

Life Expectancy in South Africa

(2)

64

56

**52**-

7.5M

600

People living with HIV (all ages)

Years 09

### A perspective on the HIV epidemic in South Africa

### Dr Pieter Du Toit van der Merwe – EACS HIV Summer School 2019

South Africa has come a long way since the early days of the HIV epidemic. Socioeconomic and political factors such as the migrant labour system as well as the government's protracted AIDS denialism¹ conspired to create an epidemic of enormous proportions. Average life expectancy plummeted since the early 1990s until, after years of pressure from advocacy groups, the government commenced the national roll-out of combination ART in 2004.<sup>2</sup> As in other parts of the world, the number of people living with HIV (PLHIV) still continues to increase despite lower incidence, due to improved life expectancy of patients on ART.<sup>3,4</sup> One out of every five people with HIV worldwide lives in SA. In July 2019 the Statistician General estimated the national numbers of PLHIV in SA to be 7.97 million (13.5% of population); amongst adults aged 15-49 years, about 19.07% are HIV positive (Stats SA). HIV prevalence is higher in the eastern regions of the country, especially in KwaZulu-Natal (KZN) province. Antenatal clinic prevalence is even higher – in some KZN communities up to 60% of women are HIV positive.

In the largest antiretroviral programme worldwide, more than 4.8 million people (61% of PLHIV) have started taking ART.8 UNAIDS's "90-90-90 by 2020" target has already been achieved by certain communities, of which Médecins Sans Frontières' HIV/TB project in Eshowe, KZN was one of the first earlier in 2019, with results of 90-94-95.9

Many challenges remain, including reaching target populations such as adolescent girls / young women and men in general, as well as vulnerable groups like sex workers and sexual minorities in many communities. Furthermore, ongoing expansion of the roll-out contributes to proportionately higher numbers of patients disengaging from care intermittently, 11 driving worse clinical outcomes upon their return, increased transmission, and potentially, viral resistance. Lastly, tuberculosis, the leading cause of natural deaths in SA, remains intricately interwoven with the HIV epidemic, and the largest contributor to HIV morbidity and mortality in SA. Over 80% of people who died of TB in 2016 were HIV infected (National Institute of Communicable Diseases – 13 March 2019).

As a fifth year medical student in 2002 I completed an elective rotation at Tugela Ferry<sup>13</sup> in deep rural KZN, and returned there again as a community service doctor in 2005. The interim change was almost palpable. Whereas three years earlier, medical wards were overfilled with emaciated patients simply dying of AIDS, the availability of ART since 2004 had transformed the expectations of both patients and doctors alike, and had provided a long overdue sense of hope. Despite many obstacles, patients were generally getting better and surviving. A subset of TB patients, however, failed to improve. The largest XDR-TB outbreak in the world at that stage was starting to unfold in the same community<sup>14</sup>. It was this dual epidemic and its ramifications that, years thereafter, inspired me to follow a career in clinical infectious diseases, with special emphasis on HIV and TB. I was fortunate enough to have been able to work in these fields in SA's public health sector for many years, thereafter on an HIV project 15 with MSF in Cape Town's Khayelitsha township, and currently in an HIV & ID physician practice in the private health sector in Christiaan Barnard Memorial Hospital<sup>16</sup> in Cape Town.

## The epidemic's trajectory The global picture

3



Share of the population infected with HIV, 2017 Share of the population aged between 15 and 49 years old infected with HIV/AIDS. This is based on estimates from the IHME, Global Burden of Disease Study.

### Access to ART

4 million

3.5 million •

3 million

2 million

1.5 million

1 million

500,000

1.0%

8.0

0.6

0.4

0.2

2.5 million =



AVERT.org Source: UNAIDS (2016) 'AIDSinfo'

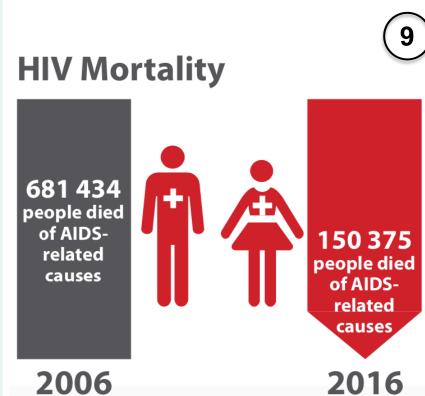
8 2,350,180 2,760,620 3,078,570 3,384,000 3,929,000 90%

https://ourworldindata.org/hiv-aids

### Some successes

Progress towards 90 90 90 targets (all ages) 68% 78% Aware of their On HIV Virally **HIV** status treatment suppressed ...... = 61% of all = 47% of all people living people living with HIV with HIV

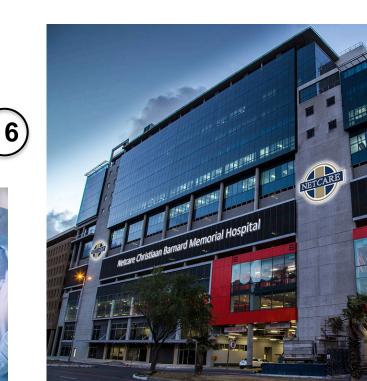
Cumulative incidence function over time from ART start (11) Disengaged **Transfers** Mortality Follow-up time (years)





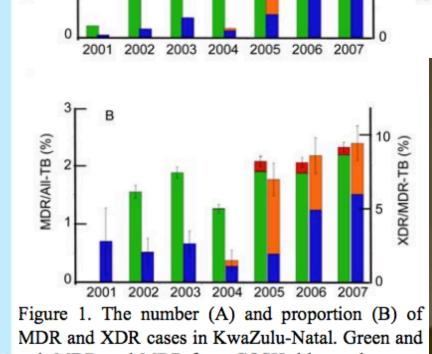
Kaplan S. Oosthuizen C. Stinson K. Little F. Euvrard J. Osler M. Hilderbrand K. Boulle A. Meinties G. Contemporary disen from ART in Khayelitsha, South Africa. PLos Med. 2017 Nov 7;14(11):31002407.



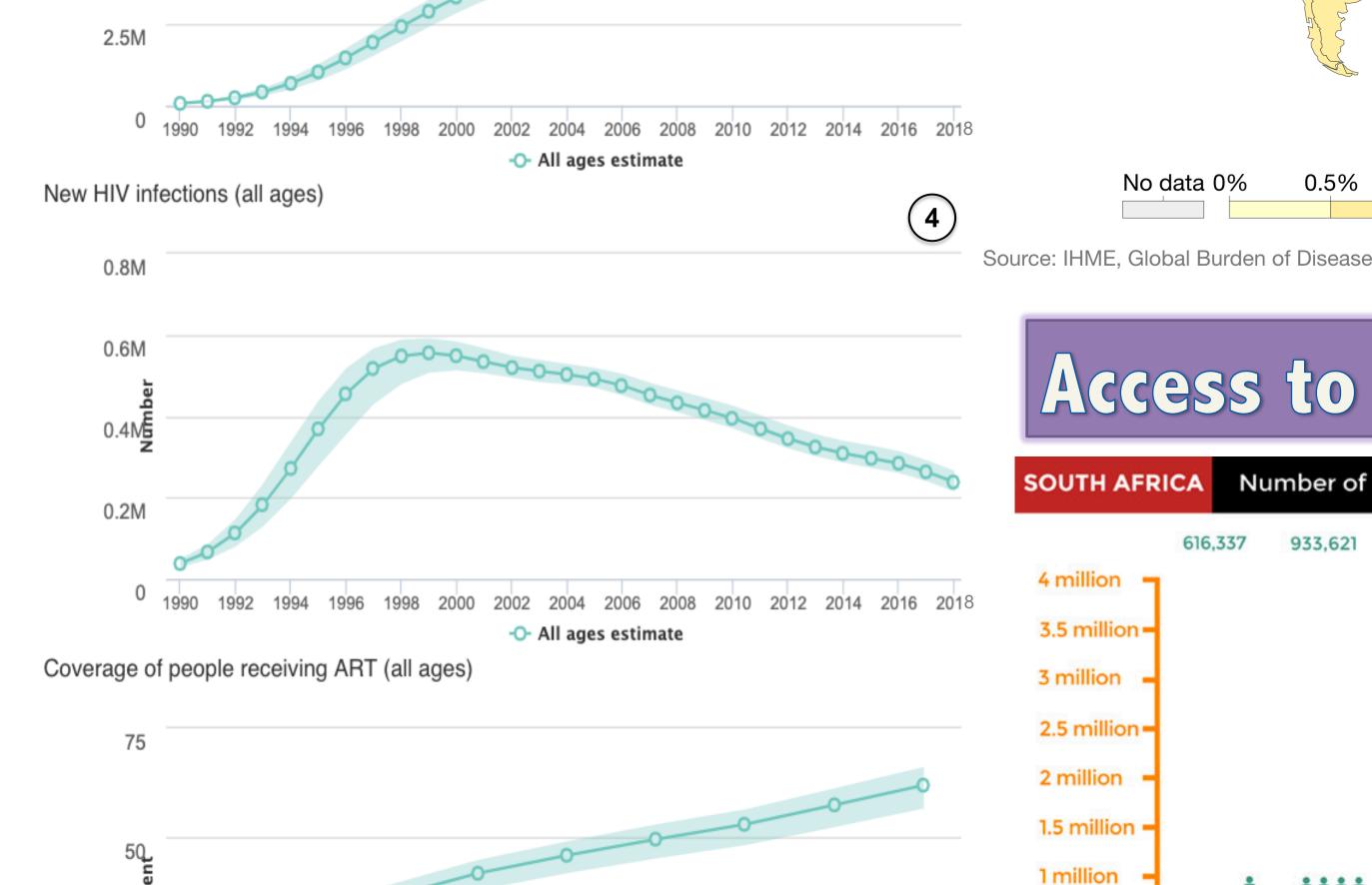


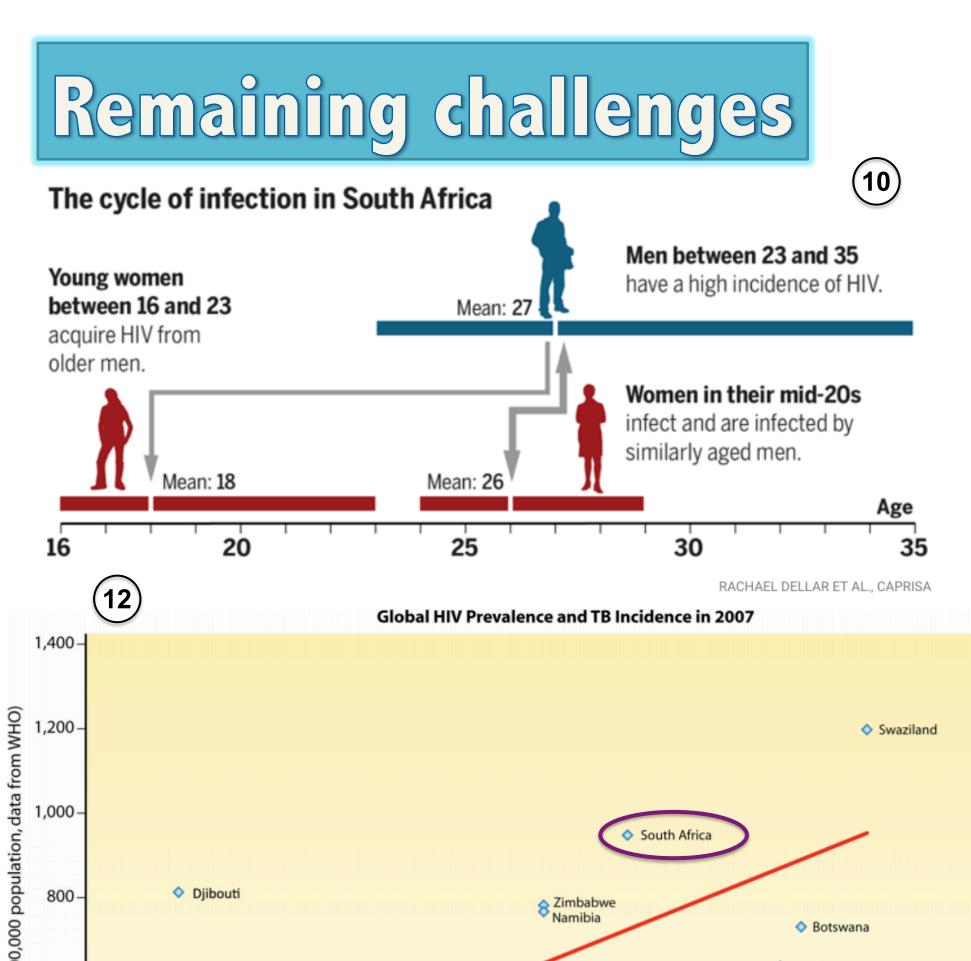
**MEDECINS** 

SANS FRONTIERES



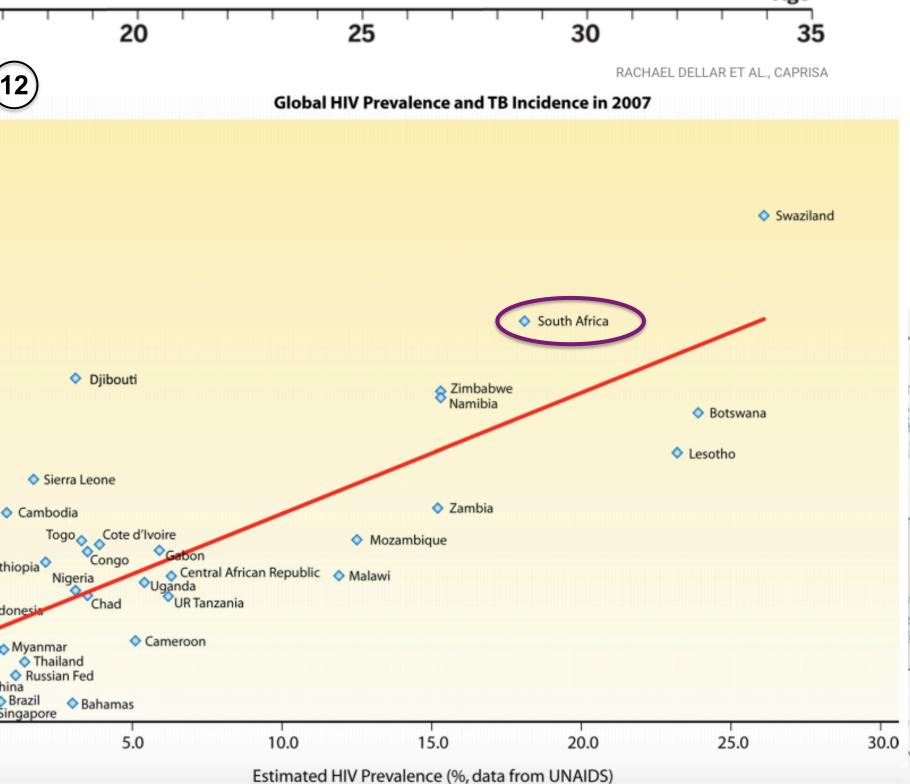
# UNTIL IT'S DONE. https://arxiv.org/pdf/1107.1800.pdf



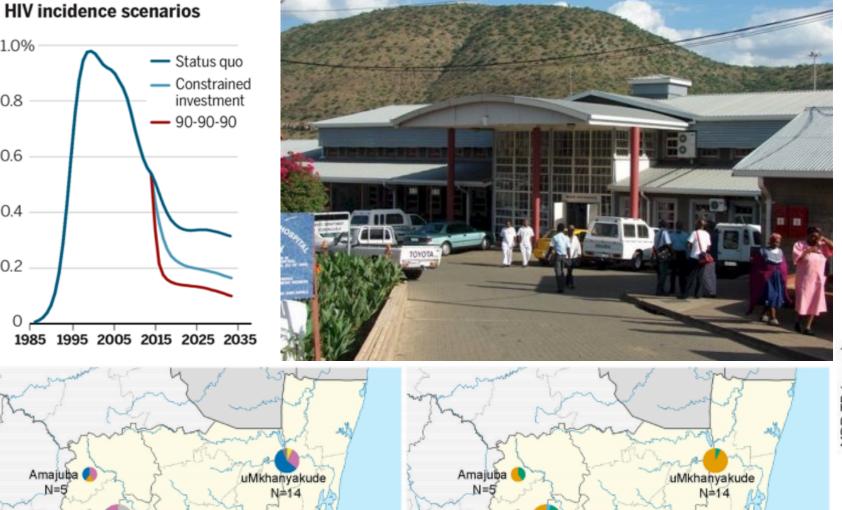


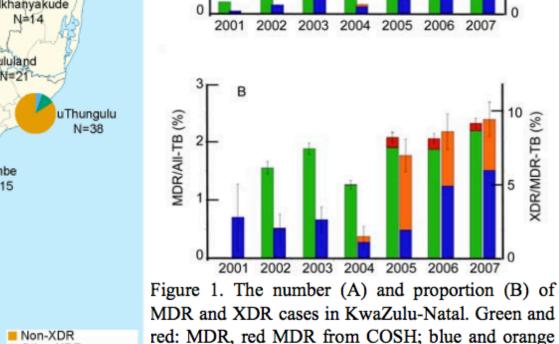
All ages estimate

Source: UNAIDS Estimates 2019; Global AIDS Monitoring 2019



Kwan CK, Ernst JD. HIV & Tuberculosis: a Deadly Human Syndemic. Clinical Microbiology Reviews. Apr 2011;351-376.





(14)

Beijing CAS EAI1-SOM

LAM4

Other https://pdfs.semanticscholar.org/20b8/cae3ec49a570eaf64c041856480015869763.pdf

uMgungundlovu

Other XDR
Tugela Ferry XDR XDR, orange XDR from COSH. Cape

Our World in Data

- KwaZulu-Natal

province

2.3%-10%

10%-20%

20%-30%

**30%-40%** 

**40%-45.9%** 

(thousands) Durban

THEN WE CONCUR:

THERE IS NO CAUSAL LINK

BETWEEN HIV AND AIDS!

NUTTY PROFESSOR

PRES. MBEKI'S SELECT

ADVISORY PANEL OF

INTERNATIONAL AIDS EXPERTS

The local picture

Pretoria

Gutreuter S, Igumbor E, Wabiri N, Desai M, Durand L (2019). Improving estimates of district HIV prevalence and burden in South Africa using small area estimation techniques. PLoS ONE 14(2):

HIV antenatal clinic prevalence (2013)

Johannesburg

Pretoria

CC BY SOUTH AFRICAN HIV AND TB INVESTMENT CASE, SANAC AND NATIONAL DEPARTMENT OF HEALTH

Source: UNAIDS Data 2018 **/vert** www.avert.org

https://samumsf.org/sites/default/files/2019-06/Press%20Release.pdf