

International Actuarial Association Health Section
2007 Colloquium

13th - 16th May 2007 Cape Town, South Africa

HIV/AIDS as cause of disability for Income Protection products in South Africa

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IAAHS 2007

IAA Health Section Colloquium

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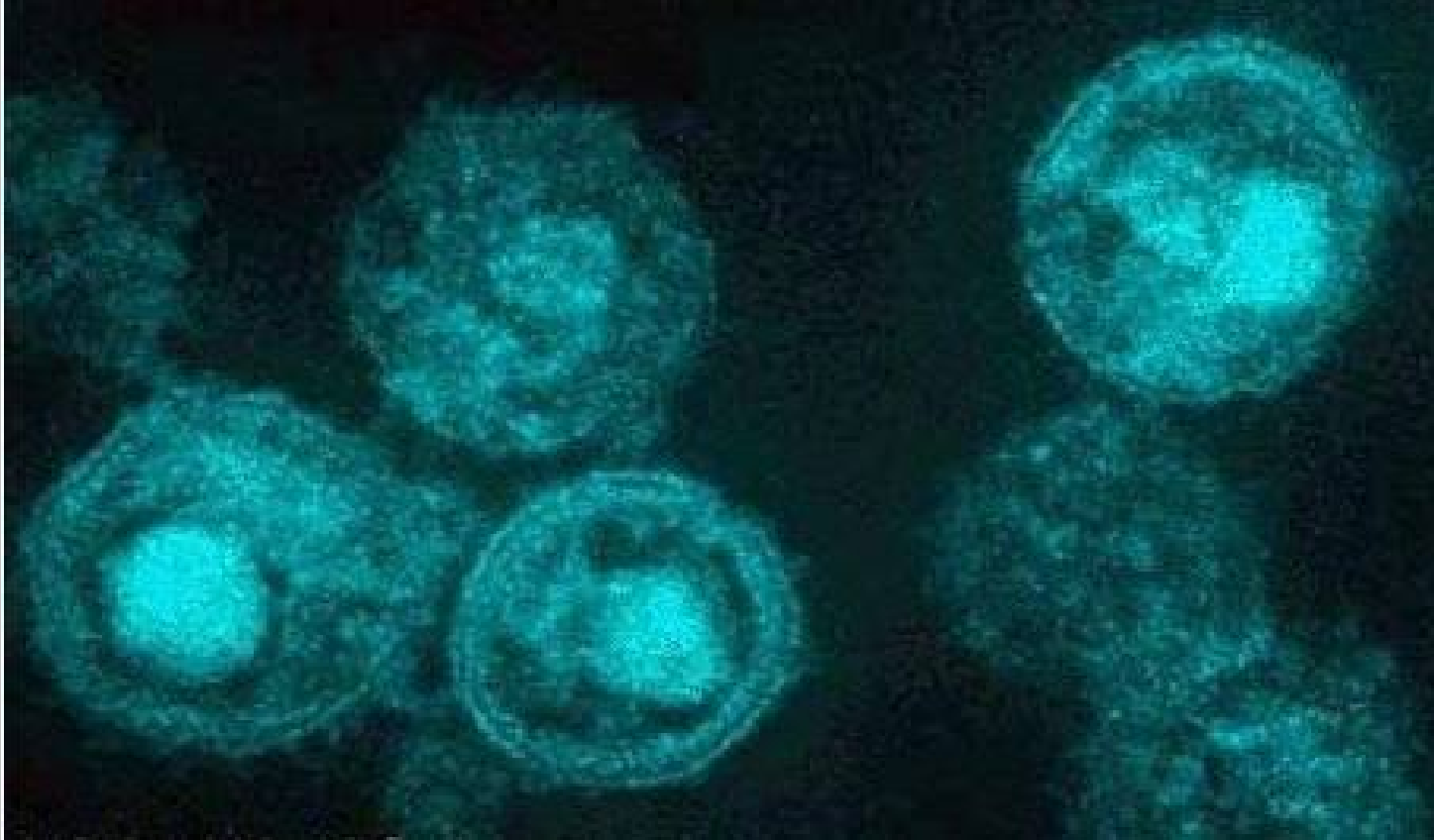
CTICC

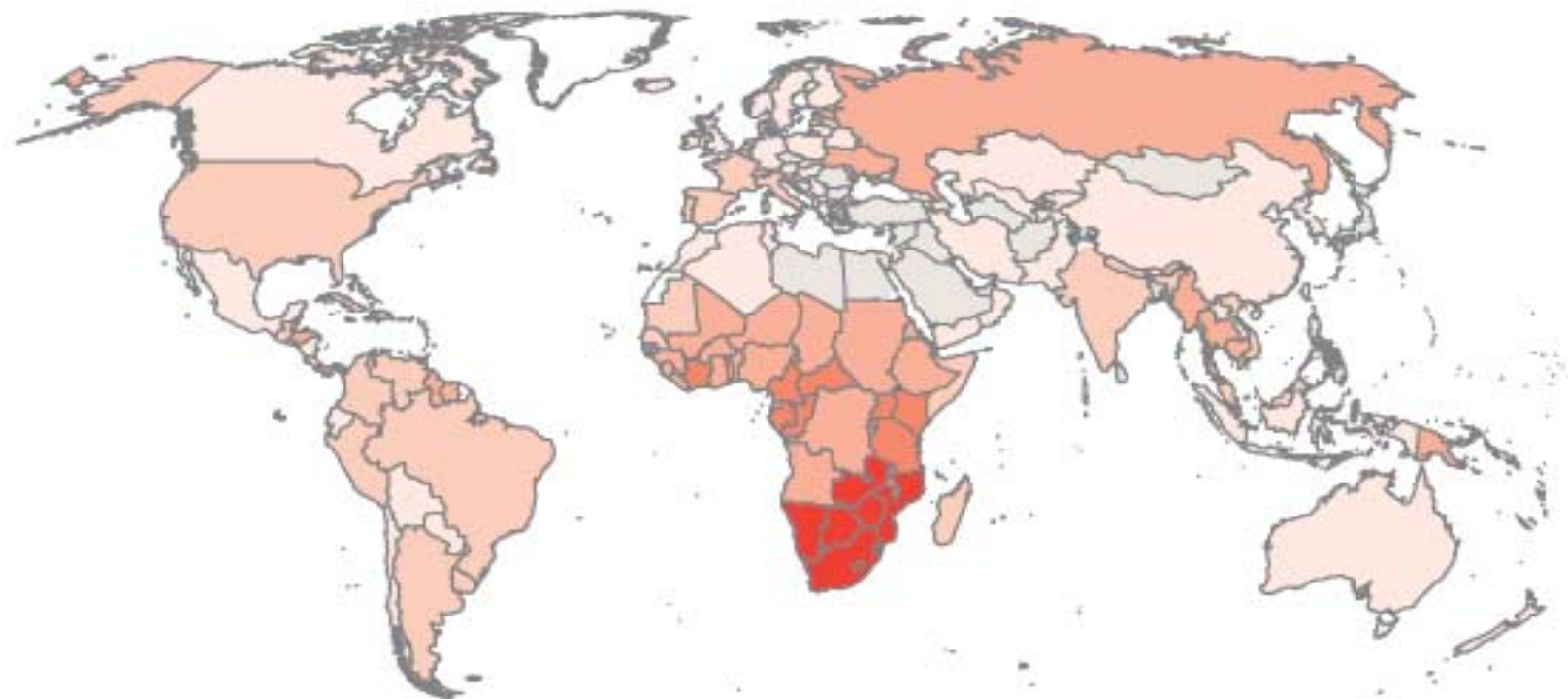
www.iaahs2007.com

Agenda

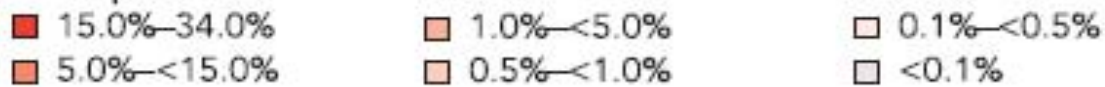
- Population HIV statistics
- Income protection AIDS inceptions
- Duration to termination

Human Immunodeficiency Virus (HIV)





Adult prevalence rate

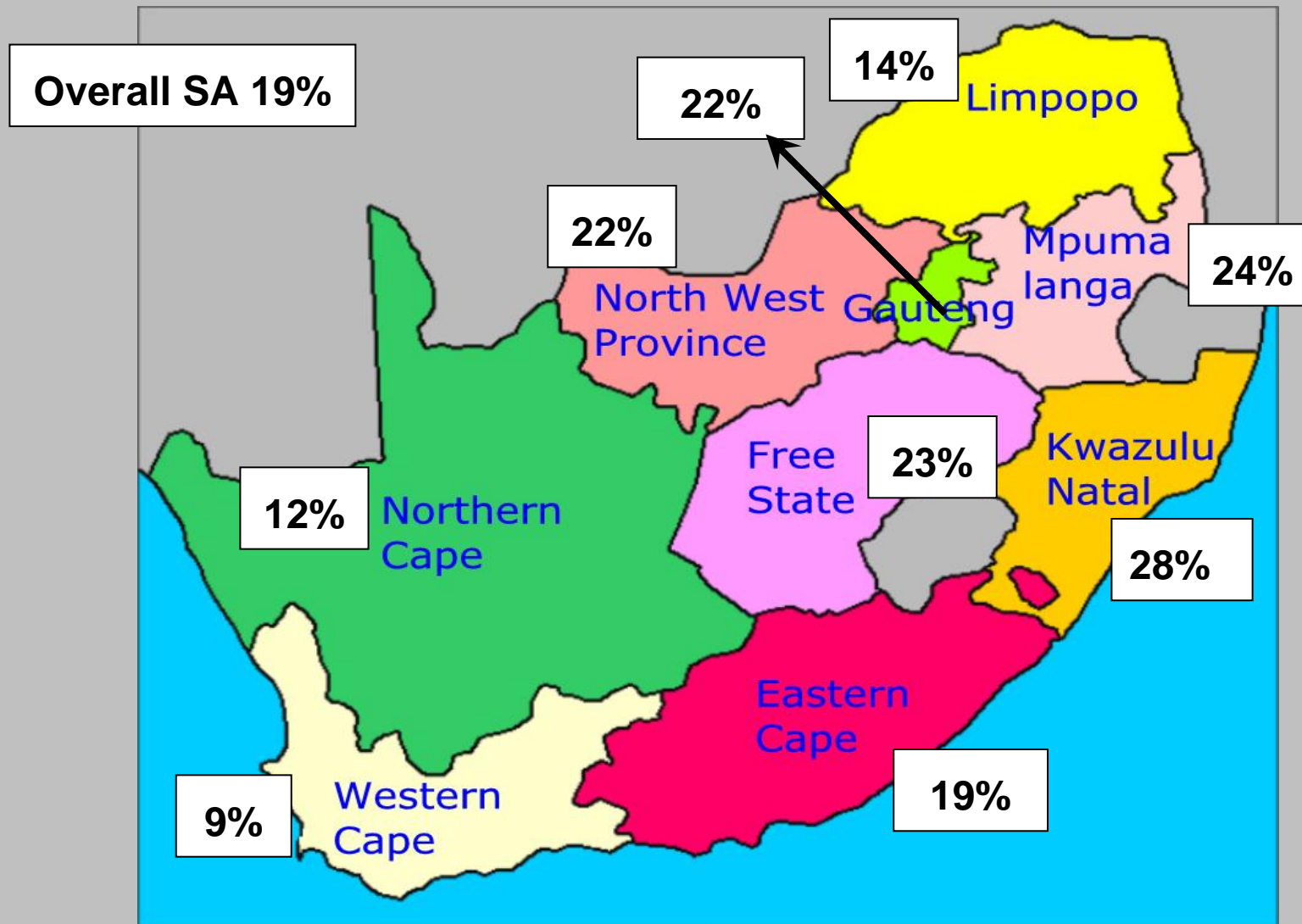


People living with HIV	39.5 million (34.1–47.1 million)
New HIV infections in 2006	4.3 million (3.6–6.6 million)
Deaths due to AIDS in 2006	2.9 million (2.5–3.5 million)

Map: UNAIDS 2006 Report on the global AIDS epidemic
 Statistics: UNAIDS Dec 2006 AIDS epidemic update

HIV statistics mid 2006

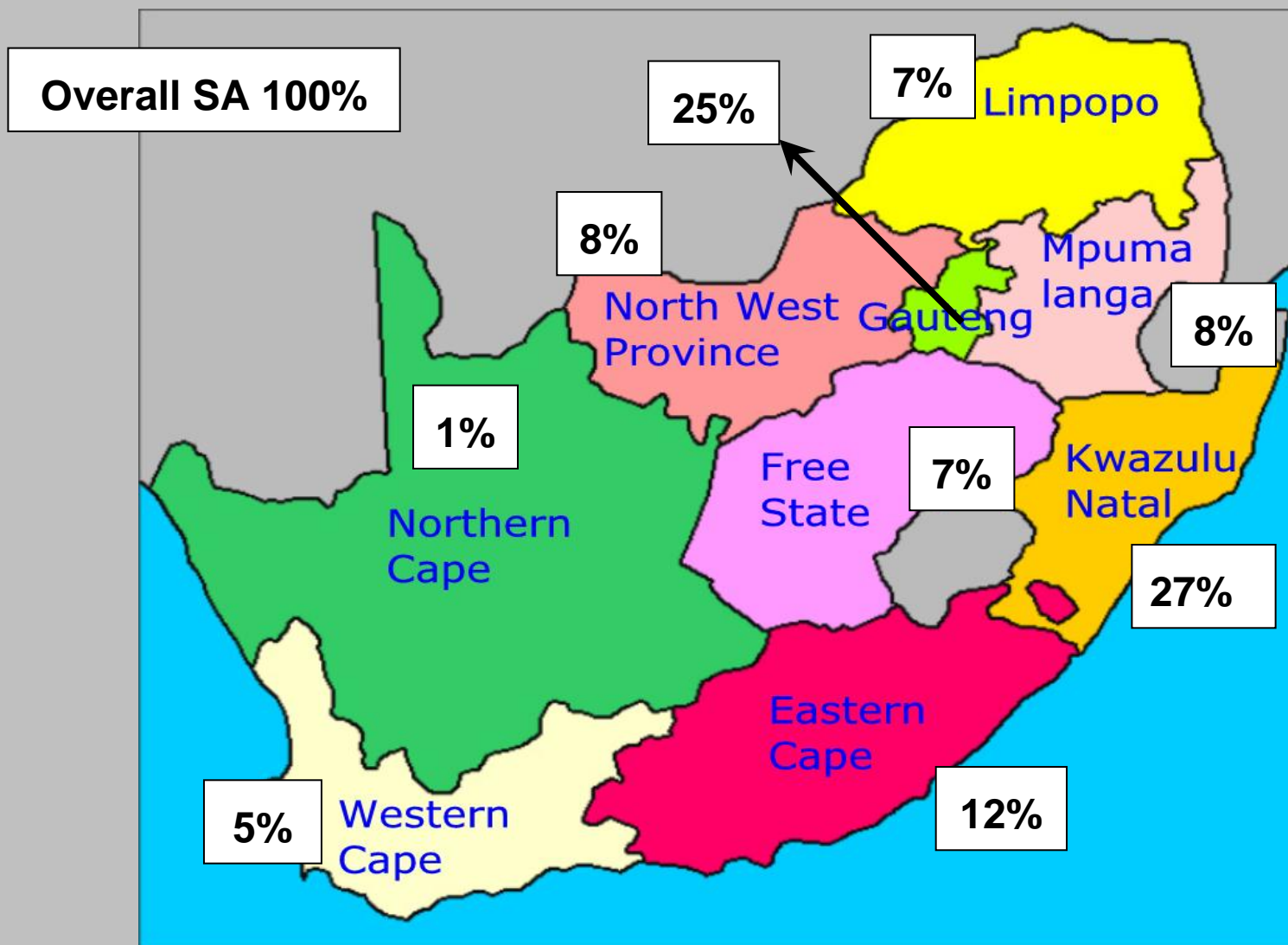
adult (20-64) HIV prevalence rate per province



Source: The Demographic Impact of HIV/AIDS in South Africa. National and Provincial indicators for 2006, Dorrington et al.

HIV statistics mid 2006

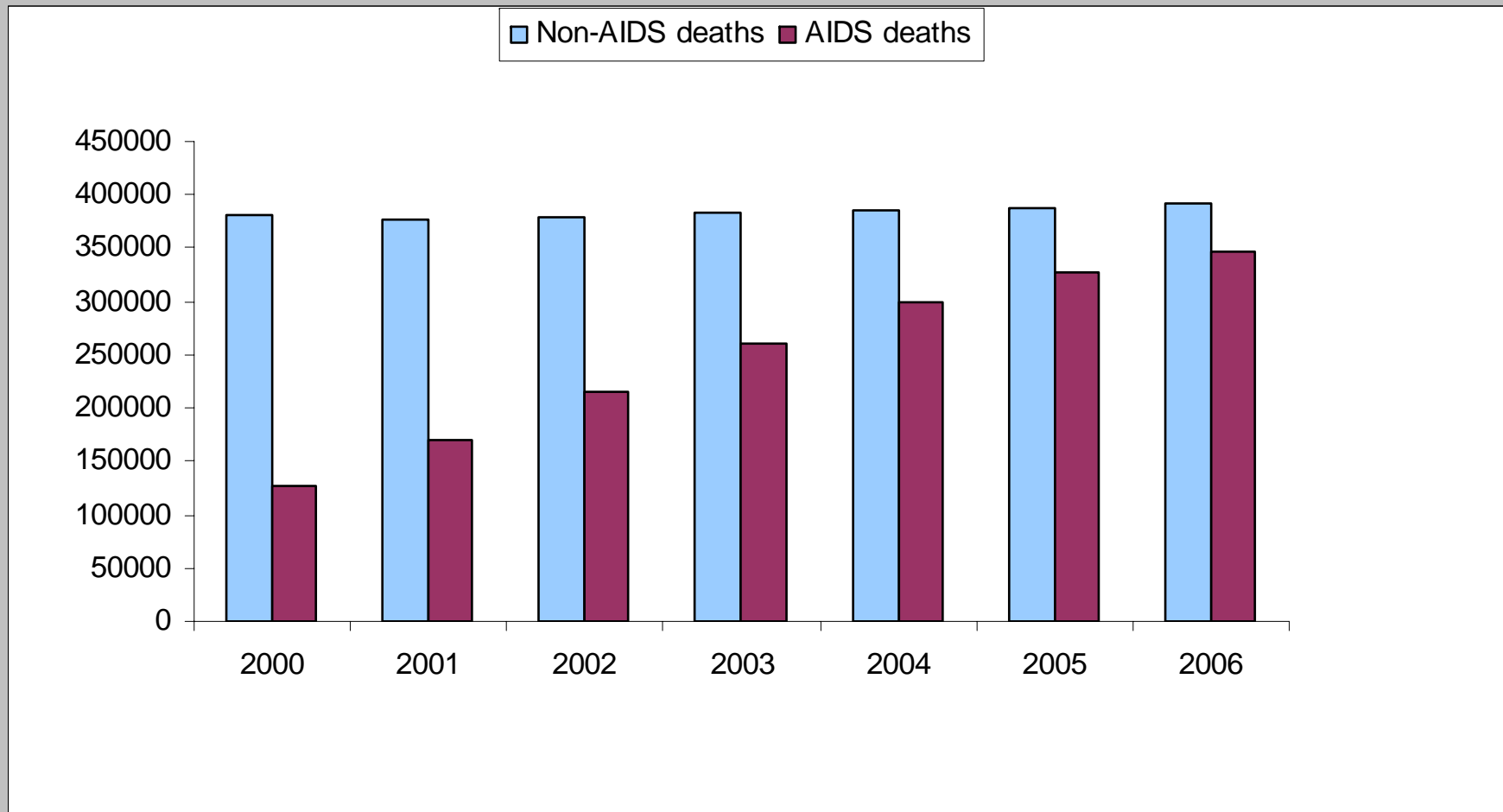
geographical location of HIV+ people



Source: The Demographic Impact of HIV/AIDS in South Africa. National and Provincial indicators for 2006, Dorrington et al.

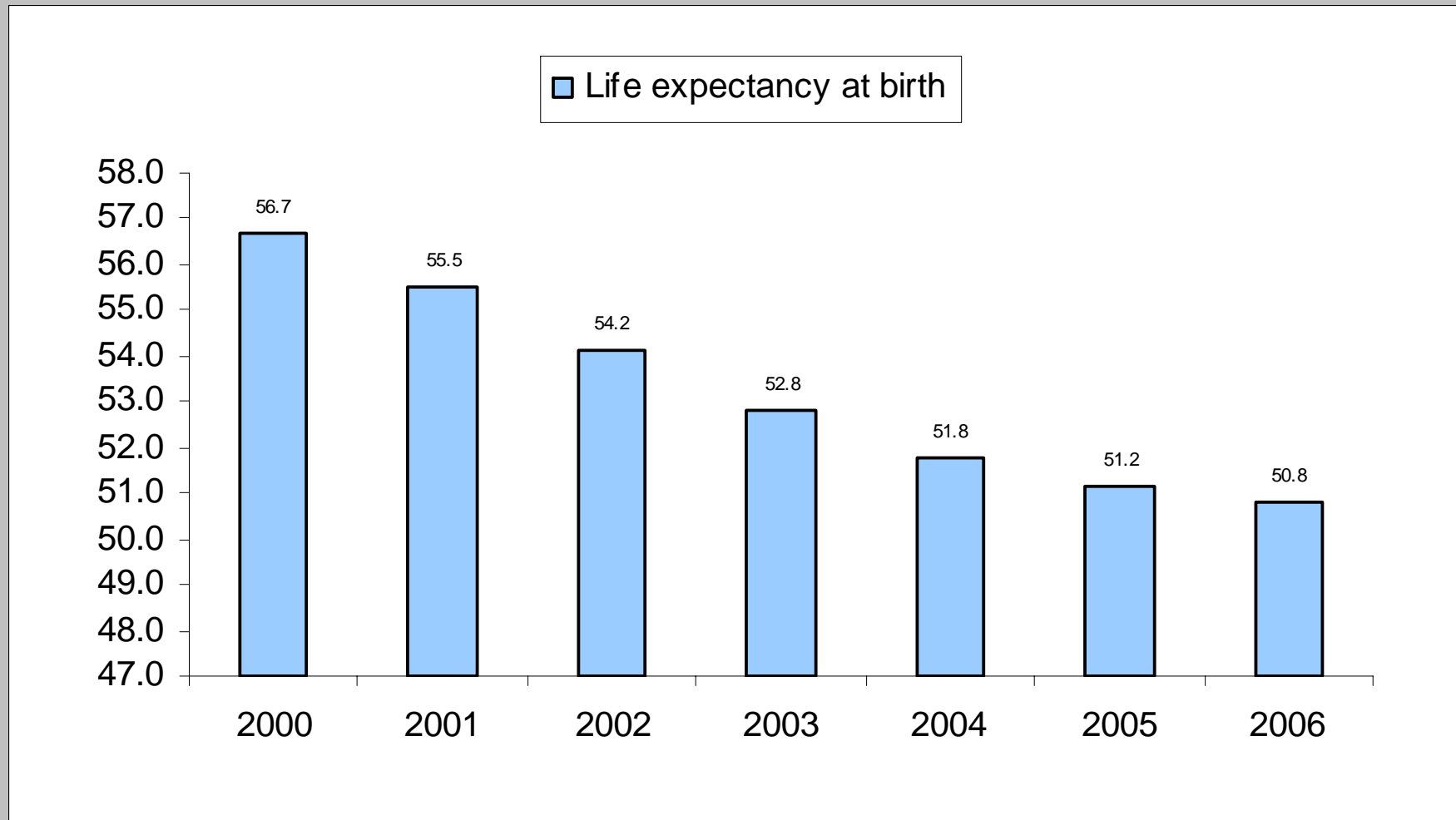
HIV / AIDS statistics mid 2006

South African AIDS deaths



Source: ASSA2003 model

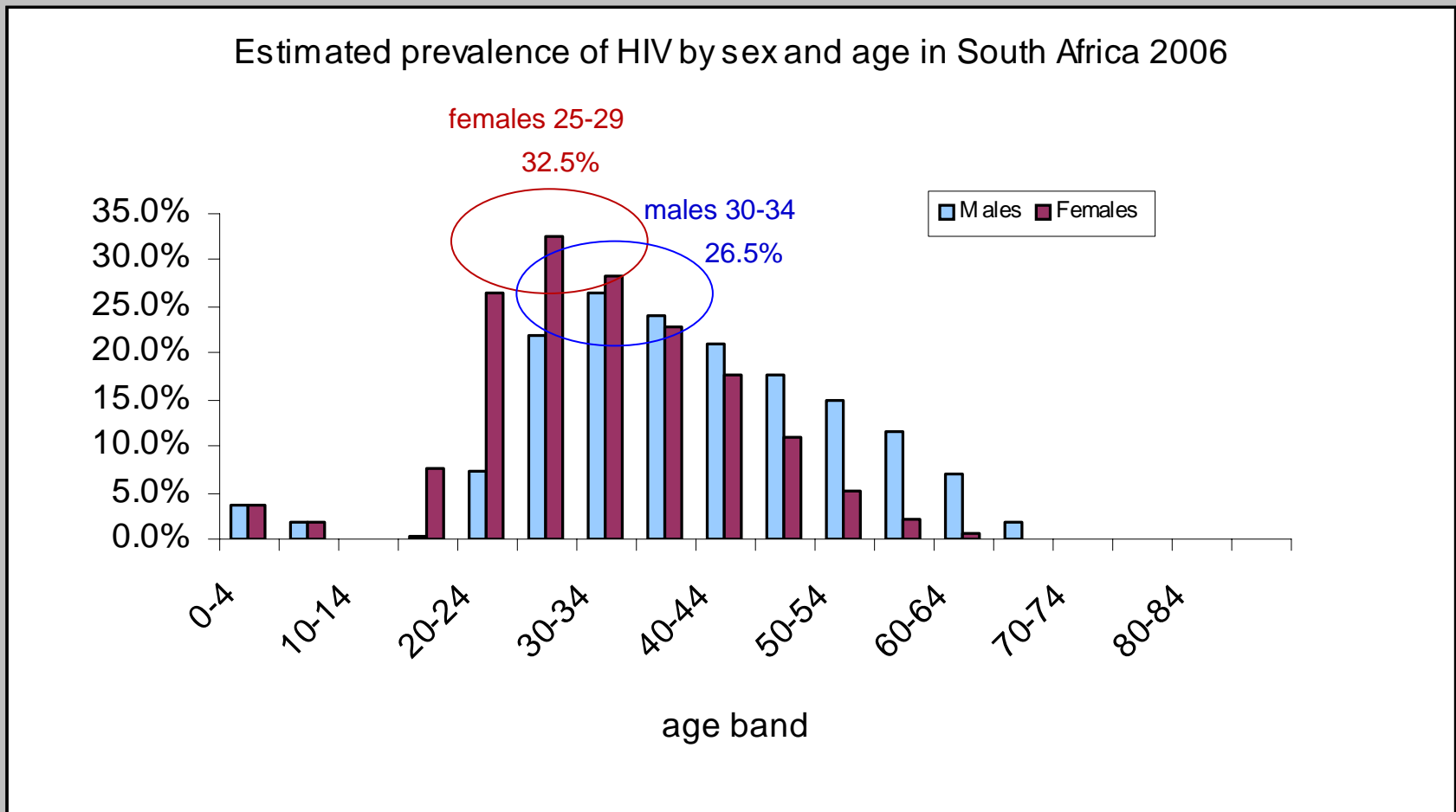
HIV / AIDS statistics mid 2006



Source: ASSA2003 model

HIV statistics mid 2006

age and sex



Source: The Demographic Impact of HIV/AIDS in South Africa. National and Provincial indicators for 2006, Dorrington et al.

AIDS as cause of income protection claims

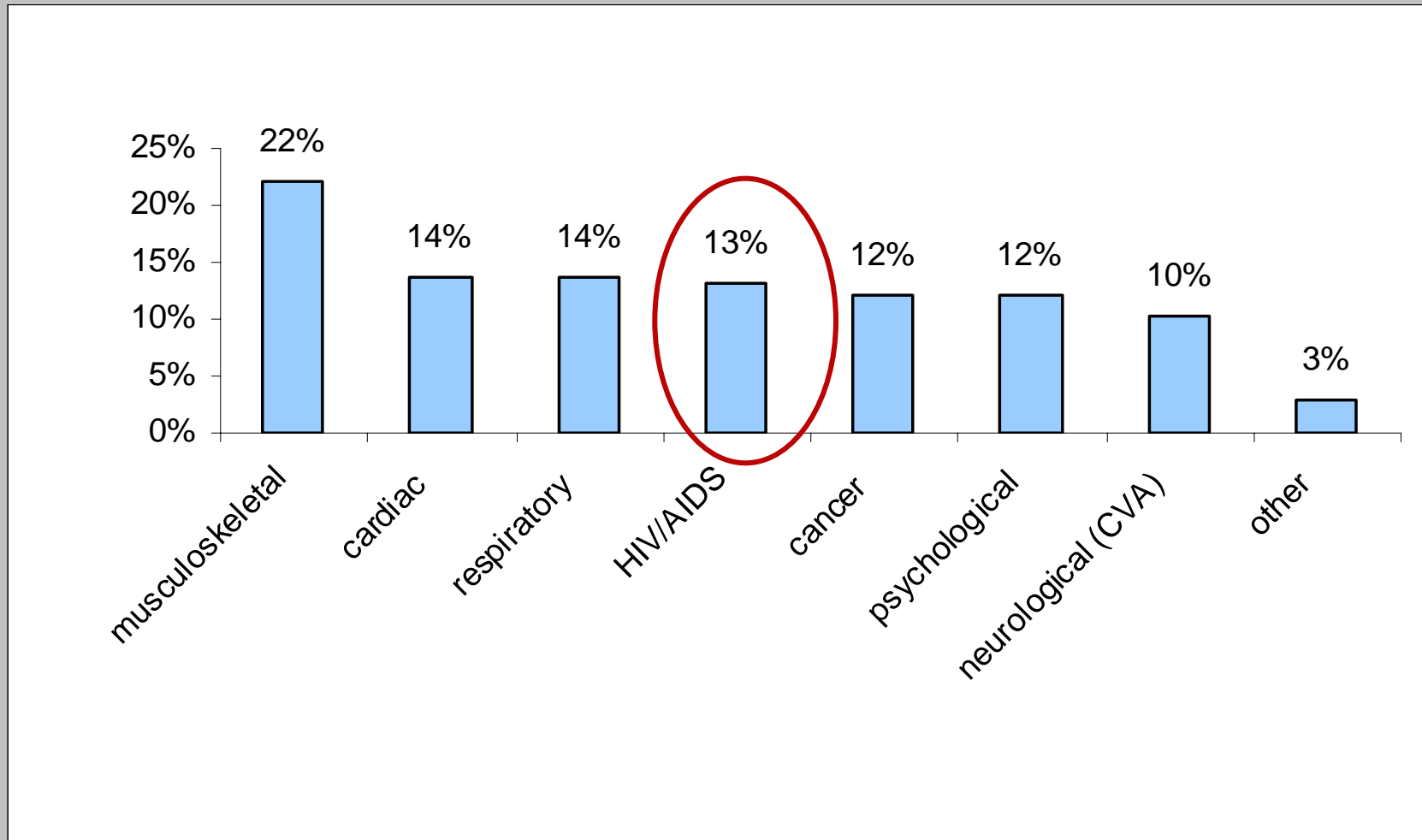
Individual life income protection – HIV test



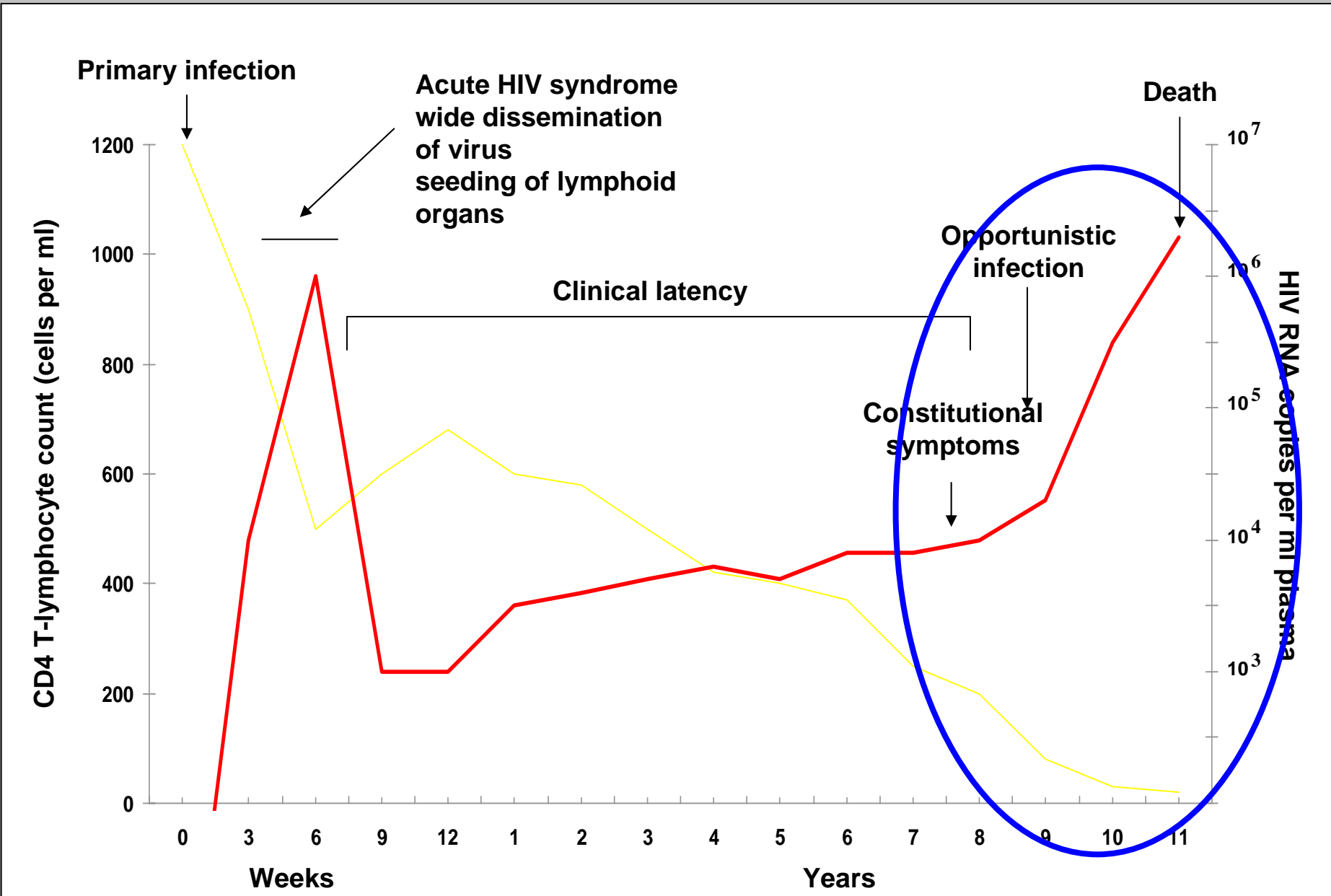
Group income protection – No HIV test



AIDS as cause of income protection claims



HIV progression in **absence** of treatment



Source: Mechanisms of CD4 lymphocyte cell death in HIV infection and AIDS, JB Alimonti, JB Bull, KR Fowke

HIV progression **with** treatment

Successful treatment definition

Viral load suppressed to low level

CD4 increase to above 200 cells/ml

CD4 cells pace of recovery

Study 1: median 120 cells/ml increase in 6 months

Study 2: median 161 cells/ml increase in 12 months

Study 3: median 39.7 cells/ml increase in 12 months (but starting off a high base of median 410)

Depending on the specific occupation and opportunistic infections, recovery can occur relatively quickly

Source 1: Disease progression in patients with virological suppression – D Moore et al.

Source 2: Late presenters in the Era of Highly Active Antiretroviral therapy: Uptake and responses To antiretroviral therapy – CA Sabin et al.

Source 3: Relationship between antiretrovirals used as part of HAART regimen and CD4 cell count Increases in patients with suppressed viremia

Conclusion

- AIDS significant cause of IP claims
- Low expected duration of IP claims

THE END