



Western Cape
Government

Health



Understanding High Ongoing HIV-associated Mortality In The Era Of Antiretroviral Therapy In The Western Cape Province Of South Africa

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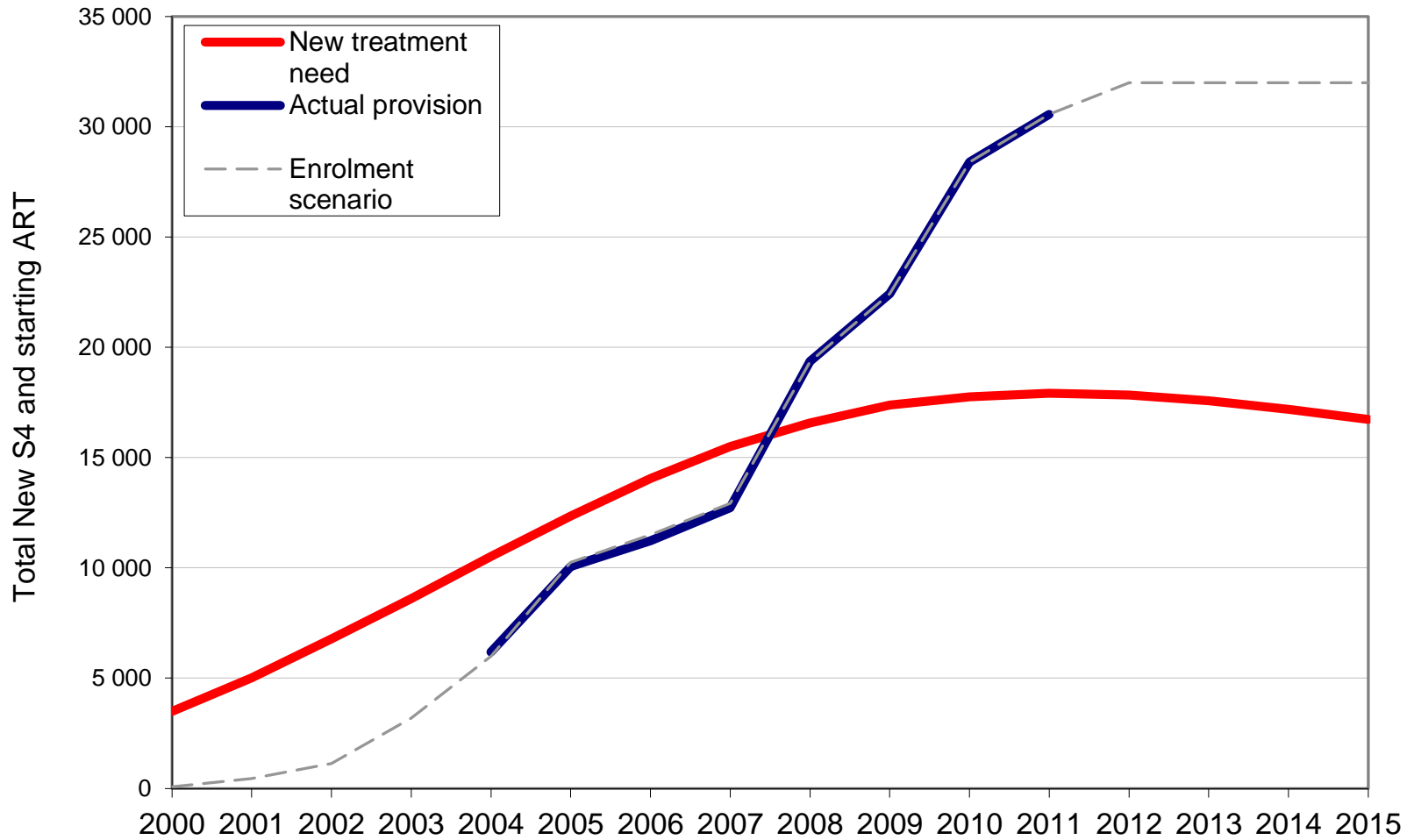
3) South African Medical Research Council

4) City of Cape Town Health Department, South Africa

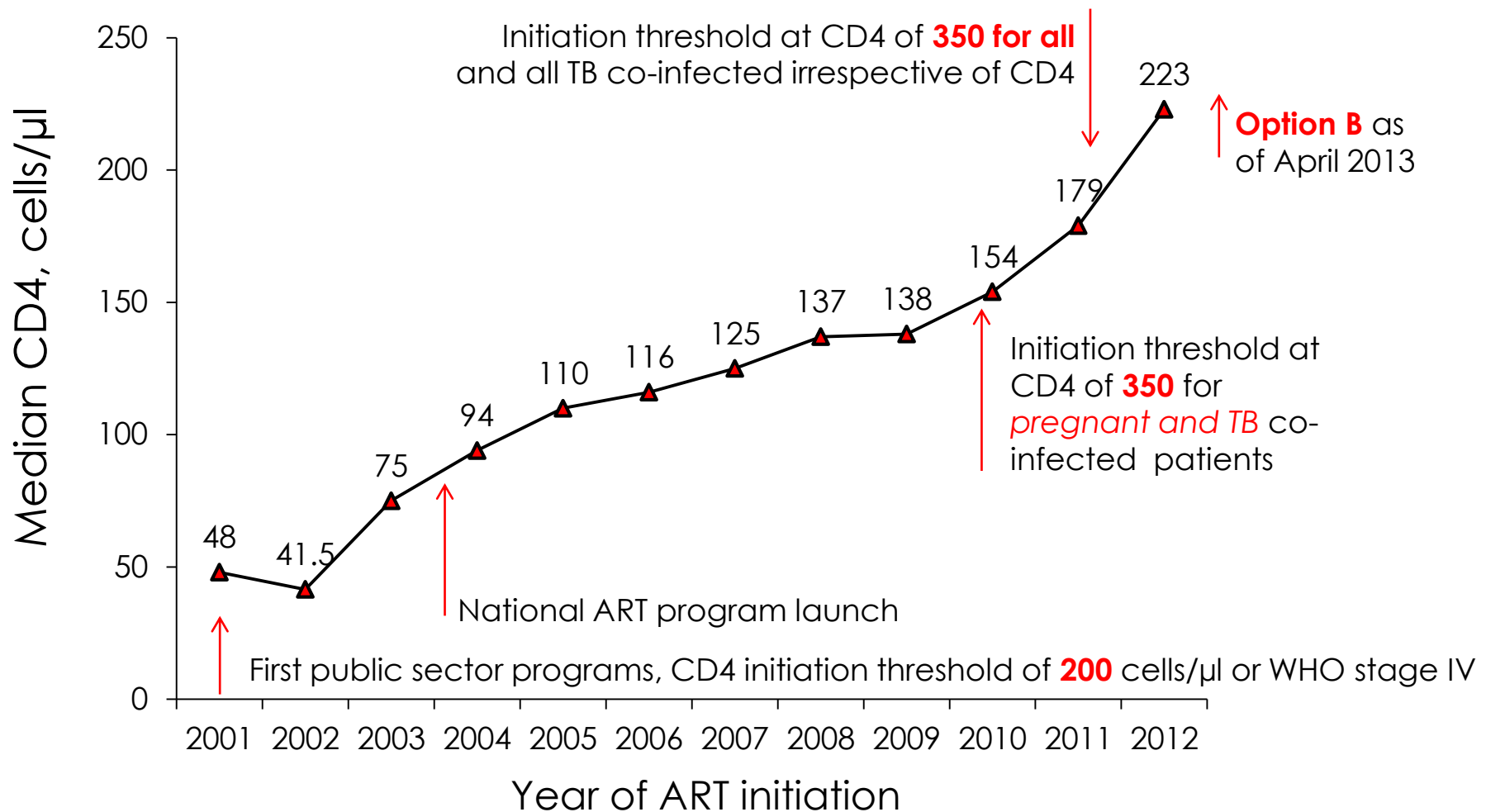
Background

- Province of 6 million people
- HIV antenatal prevalence 18%, 300,000 people living with HIV, 160,000 on ART
- 35,000 new HIV patients now started on ART per year. Those eligible include all adults who have a CD4 count <350 cells/ul, all HIV-infected TB patients and all HIV-infected pregnant women.

Coverage of adult ART



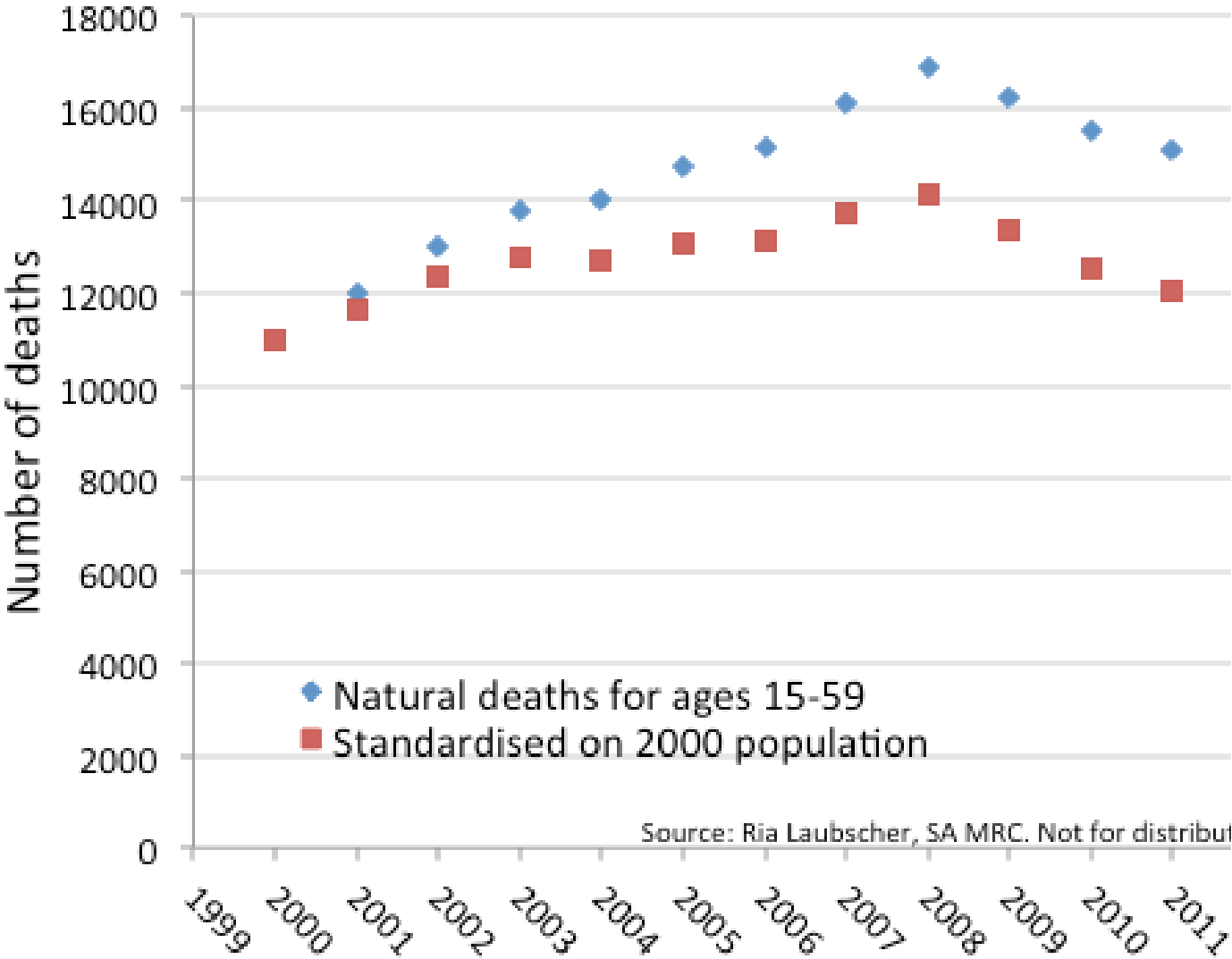
Evolution of CD4 count at ART initiation



Adults starting ART for the first time, and monitored through the three tier system

83 204 434 2,509 5,223 7,566 8,967 13,835 16,991 20,837 23,602 **27,479**

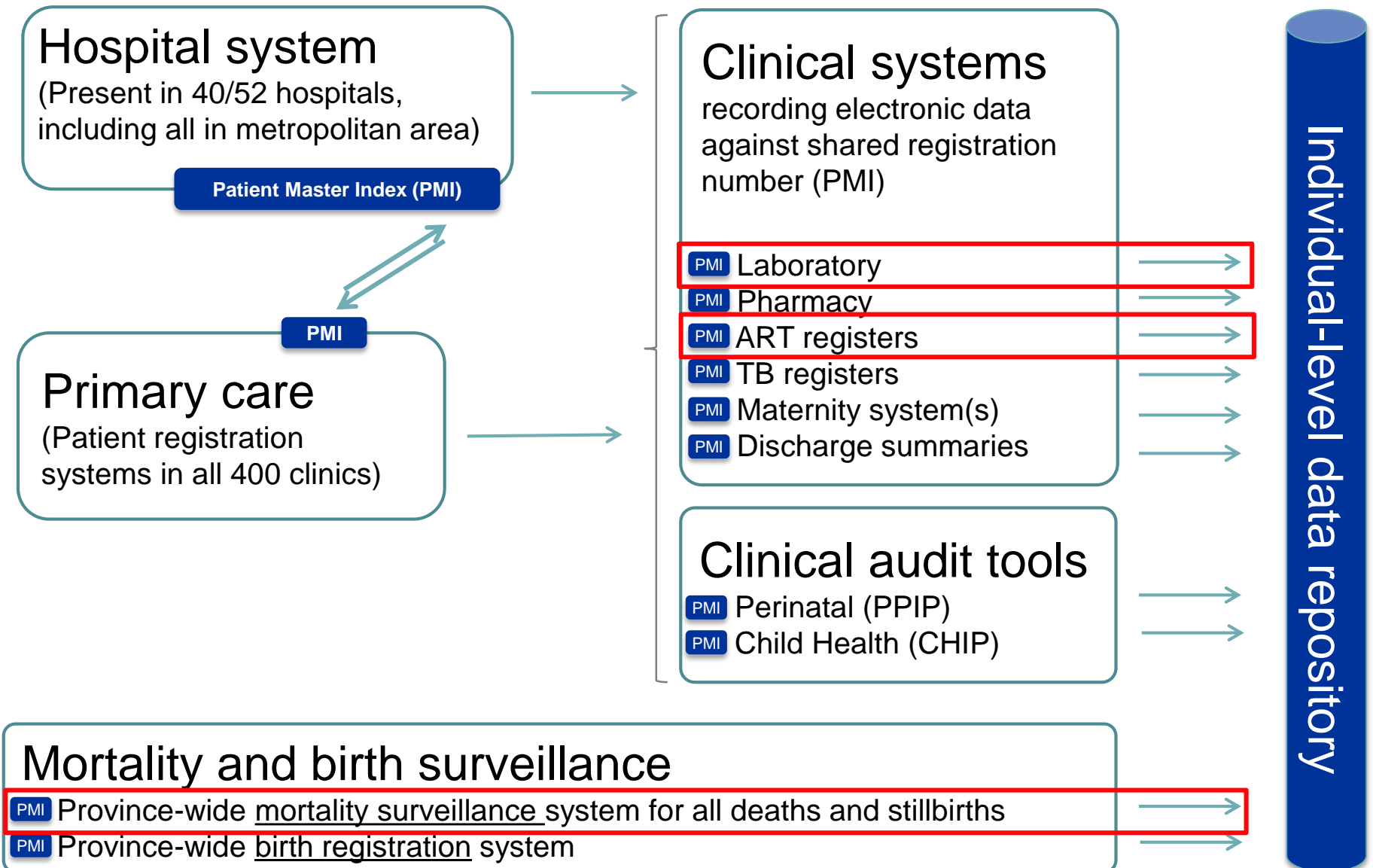
Natural deaths 15-59 as barometer of HIV mortality



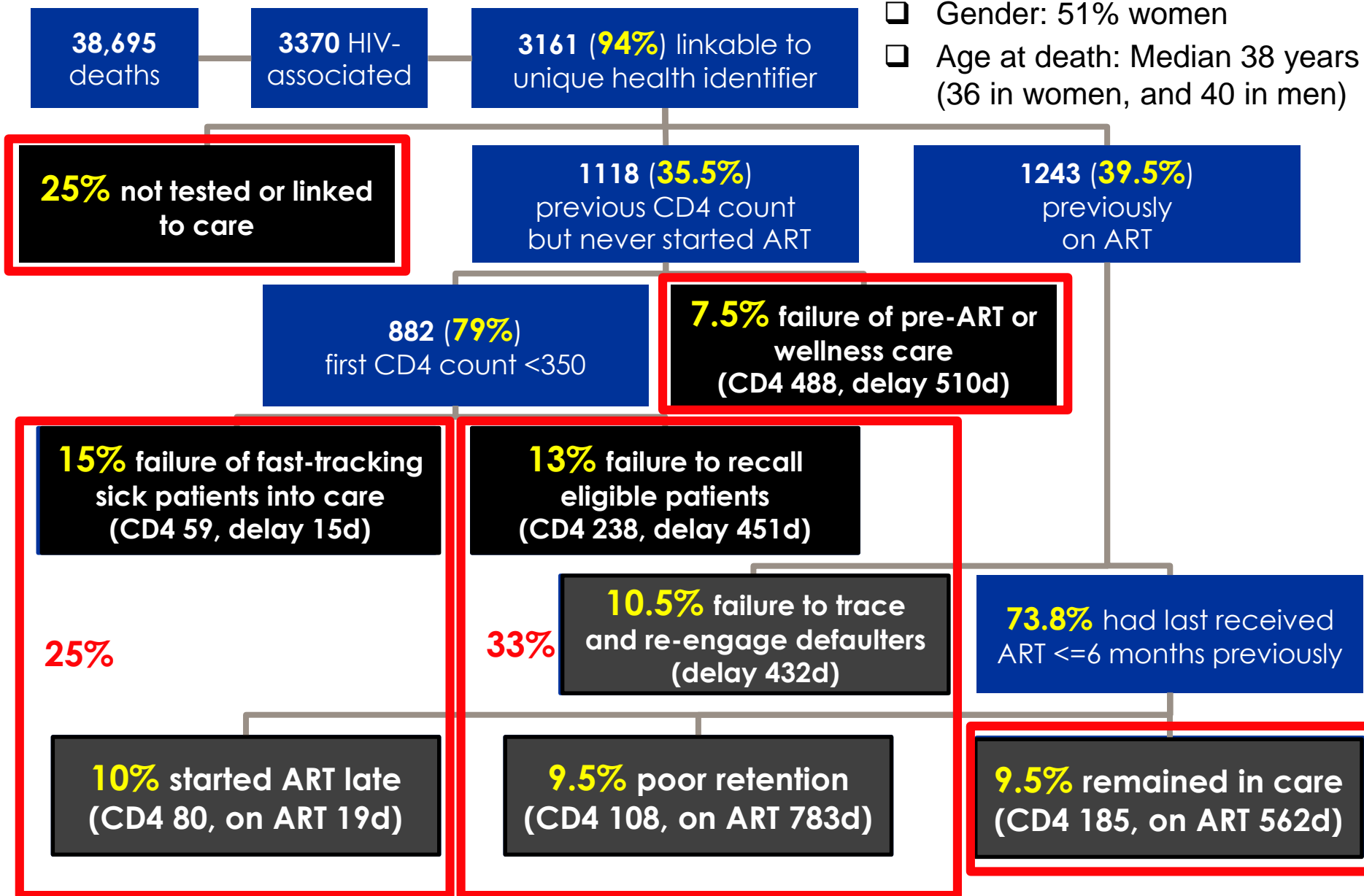
Methods

- ❑ Cross-sectional study of all HIV-associated deaths in the mortality surveillance system recorded in 2012
- ❑ Retrospective linkage on the unique patient identifier to laboratory and disease register data to ascertain prior service interventions
- ❑ Descriptive analysis of
 - ❑ Prior HIV care indicated by a CD4 count
 - ❑ Prior ART indicated by register entry or viral load test
 - ❑ Most recent CD4 count
 - ❑ Durations between linkage to care/ART/most recent visit and death
 - ❑ Treatment interruptions

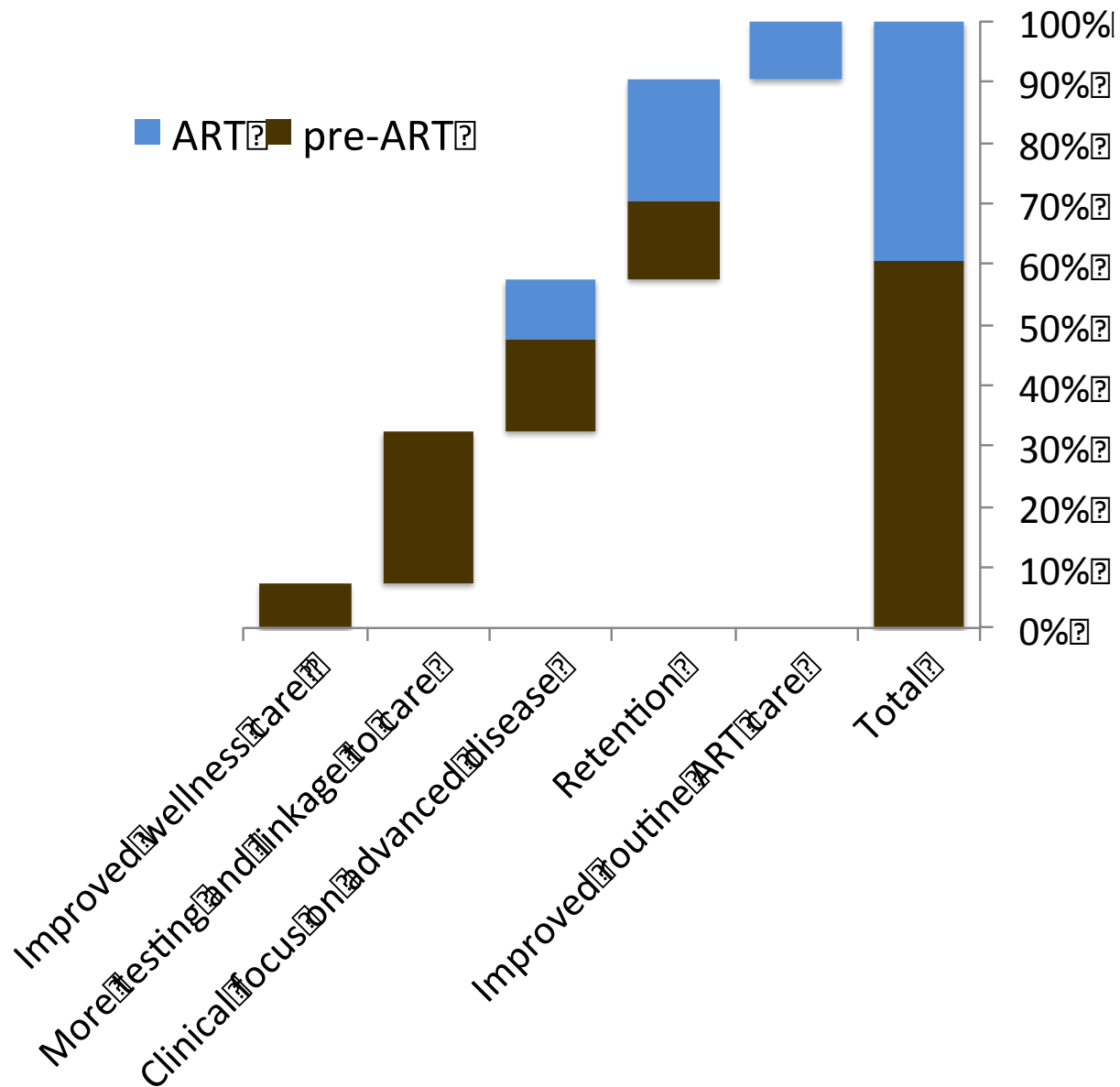
Model for consolidating patient data in the Western Cape



HIV-associated adult mortality in 2012 in the WC



Causes of HIV mortality in the ART scale-up era by type of prevention intervention



Limitations

- ❑ Lack of testing data might incorrectly classify patients as previously undiagnosed
- ❑ Direct cause of death data not yet analysed
- ❑ Single year analysis cannot demonstrate trends in the importance of retention of ART patients relative to testing and linkage to care
- ❑ Data gaps may have resulted in further misclassification
- ❑ 6% of patients were not linked to any health records, could under-estimate late access to care

Acknowledgements

- ❑ Co-authors, including colleagues at in the Provincial Government Department of Health, the South African Medical Research Council, and at the University of Cape Town
- ❑ The data staff throughout the services who have assisted in collecting HIV treatment data as part of the three-tier ART monitoring system
- ❑ The South African National Health Laboratory Service
- ❑ Patients, clinicians and activists who have assisted the Province to create a treatment service for HIV which has exceeded all of our expectations in its scale and impact



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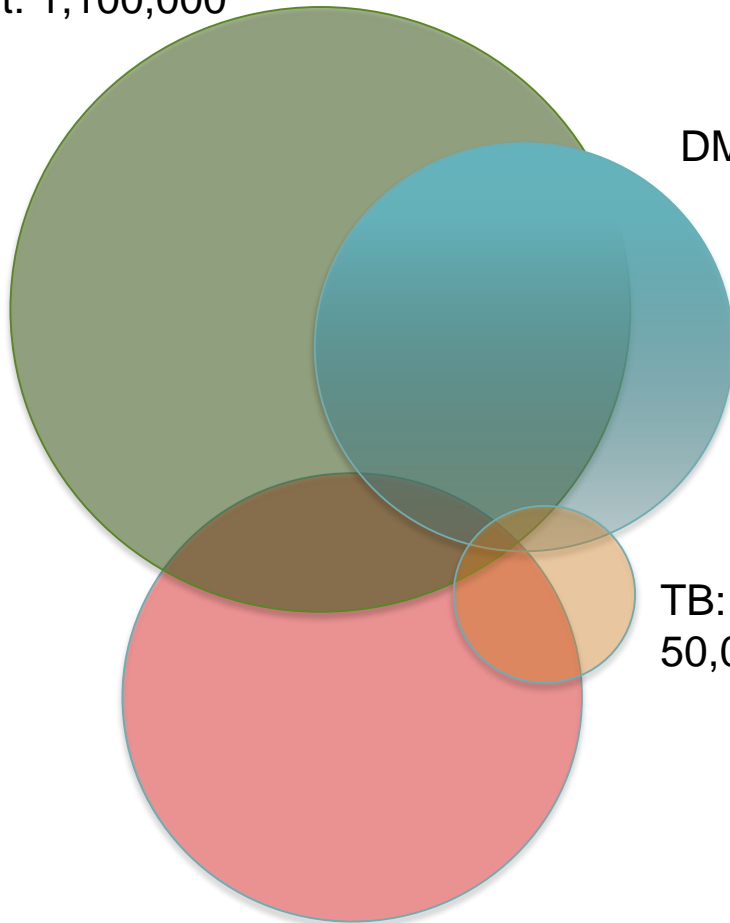
Health

Thank you

Burden of disease in the Western Cape Province

Population ≈ 6 million

Hpt: 1,100,000



DM: 400,000

On average 10
PYLL per
premature
death due to
CVD/ DM

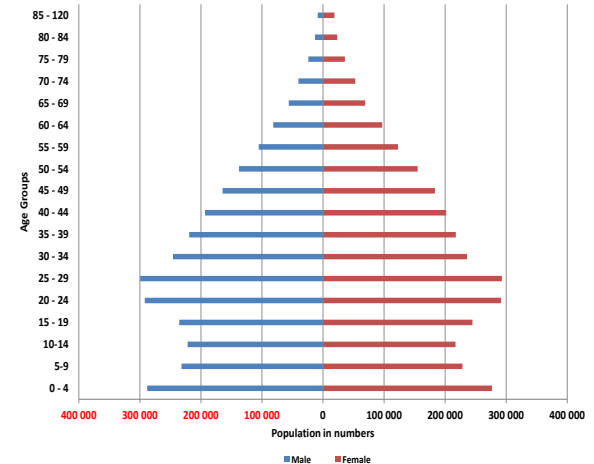
TB: 30,000,
50,000 new cases per year

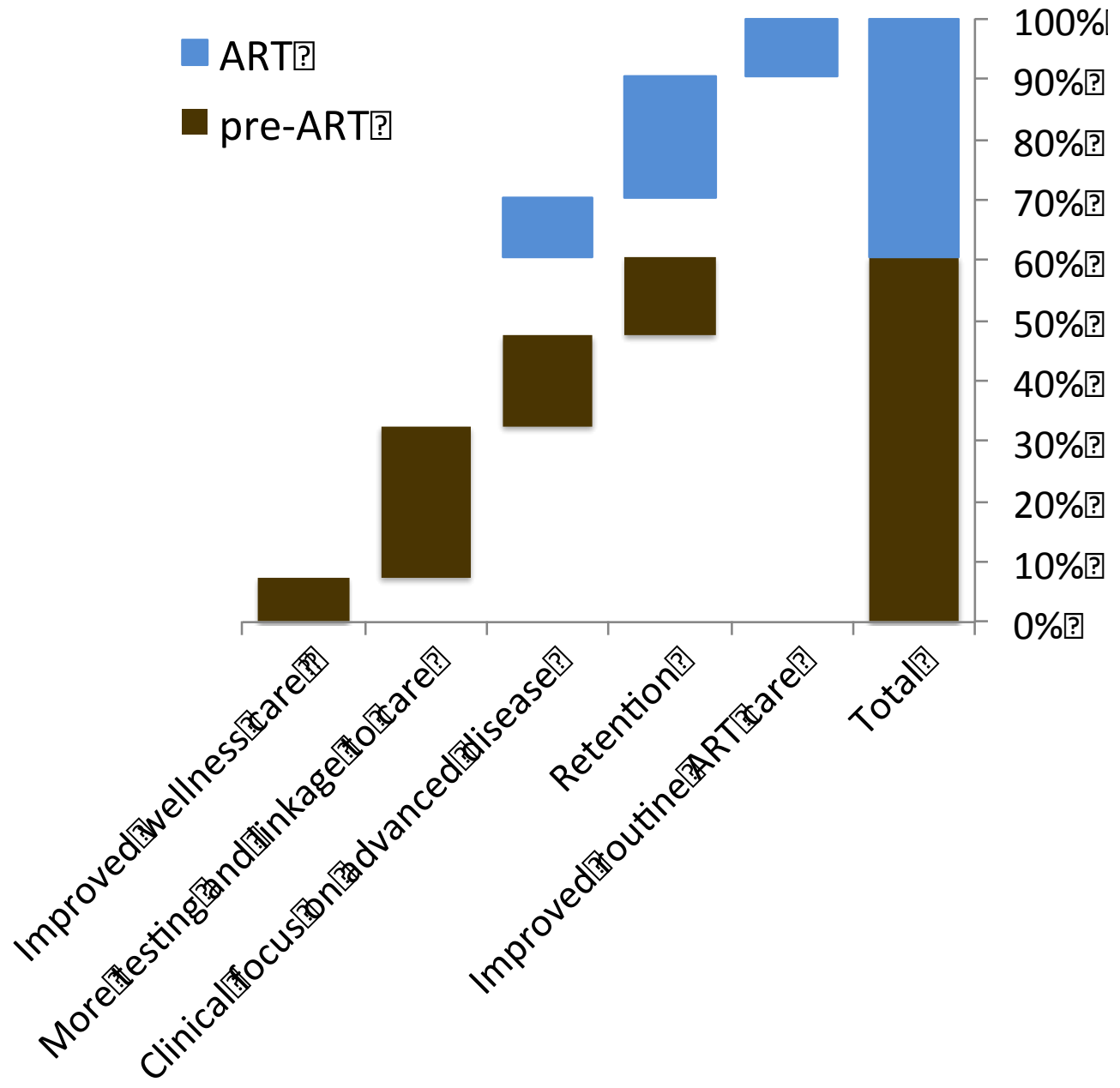
38 PYLL per
premature
death due to
HIV

HIV: 300,000, 150,000 on ART

Antenatal prevalence 2012 17.8%, 34.3% in Khayelitsha

Western Cape Province Population Distribution, 2011 Census





Cause of death data – contributors to years of life lost

Rank	Cape Winelands	Central Karoo	Cape Town	Eden	Overberg	West Coast	Western Cape
1	HIV/AIDS (13.3%)	HIV/AIDS (11.5%)	HIV/AIDS (13.7%)	HIV/AIDS (12.7%)	HIV/AIDS (11.1%)	HIV/AIDS (10.7%)	HIV/AIDS (13.2%)
2	Tuberculosis (10.1%)	Tuberculosis (9.1%)	Interpersonal violence (9%)	Tuberculosis (8.5%)	Interpersonal violence (7.7%)	Tuberculosis (10.3%)	Tuberculosis (8.6%)
3	Interpersonal violence (7.1%)	Interpersonal violence (7.9%)	Tuberculosis (8.3%)	Interpersonal violence (6.8%)	Tuberculosis (6.2%)	Interpersonal violence (7.1%)	Interpersonal violence (8.3%)
4	Cerebrovascular disease (5.6%)	COPD (6.6%)	Ischaemic heart disease (5.2%)	Ischaemic heart disease (6.5%)	Road injuries (6.1%)	Ischaemic heart disease (6.2%)	Ischaemic heart disease (5.2%)
5	COPD (5%)	Cerebrovascular disease (5.2%)	Road injuries (5.2%)	Cerebrovascular disease (5.7%)	Ischaemic heart disease (5.7%)	Cerebrovascular disease (5.7%)	Road injuries (5.1%)
6	Road injuries (4.9%)	Road injuries (4.1%)	Diabetes mellitus (4.9%)	Road injuries (4.7%)	Cerebrovascular disease (5.2%)	Road injuries (5.6%)	Diabetes mellitus (4.6%)