



Institute *for*
Healthcare
Improvement

Tackling Retention and Adherence: Fixing the Cascade:



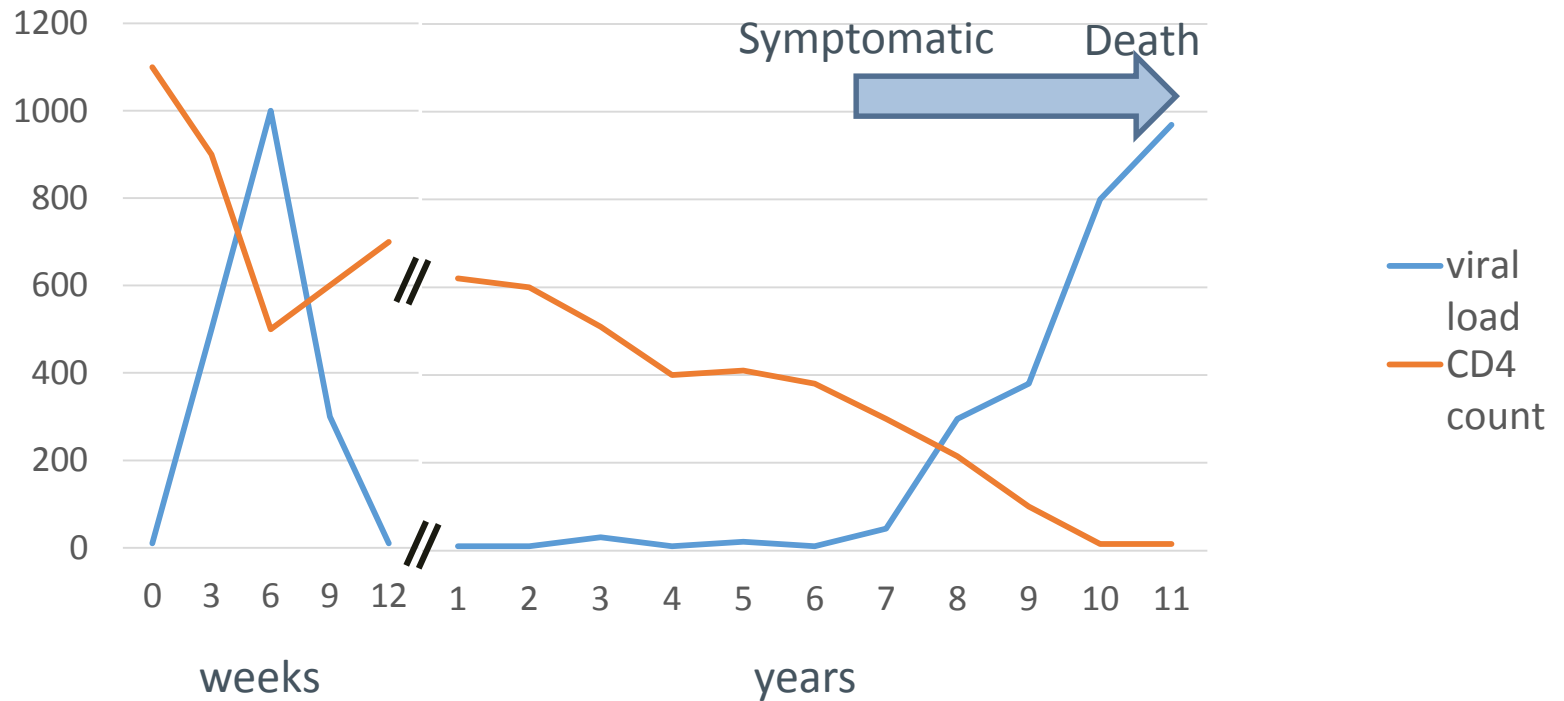
Pierre Barker

3 Take-away Concepts

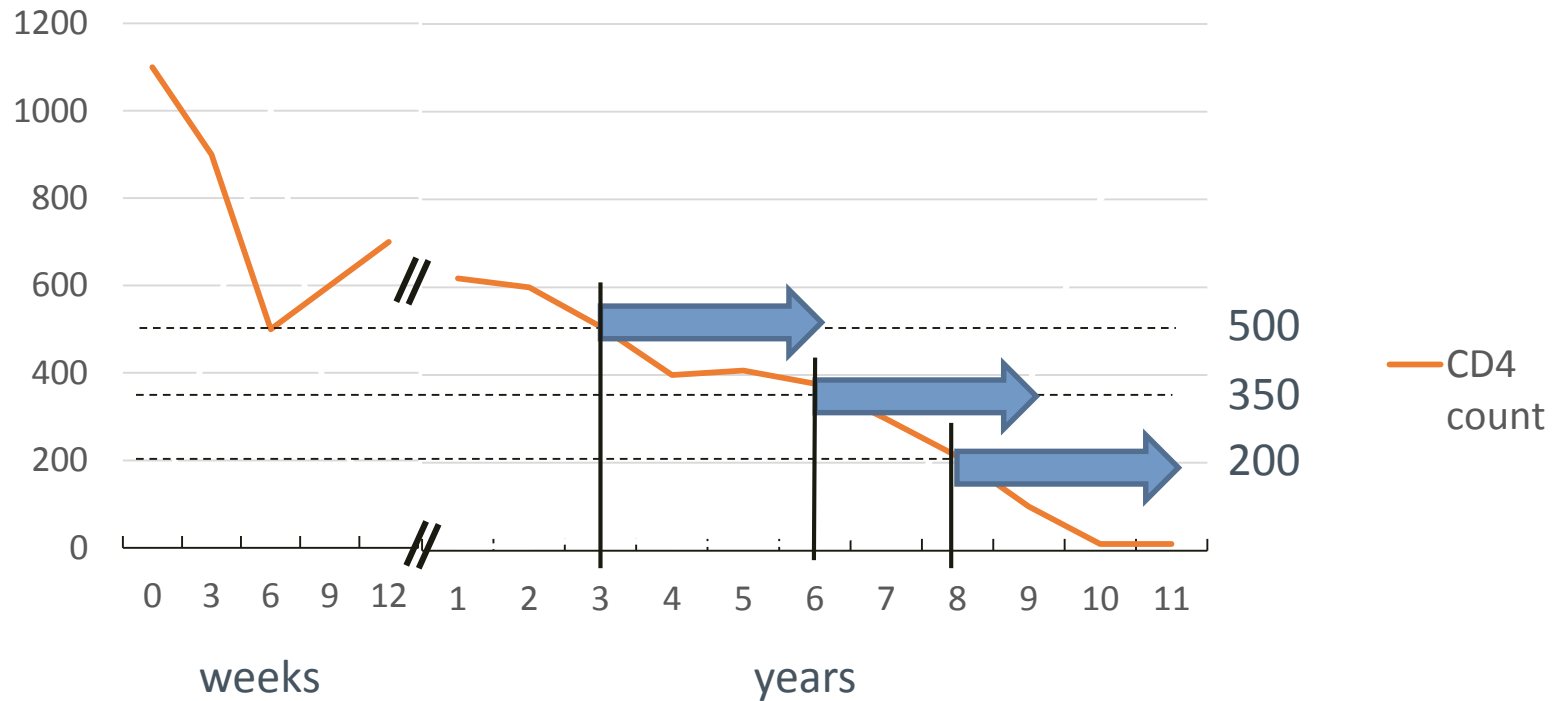
1. 2 “pools” of HIV patients need to be managed – those awaiting ART (initiation), those on ART (retention)
2. South African examples of how these pools can be managed effectively
3. “inflow”, “outflow”, “backlog” have to be managed separately



Time to Immunological Failure

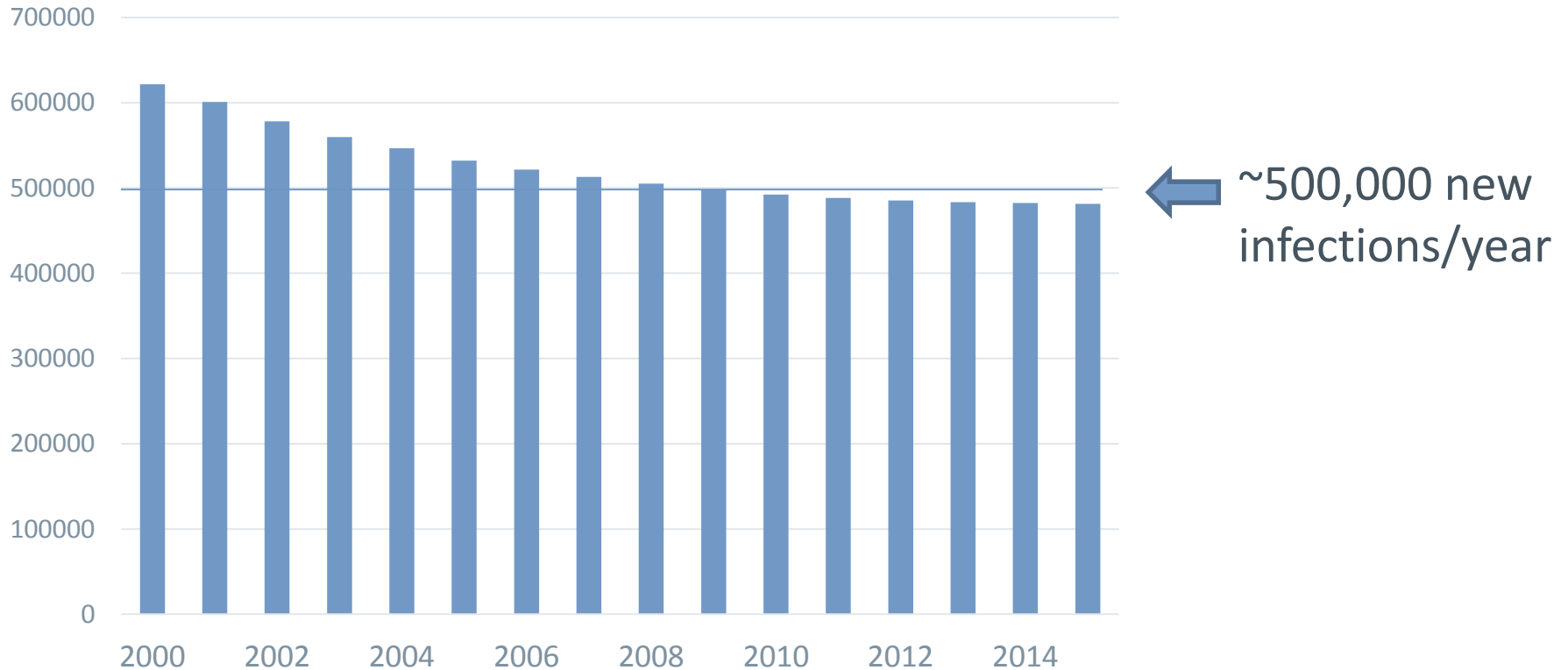


Time to Immunological Failure

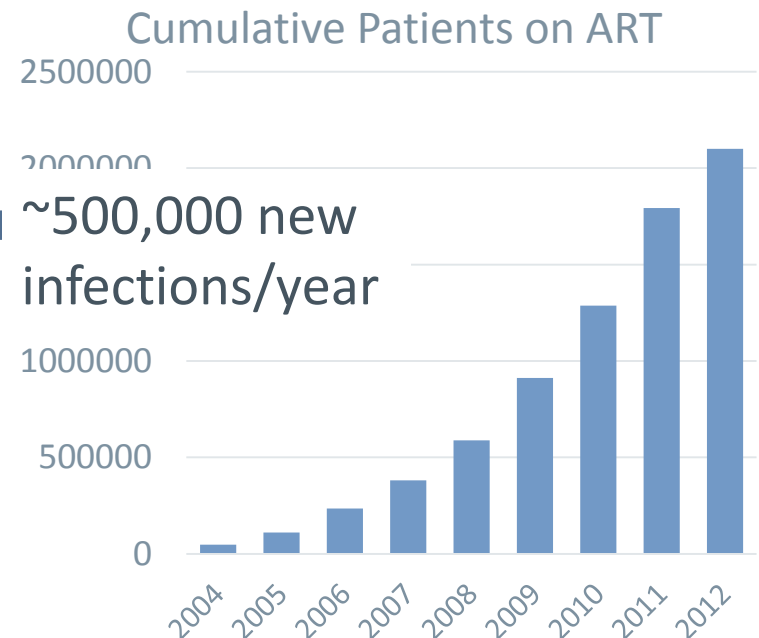
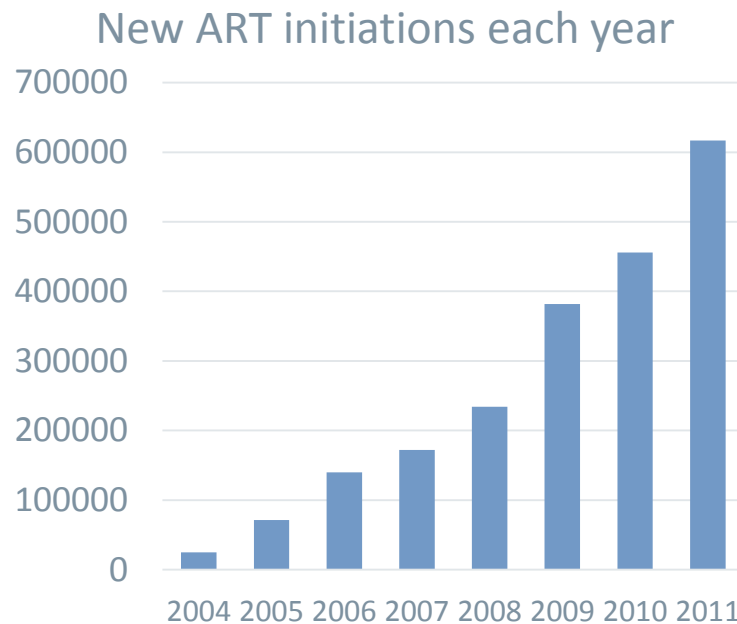


What do we know? Rate of new infections?

P5



What do we know? New HAART Initiations, Cumulative patients



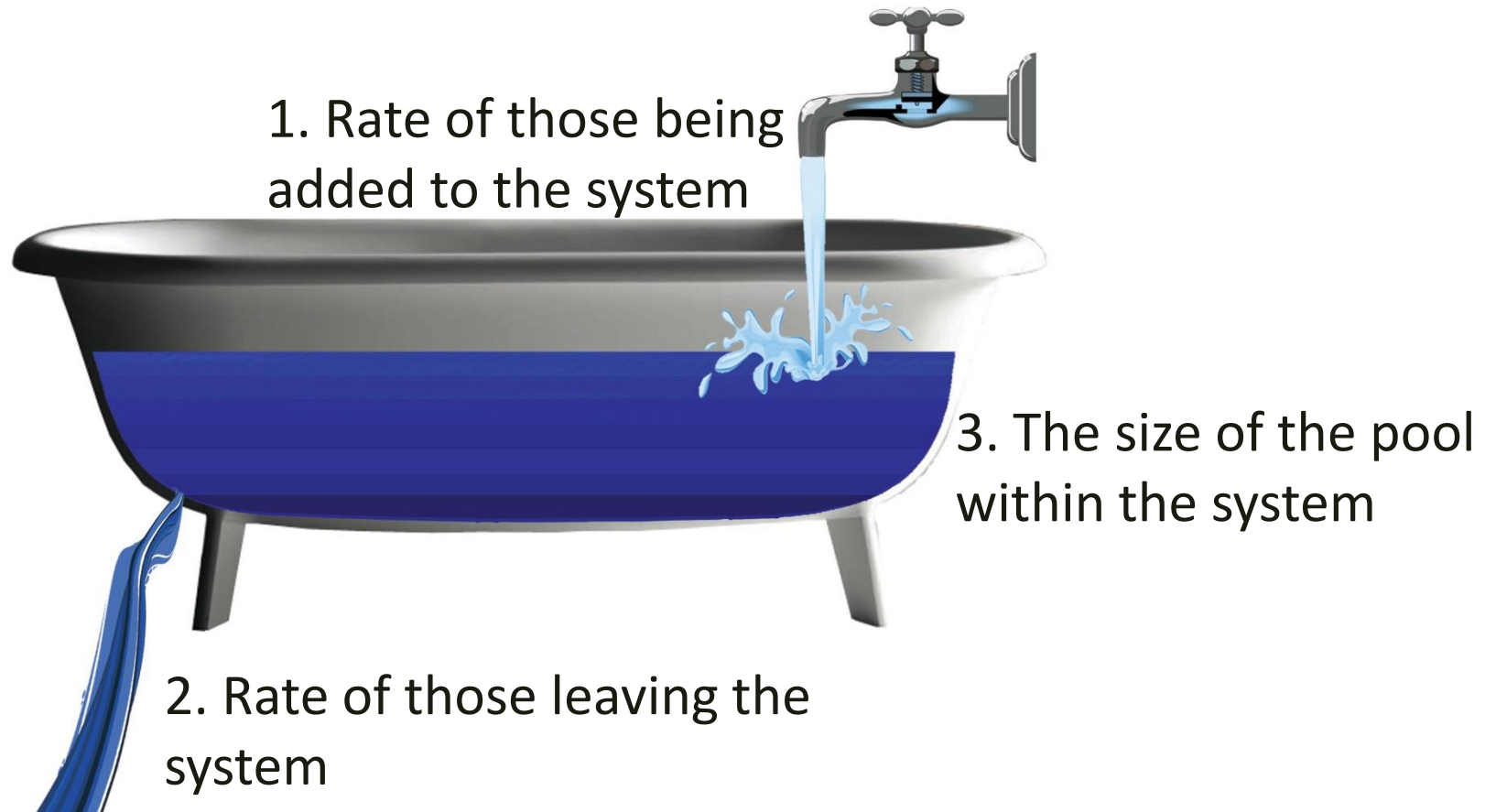
Johnson LF. Access to antiretroviral treatment in South Africa, 2004 - 2011. SA J HIV Med 2012;13(1):22-27.

Pillay Y. Treatment 2013 –7th IAS Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2013), Kuala Lumpur, Malaysia, 30 June - 3 July 2013.

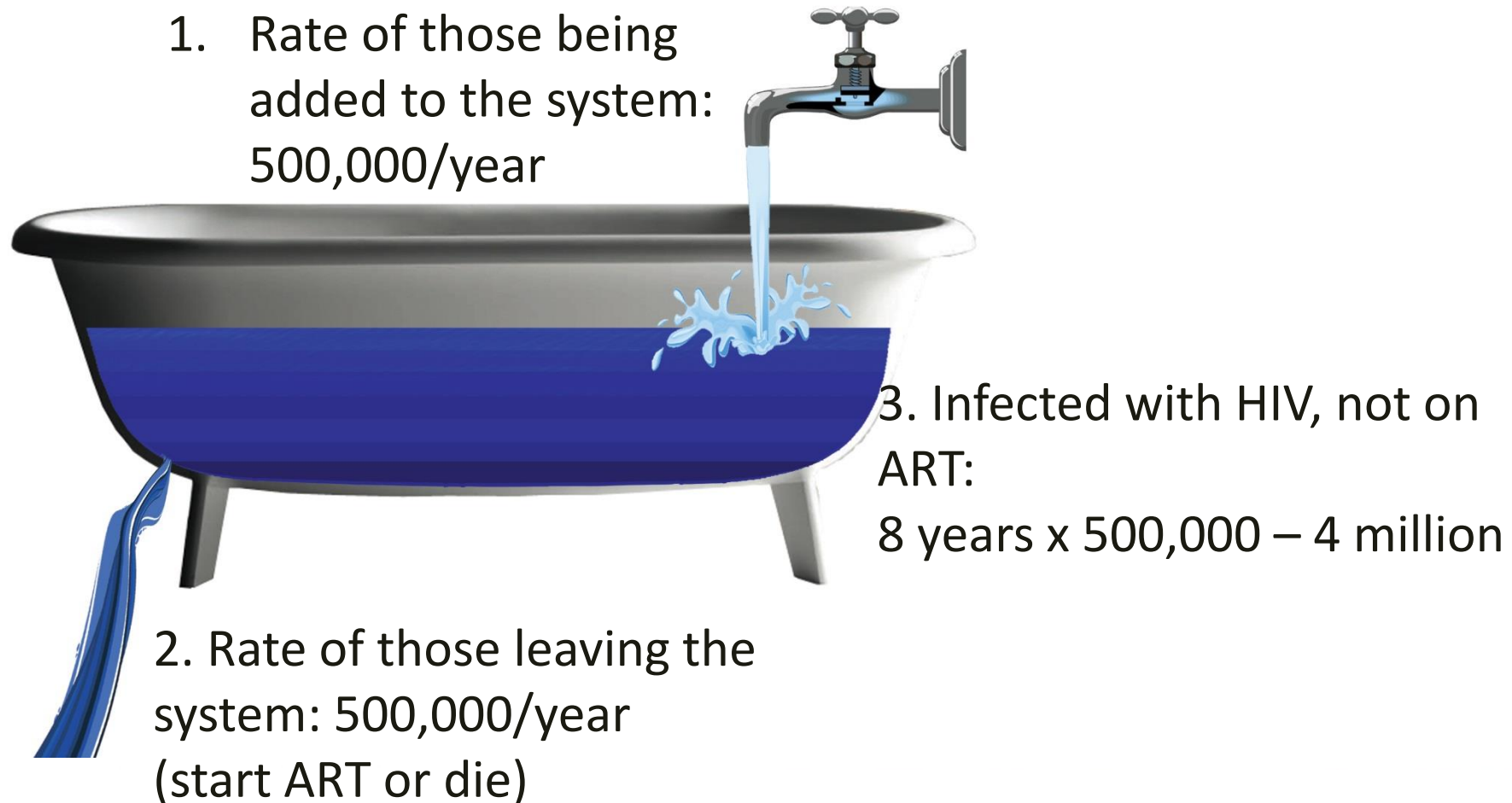


Understanding current state: inflow, outflow, backlog

P7



Initiation of ART – previous state (CD4 200 threshold) P8



Understanding the Backlog: Setting treatment threshold at 350, 500 or no threshold



Understanding the Backlog: Effect of setting treatment threshold at 350

P10

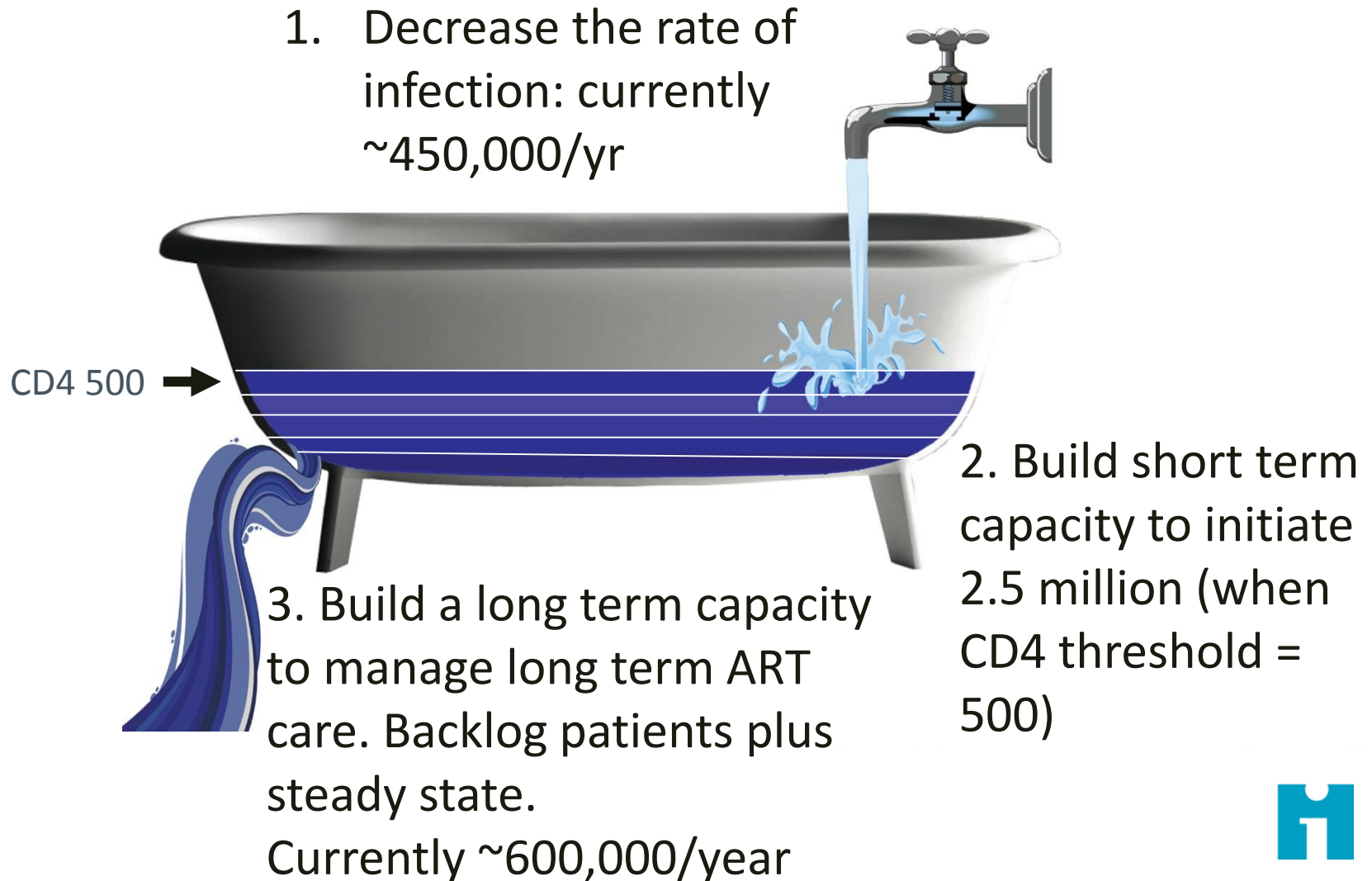


Understanding the Backlog: Effect of setting treatment threshold at 500

P11



Health systems view: 3 tasks –



Experience from NW Province

Setting ART initiation targets in response to changing guidelines: The importance of addressing both steady-state and backlog

C Martin,¹ MB ChB, DipHIVMan, DTM&H; **N P Naidoo,**¹ MPH; **W D F Venter,**^{1,2} FCP, MMed, DTM&H, DipHIVMan; **A Jaffer,**¹ MPH; **P M Barker,**^{3,4} MB ChB, MRCP, FAAP

¹ Wits Reproductive Health and HIV Institute, School of Clinical Medicine, University of the Witwatersrand, Johannesburg, South Africa

² Department of Medicine, School of Clinical Medicine, University of the Witwatersrand, Johannesburg, South Africa

³ Institute for Healthcare Improvement, Cambridge, Massachusetts, USA

⁴ Gillings School of Global Public Health, University of North Carolina at Chapel Hill, North Carolina, USA

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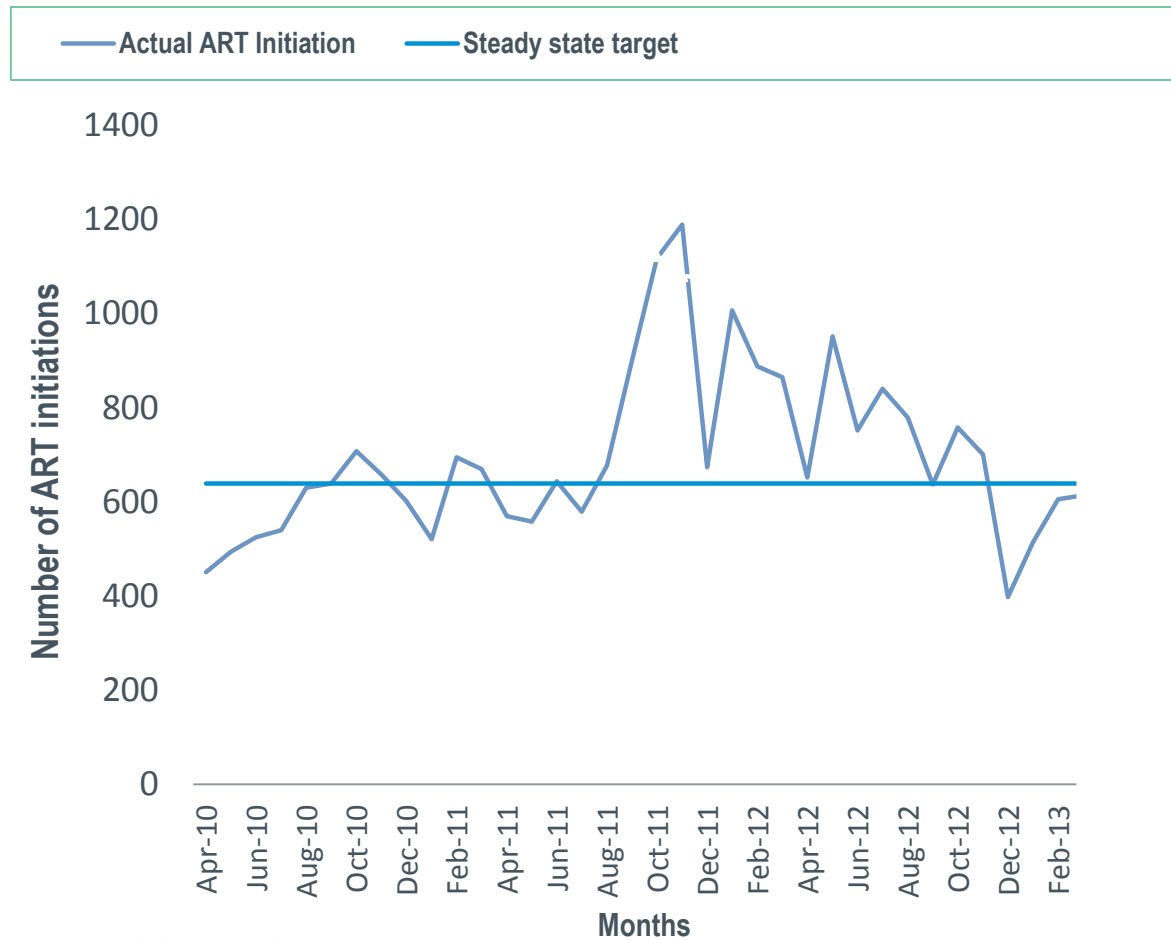
Experience from NW Province

- Kenneth Kaunda District population of ~700,000
- HIV prevalence (at ANC clinic) of 32.4%
- Calculated steady-state need for the district:
 - 639 initiations/month (Leydon S Afr Med J 2010;100(7):420-424)
- Calculated backlog (with CD4 = 350 threshold)
 - 15 400 patients (2x annual steady state requirement)



Capacity to address steady state and backlog requirements in xx District

P15



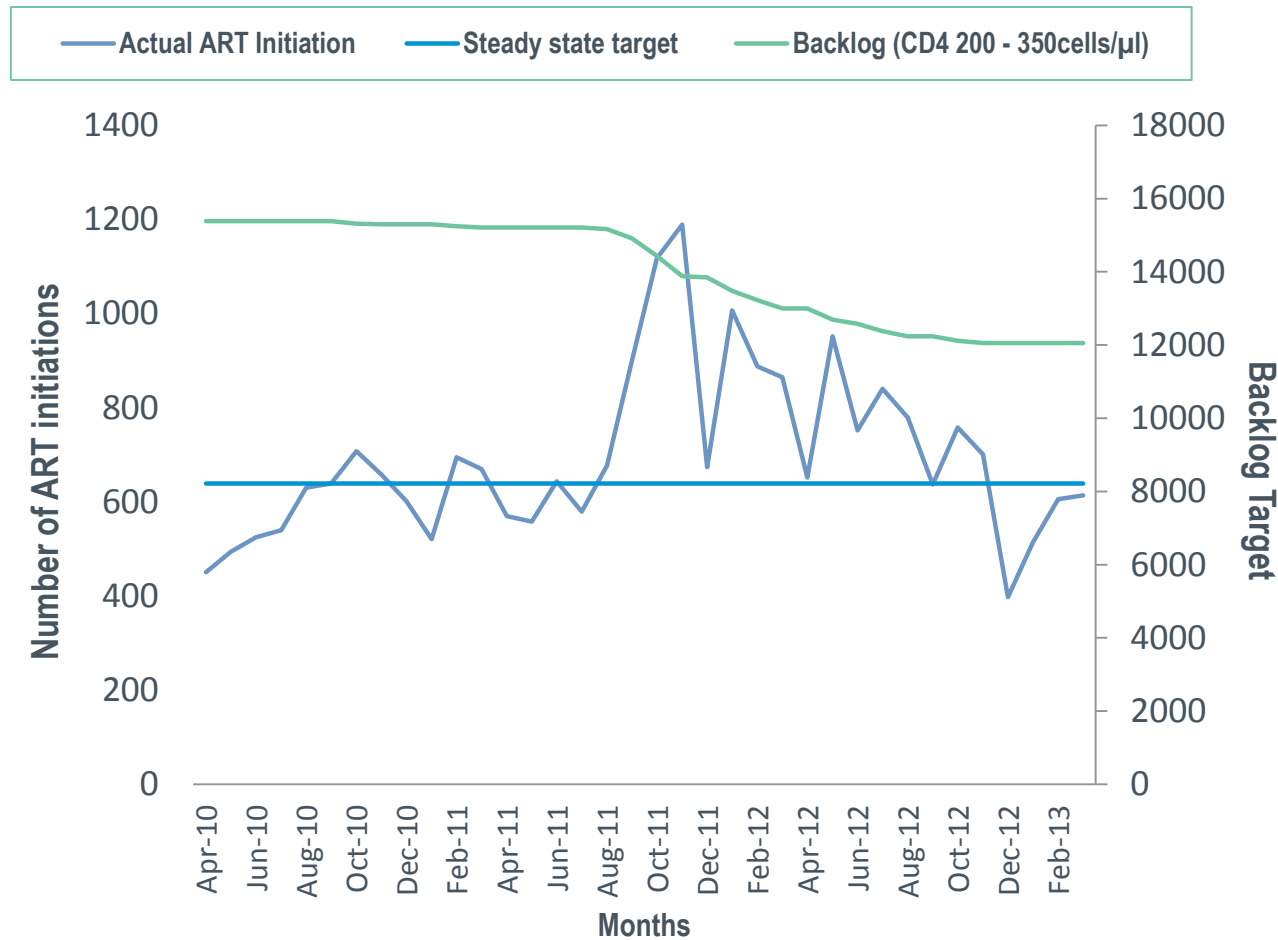
Martin et al S Afr Med J 2014;104(6):428-430. DOI:10.7196/SAMJ.7507

Leydon et al S Afr Med J. July 2010, Vol. 100, No. 7



Capacity to address steady state and backlog requirements in KK District

P16



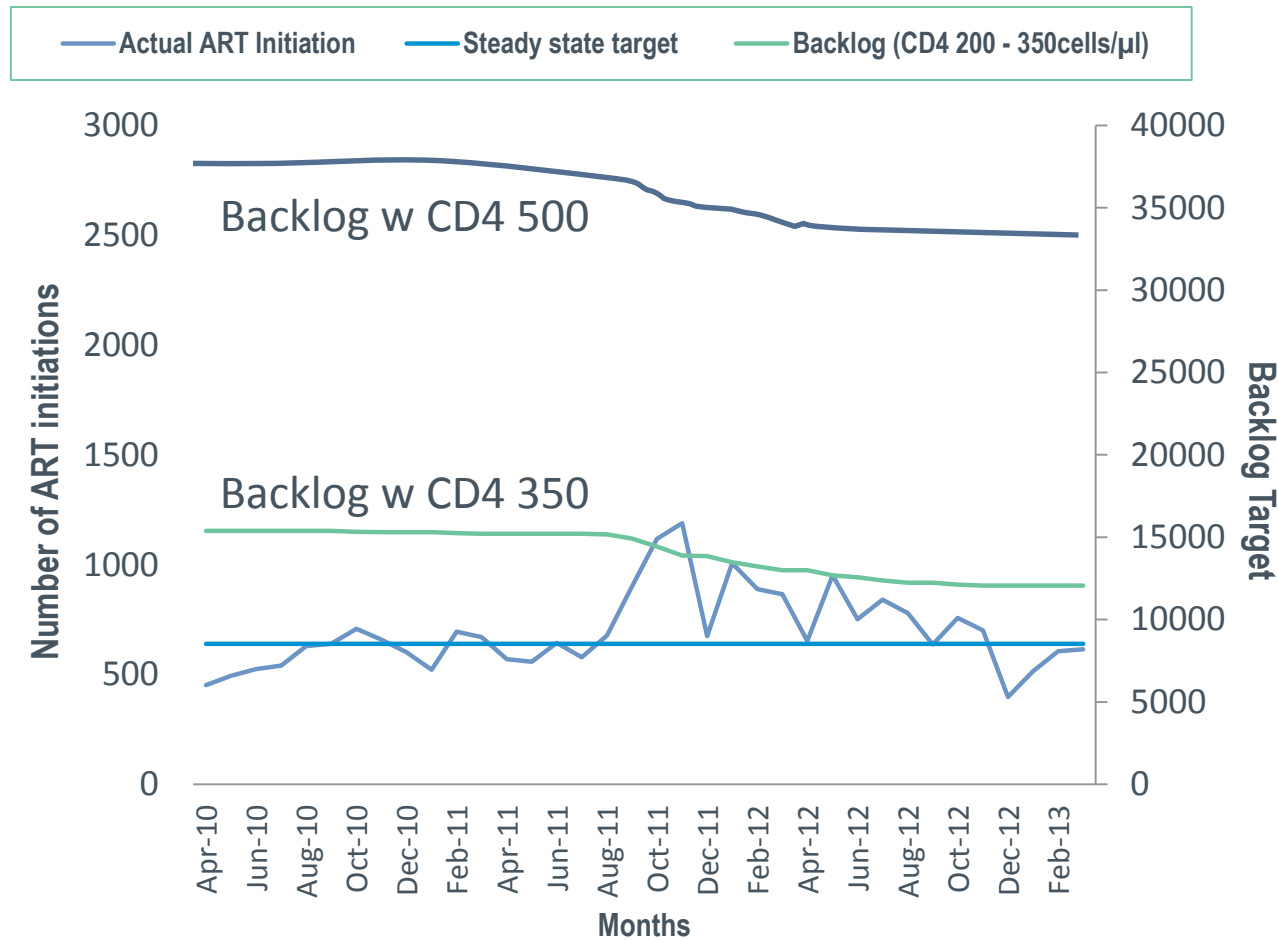
Martin et al S Afr Med J 2014;104(6):428-430. DOI:10.7196/SAMJ.7507

Leydon et al S Afr Med J. July 2010, Vol. 100, No. 7



Moving CD4 threshold from 350 to 500^{P17}

Implications at a District level.

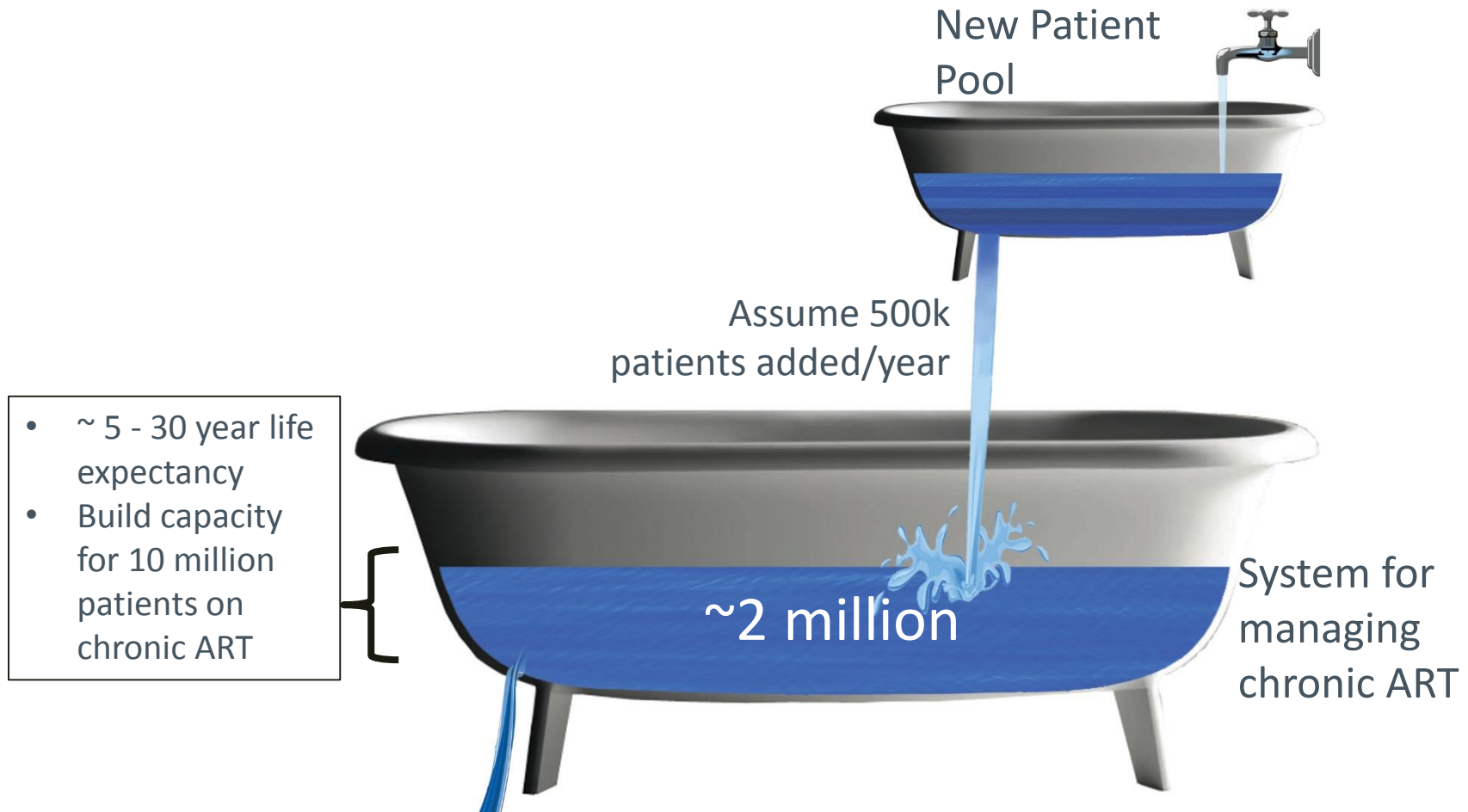


2 baths! Initiation and Chronic Care

- Rate of influx
- Size of treatment pool
- Rate of efflux



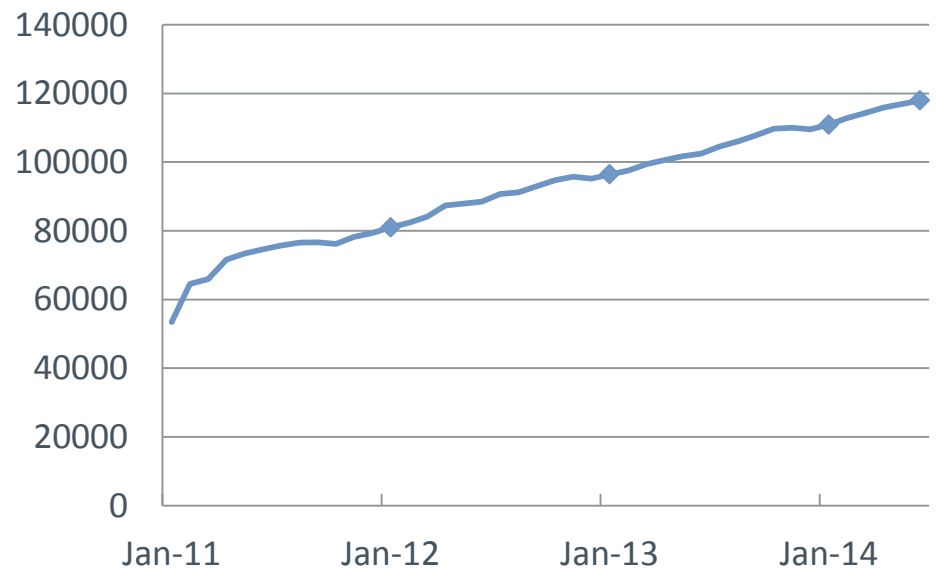
2 baths! Initiation and Chronic Care





City of Cape Town

ARV RIC patients 2011 to 2014



Net gain of $\sim 20,000/\text{yr}$
Steady state need = 16,000
Backlog (CD4,350) = 32,000

MSF Adherence Clubs Model



30 stable
patients on
ART in a
“club”

Onsite or offsite
peer support for
ART adherence

- Patient-initiated request to clinician for club recruitment.
- Stable ART population
- Meet once a month for basic clinical assessment, medication collection, peer support
- Secure medical backup



Pilot project: 20 clubs at the Ubuntu clinic, Site B, Khayelitsha (2007)

after 40 months...

- retention in clinic care 97% for club patients vs 85% in clinic (matched)
- virological rebound - 67% less in club participants

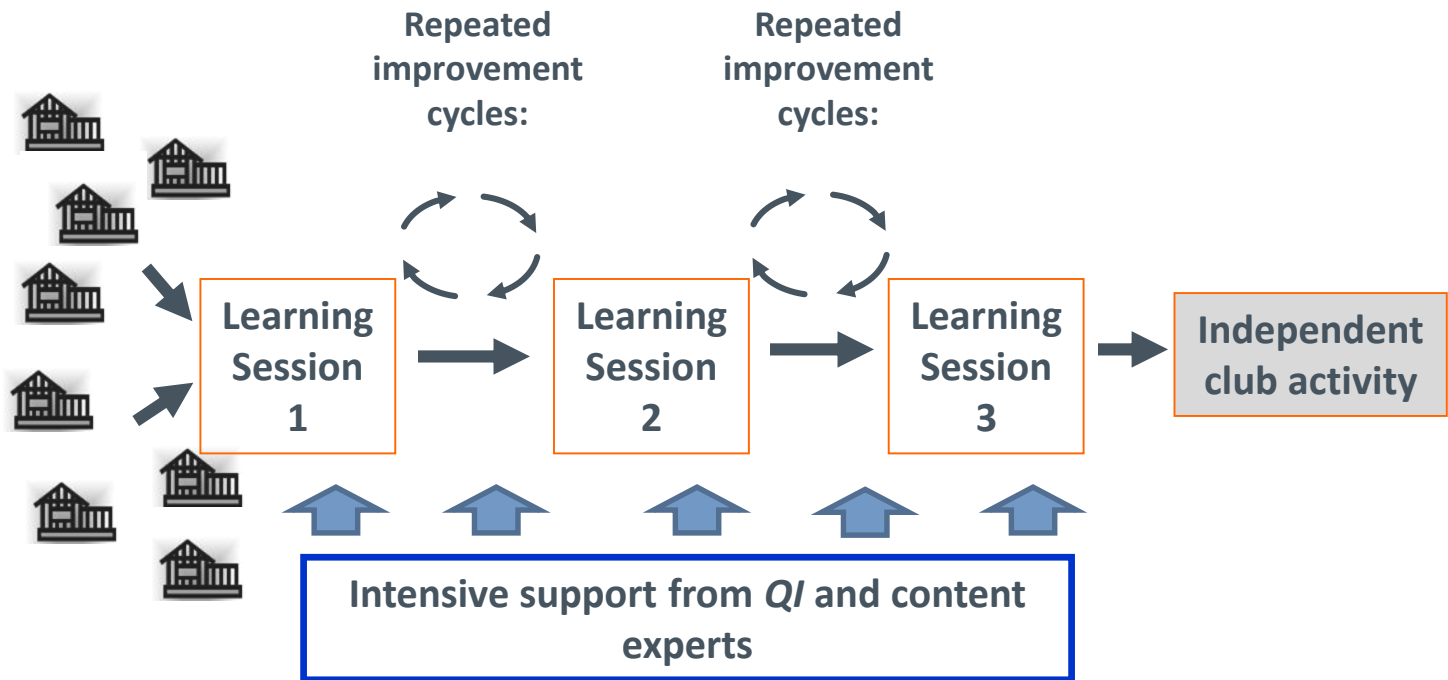


Test of Scale-up of AC in City of Cape Town (2011)

P23

12 facility club teams

- manager
- nurse
- facilitators
- clinic
- pharmacist
- clinic data capturer)

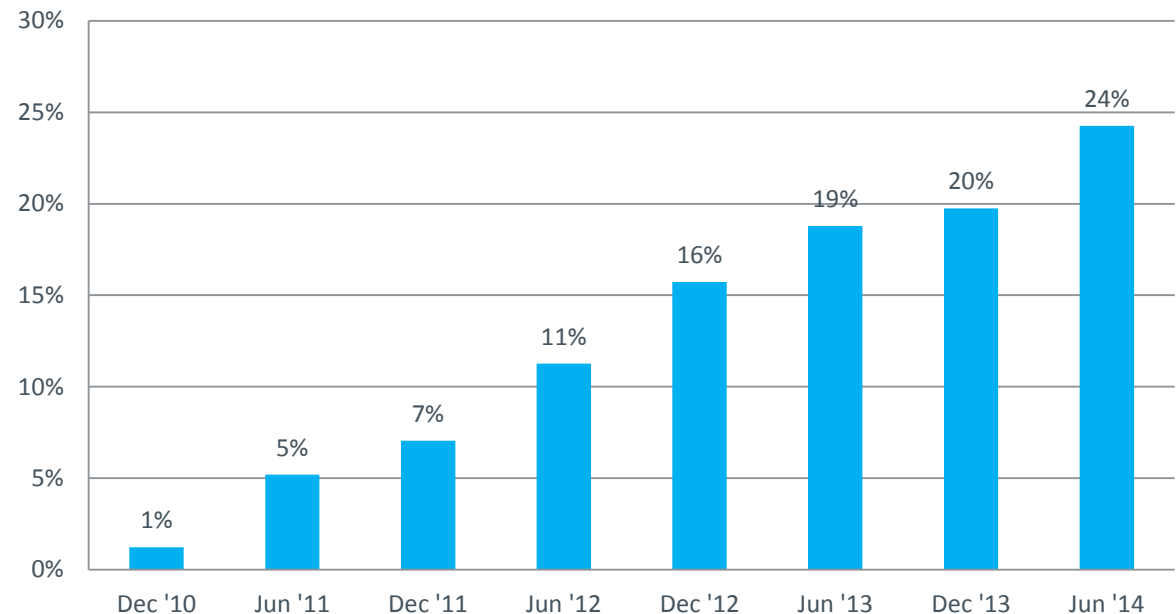


Partnership between the WCG DoH, City Health (City of Cape Town), MSF and the Institute for Health Improvement (IHI)

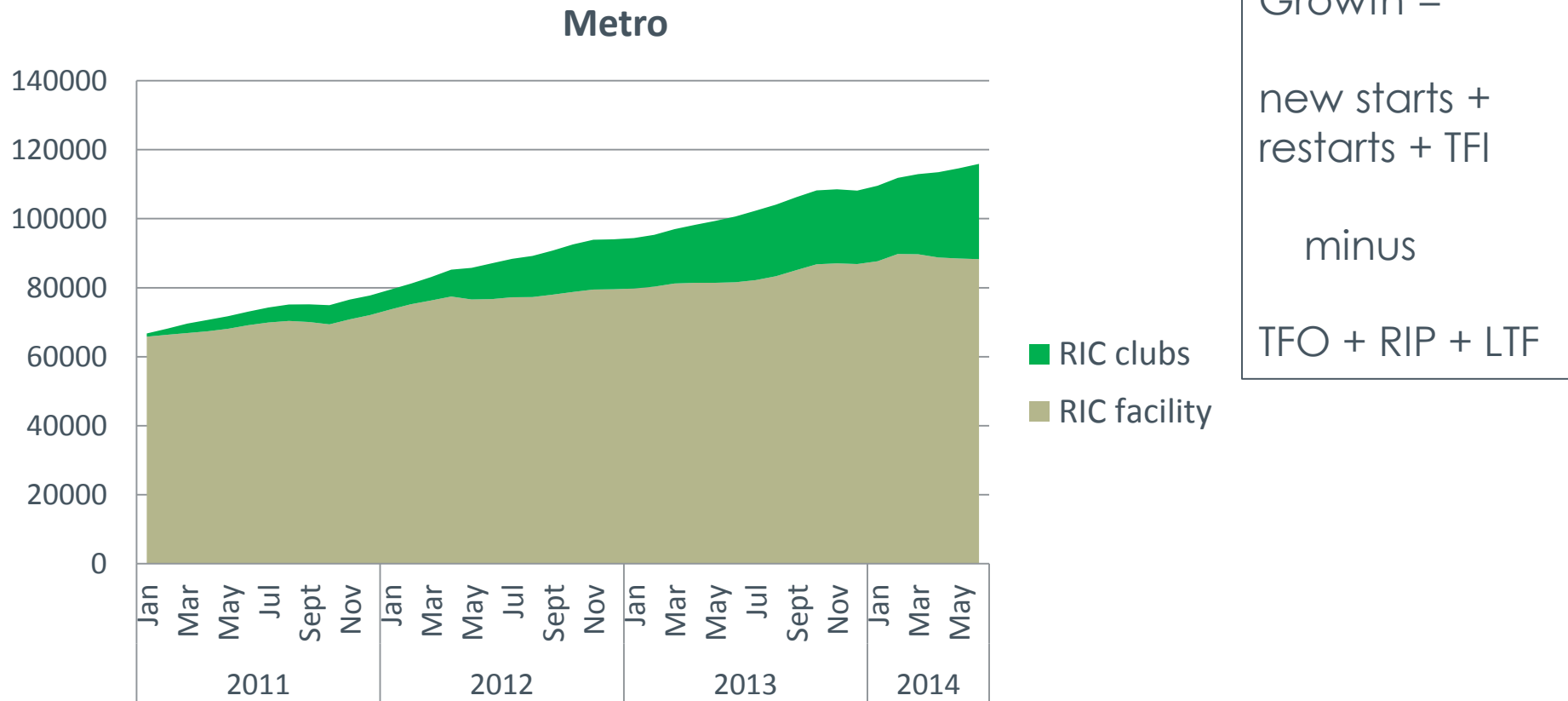
June 2014

- 600 clubs
- 27,000 stable ART patients accessing care and treatment

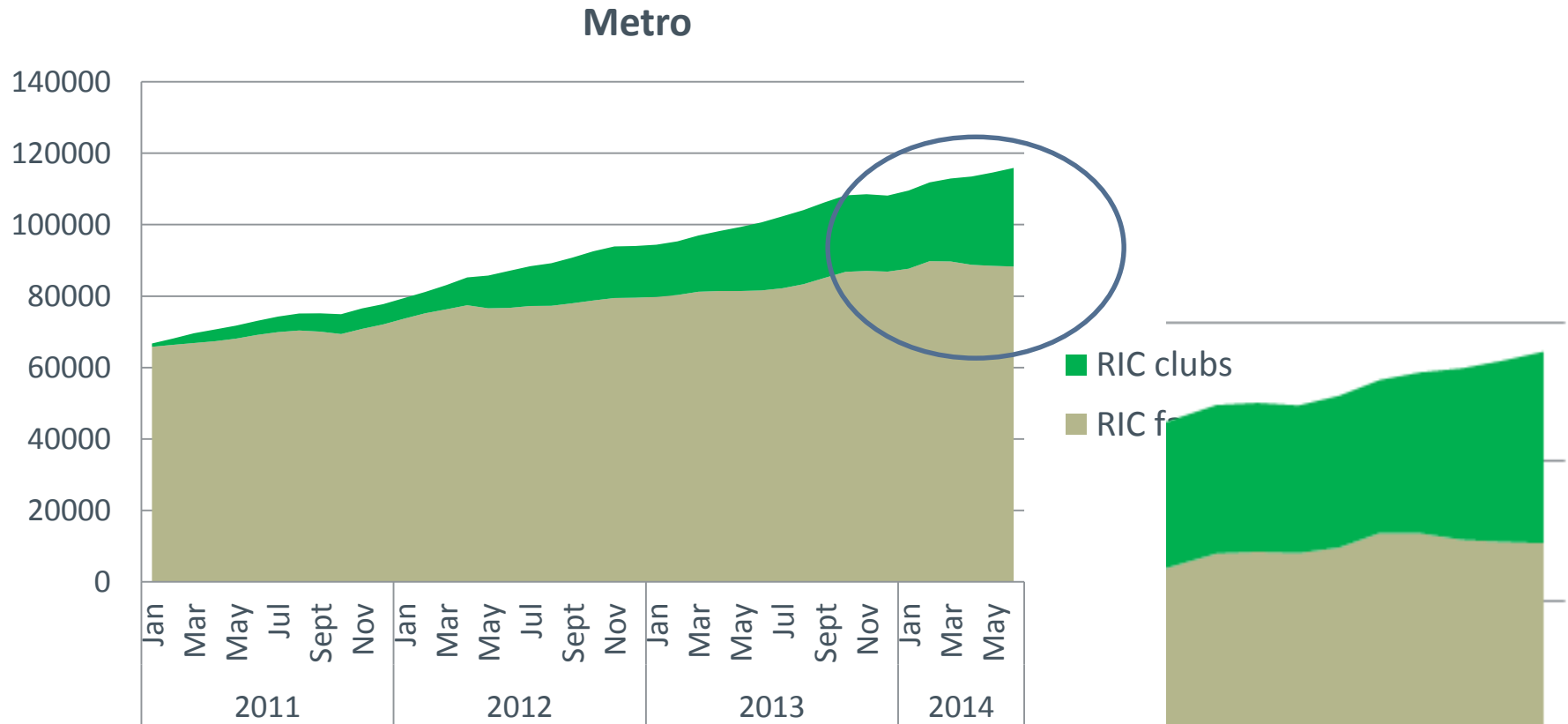
Percentage of RIC patients who receive care in Clubs over time



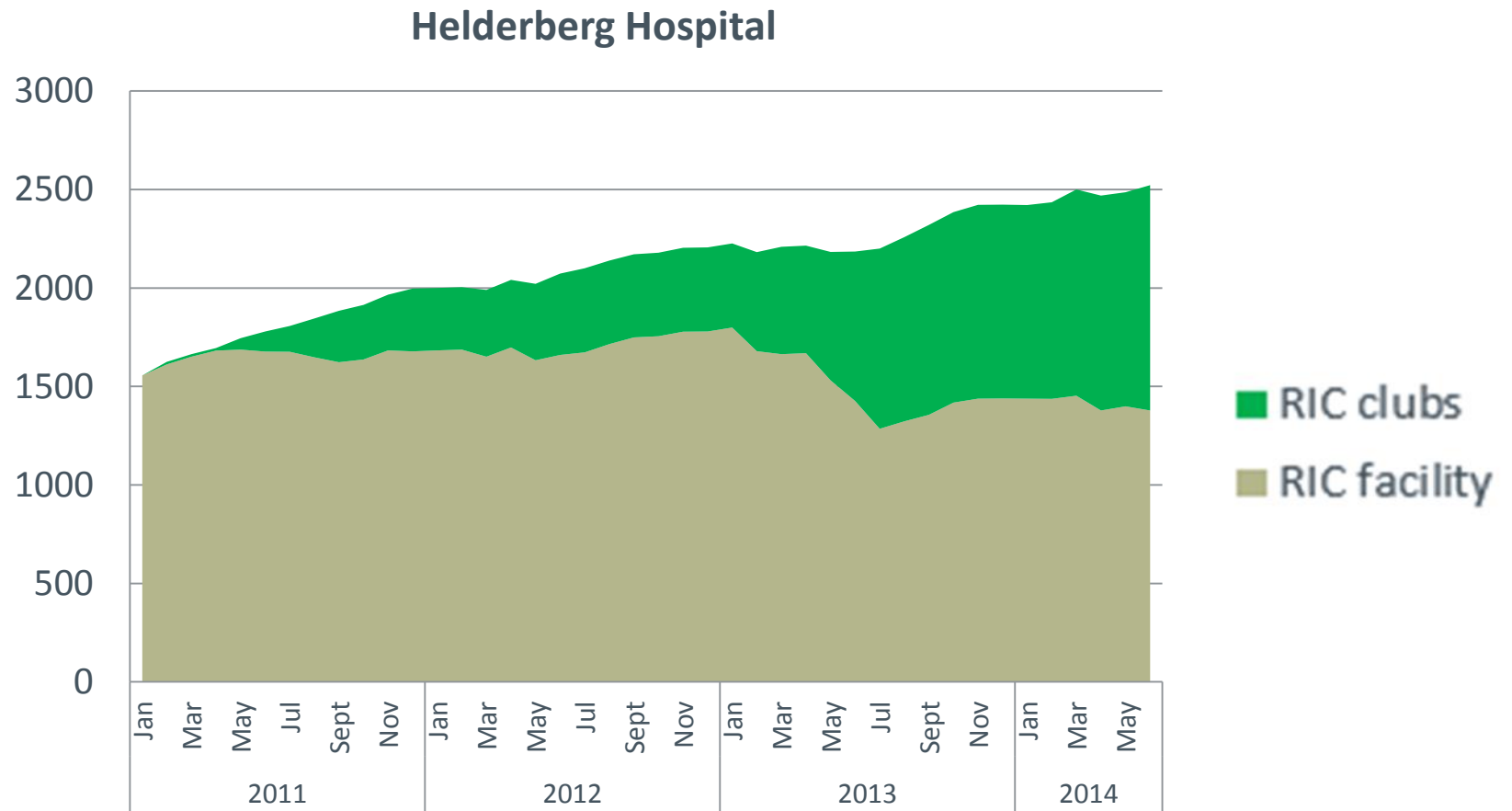
Keeping up with inputs and backlog



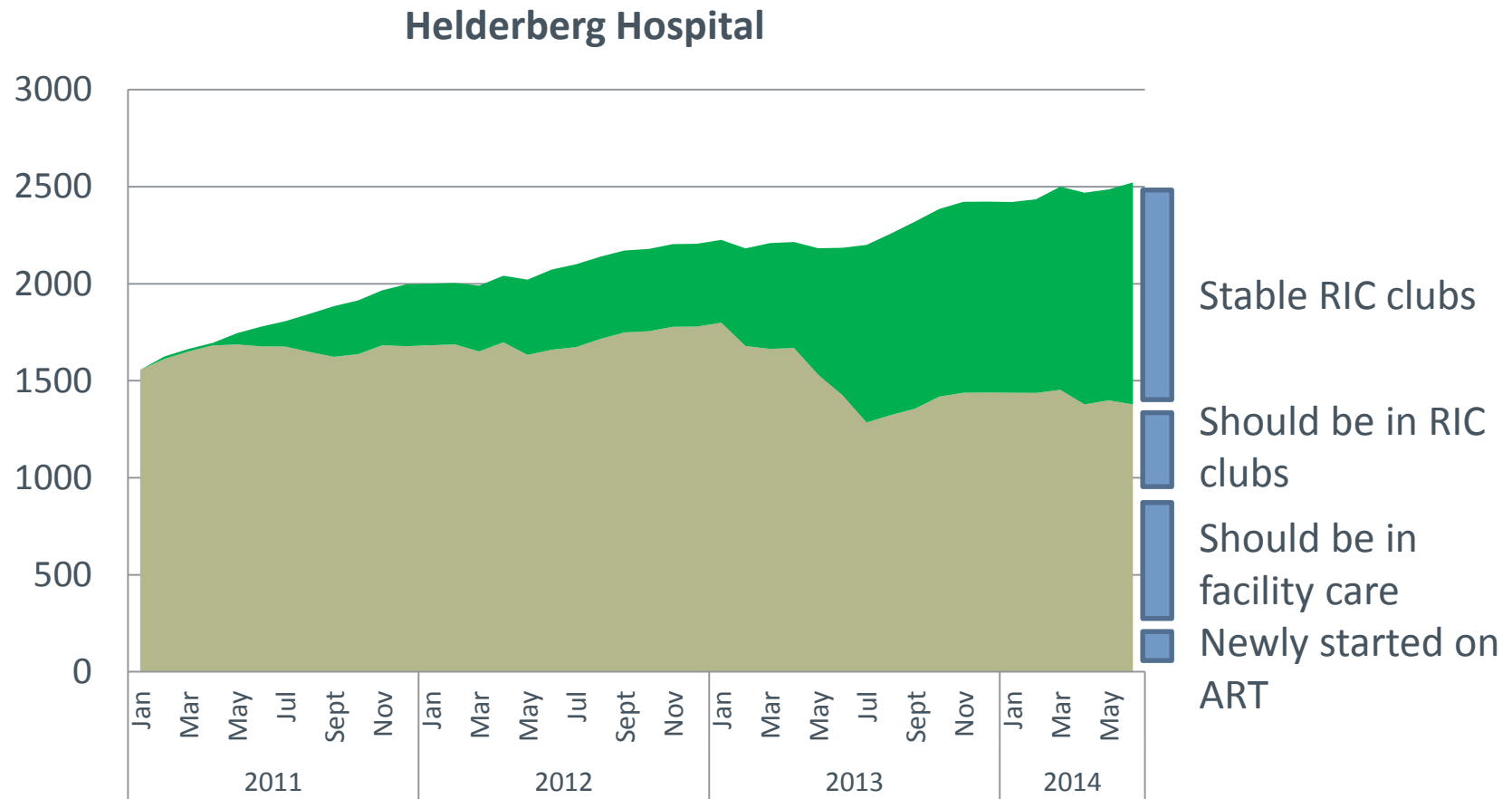
Keeping up with inputs and backlog



Helderberg HIV Clubs



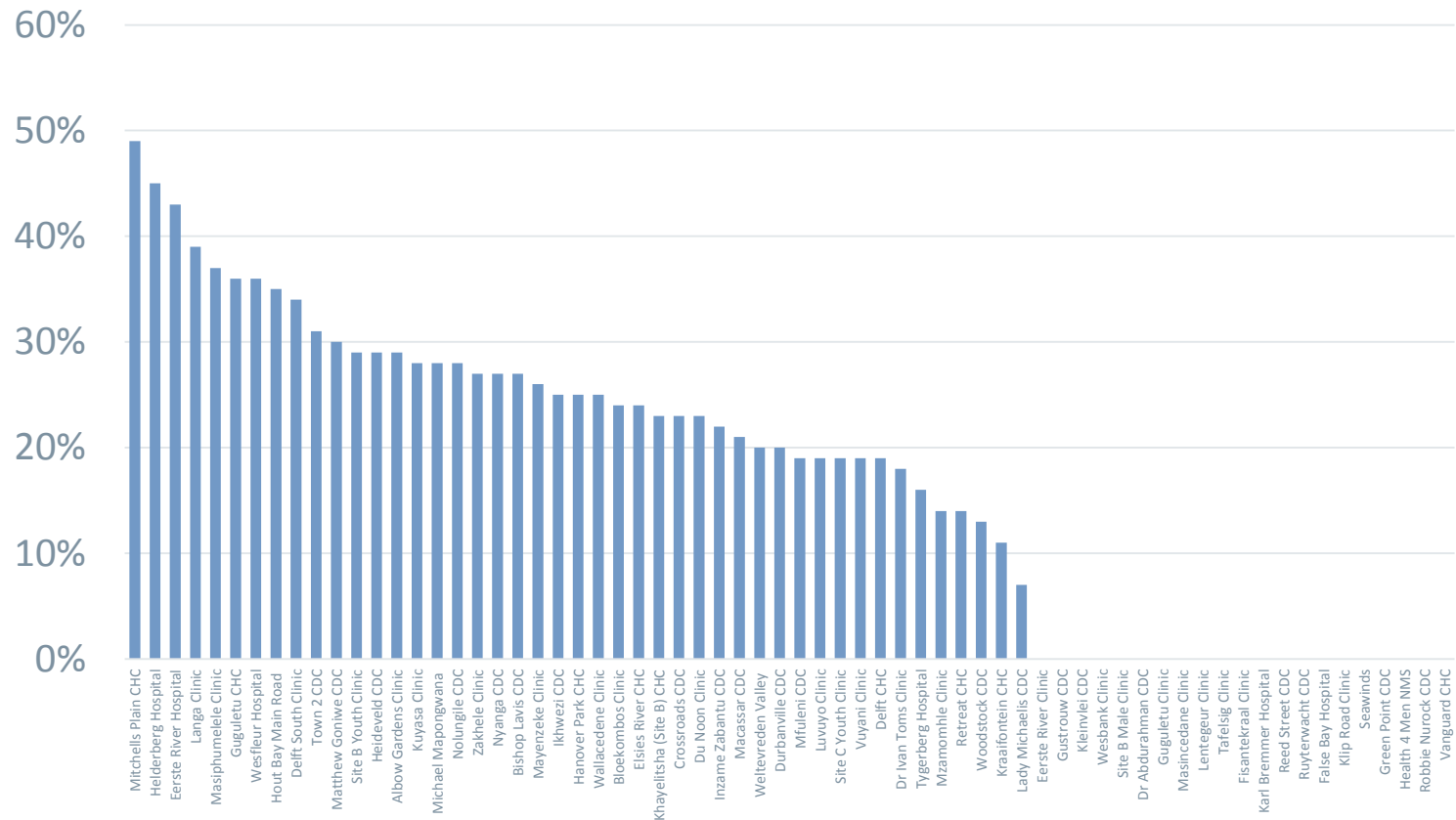
How far can you take the model?



Getting to full scale: variation in clinic performance

P29

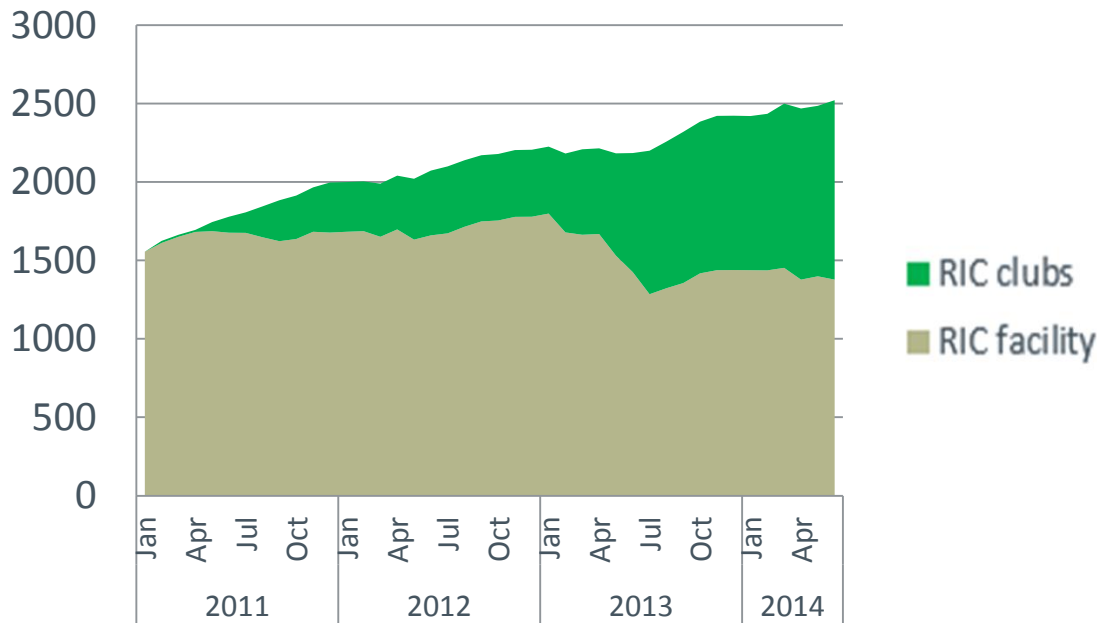
% ART patients who are followed in Adherence clubs



The Future: ART Adherence Clubs

Diabetes

Helderberg Hospital

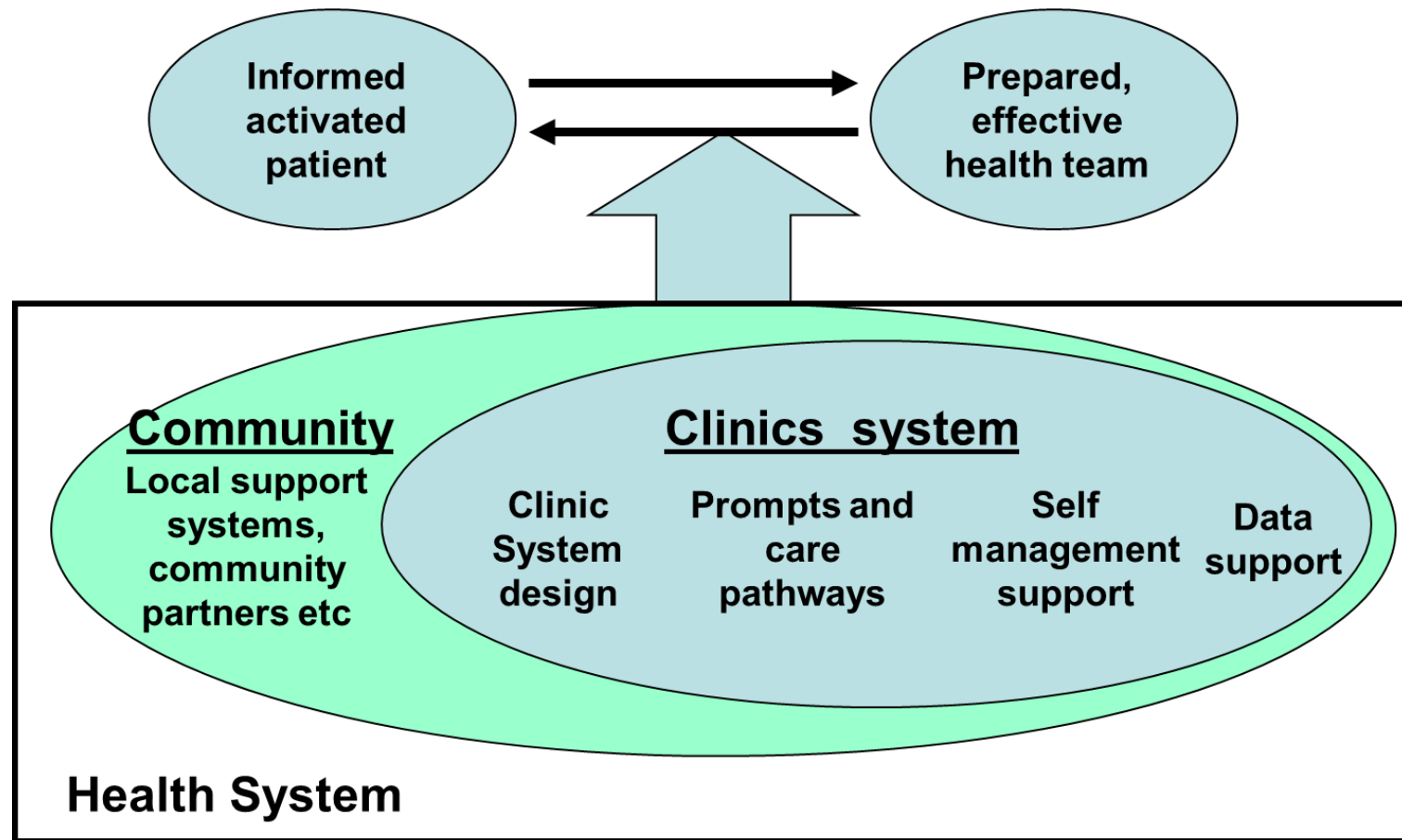


The future

- Go to full scale
- Determine adherence rates in expanded adherence clubs
- Determine cost effectiveness
- Apply model to other areas of chronic care



Chronic Care Model



Take-aways

Design your HIV care system through understanding of

- Rate of entry and exit of patients from pre-treatment and treatment pools, and size of 2 pools
- Backlog and steady state require different health system designs
- Modern QI methods can be used to develop, test and spread innovations that can bring epidemic needs under control



Resources

1. *Luque-Fernandez MA, Van Cutsem G, Goemaere E, et al.. PLoS One 2013;8(2)*
2. *Lessons learnt through the Khayelitsha implementation experience and tools utilised in the ART club model.*
<http://www.msf.org.za/publication/art-club-toolkit>.
3. *Wilkinson L SAJHIVMED, Vol. 14, No. 2 June 2013*
4. *Martin C, S Afr Med J 2014;104(6):428-430.*
5. *Leyden et al, July 2010, Vol. 100, No. 7 SAMJ*
6. *Barker PM and Venter F, SAMJ 2007; 97:10: 916-917*
7. www.ihl.org
8. *Aurum Quality Improvement Tool: Lauren De Kock – LDeKock@auruminstitute.org*



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Medecins Sans Frontiers

