase knowledge.

Treatment preparedness - a required minimum for starting ART; recommended in most ART guidelines.



Learning Knows No Bounds

Education / counselling methods:

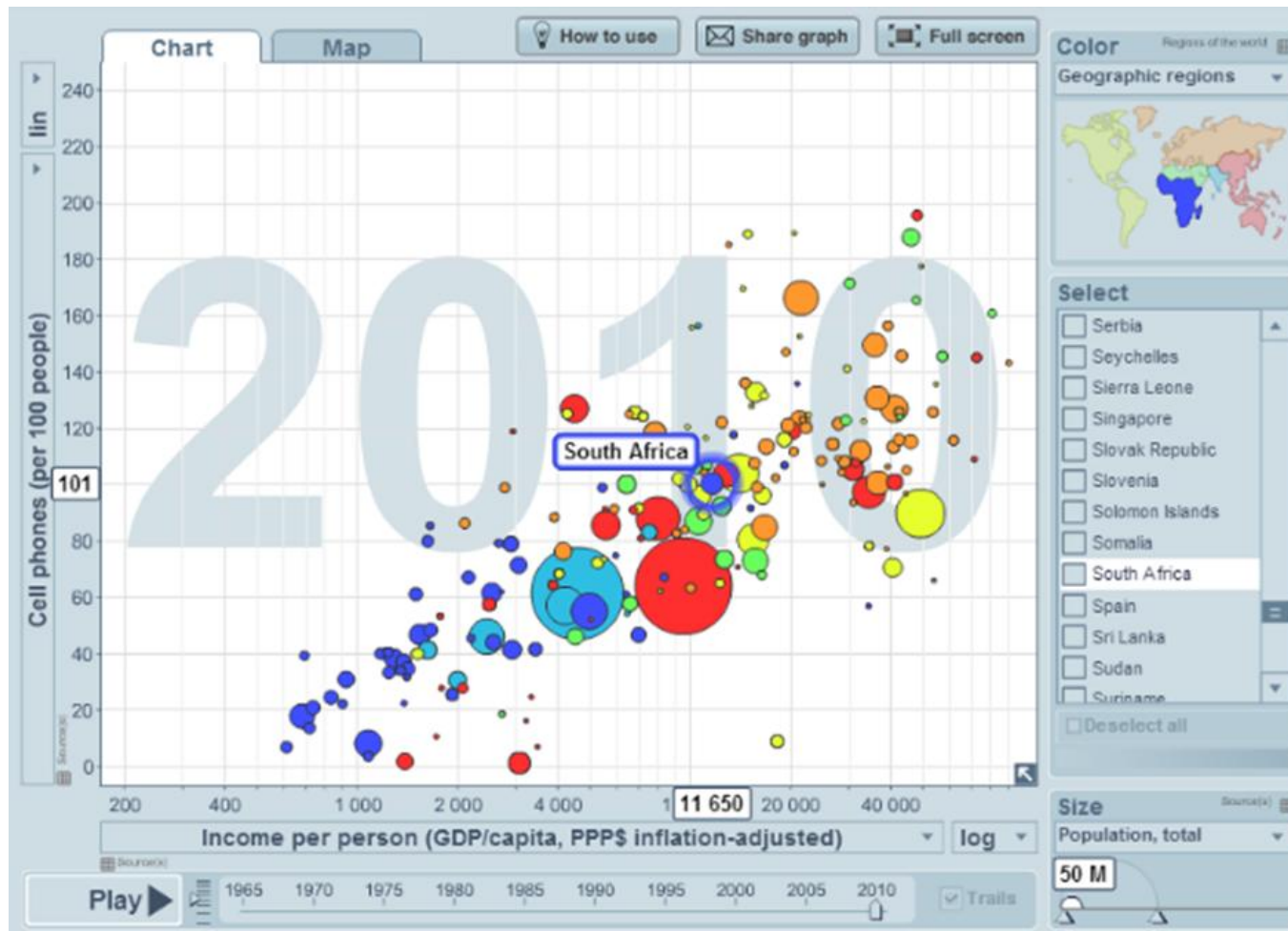
Counselling:

Beliefs, attitudes, feelings and skills related to ART adherence.

Counsellor or peer-nominated supporters can improve adherence, provide emotional support and promote healthy behaviours.



Electronic tools:



Electronic tools:

Mobile phone interventions –

Weekly, bi-weekly and initial daily text messages have all resulted in adherence improvement; as have voice calls.

- Connection with the clinic adds benefit.
- Creation of good habits.



Horvath, Cochrane 2012; Lester, Lancet 2010; Pop-Eleches, AIDS 2011; Ikeda, IAS 2012; Maduka, Niger J Clin Pract 2013

Electronic tools:

Electronic Monitoring Devices (EMD) –

Monitor adherence in real-time,
so allow immediate intervention

To date:

- Increased cumulative adherence
- Reduced ART Rx interruptions
- Improved adherence to TB Rx



Electronic tools:

Caution –

Not all studies show improvement in biological markers.

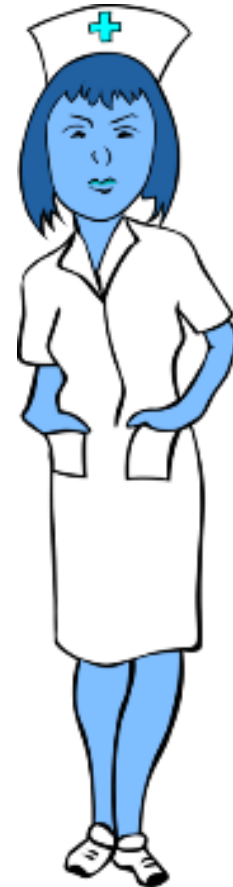
Some good studies show no benefit of SMS reminders.



Healthcare system restructure:

Barriers:

- Extended travel to clinic
- Long waiting times
- Stock outages
- Negative interactions with staff

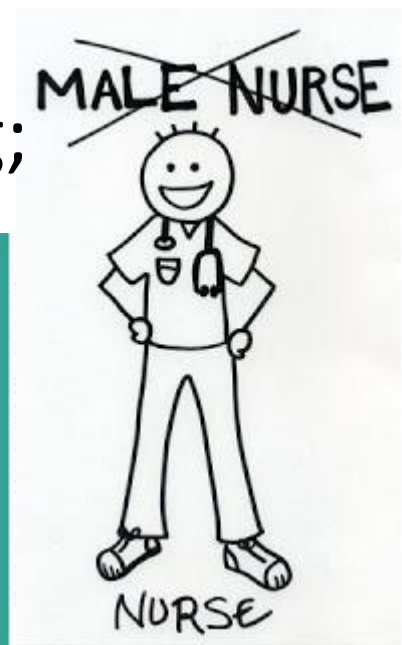


Healthcare system restructure:

Task-shifting –

Doctor to nurse (NIMART) – already used in South Africa...

Includes counselor to peer shifting; and clinic to community...



Sanne, Lancet 2010; Fairall, Lancet 2012; Thompson Ann Int Med 2012



2016

Healthcare system restructure:

Adherence clubs –

Alternate models of receiving ART - success with moving suppressed individuals into clinic-based and community clubs.

- Better retention
- Reduced clinic staff burden
- Reduced patient time / transport
- Social support

Healthcare system restructure:

e.g. South Africa: VL<40

- 30 people per club
- 5 times per year
- Less than 1 hour per visit



e.g. Mozambique:

- ~6 people in community groups
- 1 person represents the group at the clinic

Economic-based interventions

Cash incentives – in US conditional economic incentives have improved adherence.



Food parcels: worked with youth, and in resource-poor settings.



How do we apply this on a country level?

Differentiated care -

Different people have different needs; tailor resources to those who require them.



How do we apply this on a country level?

1. Assess adherence in all; intensify interventions for decreasing pool of individuals with reduced adherence.
PR – coarse, retrospective...
Electronic – identify adherence patterns, granular.



How do we apply this on a country level?

2. Allow people to choose an intervention up front, from a range of (exciting!) options



Conclusion...

- Adherence is crucial
- Can be altered – both directions
- We have to improve / streamline existing systems (use what you have)

Lastly: Take your treatment and stay suppressed!!



Acknowledgments

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