



M&E of AHD interventions in South Africa

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 **NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**
Division of the National Health Laboratory Service



 **ICAP** Columbia University
Mailman School
of Public Health

HIV LEARNING NETWORK
The CQUIN Project for Differentiated Service Delivery

Background: National AHD services in SA

- **Diagnosis and screening**
 - Baseline and follow-up CD4 counts
 - Reflex blood CrAg screening CD4<100 and CSF CrAg diagnosis of CM
 - Xpert Ultra for symptomatic and pregnant individuals
 - Urine LF-LAM
- **Prophylaxis and pre-emptive treatment**
 - Cotrimoxazole prophylaxis for CD4<200 and stages 2-4
 - TPT at any CD4 count
 - Fluconazole pre-emptive treatment for CrAg+
- **Treatment of opportunistic infections**
 - 5-FC and liposomal AmB for CM through medicines access programme (limited sites)

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Background: M&E for AHD services

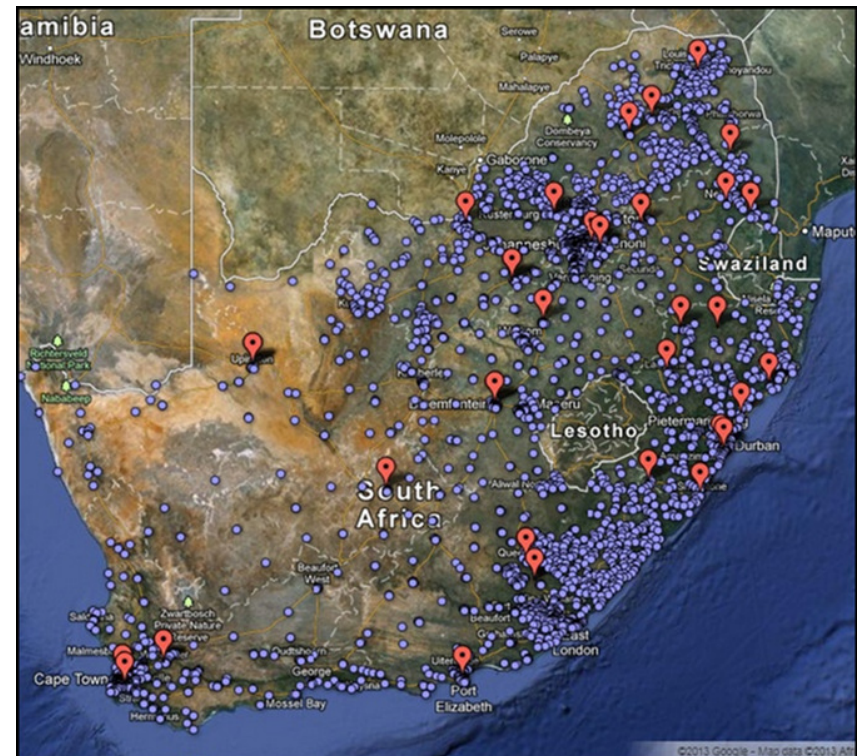
- Diagnosis and screening: *Laboratory surveillance*
 - Baseline and follow-up CD4 counts
 - Reflex blood CrAg screening CD4<100 and CSF CrAg diagnosis of CM
 - Xpert Ultra for symptomatic and pregnant individuals
- Prophylaxis and pre-emptive treatment: *CAST-NET*
 - Fluconazole pre-emptive treatment for CrAg+
- Treatment of OIs: *GERMS-SA CM surveillance*
 - CM medicines access programme (limited sites)

Specific AHD indicators (in red)

	Most indicators available by quarter, province, district, facility
1.	Number of HIV+ people on treatment (<i>DHIS</i>)
2.	Proportion with VL performed in last 12 months, VL ≤ 1000 copies/ml (<i>laboratory surveillance</i>)
3.	Proportion CD4 with count ≤ 500 , ≤ 350 , ≤ 200 , ≤ 100 (<i>laboratory surveillance</i>)
4.	Proportion CD4 < 100 screened for CrAg and CrAg+ by age, sex (<i>laboratory surveillance</i>)
5.	Proportion CrAg+ started on antifungal treatment (<i>CAST-NET study</i>)
6.	6-mos cryptococcal meningitis-free survival of CrAg+ patients (<i>CAST-NET study</i>)
7.	Incidence risk of laboratory-confirmed cryptococcal meningitis (<i>GERMS national surveillance</i>)
8.	Clinical treatment and outcomes of laboratory-confirmed cryptococcal meningitis (<i>GERMS enhanced surveillance</i>)
9.	Incidence risk of laboratory-confirmed TB by age, sex (<i>laboratory surveillance</i>)

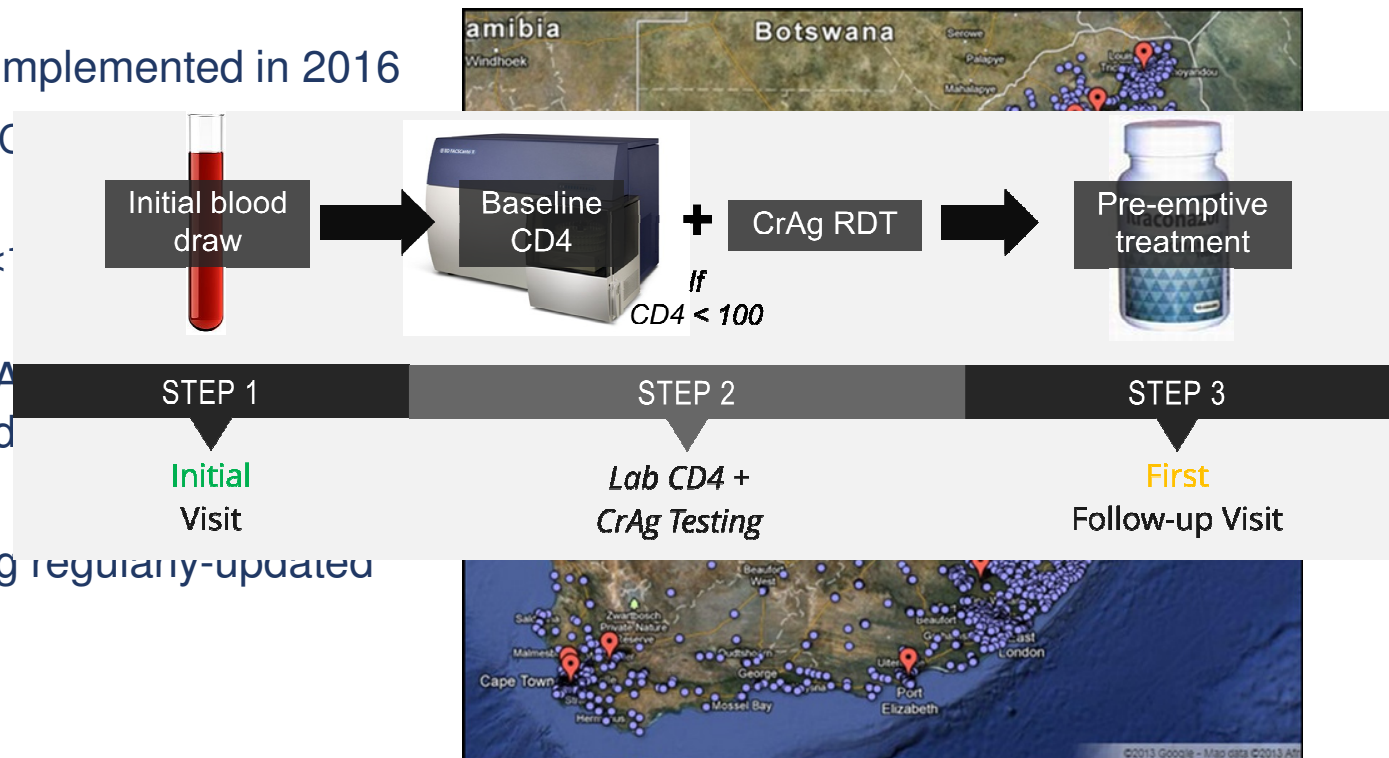
Laboratory M&E of AHD

- Reflex CrAg screening implemented in 2016
 - Now operational at all CD4 laboratories nationwide
 - All patients with CD4 <100 *reflexively* screened for CrAg
- CD4, CSF and blood CrAg, VL and TB GeneXpert results stored in NHLS electronic *TrakCare* system
- Monitored by NICD using regularly-updated dashboards



Laboratory M&E of AHD

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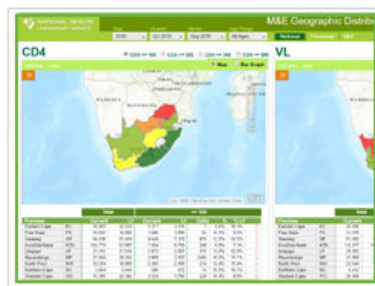




HIV Programme M&E Dashboards

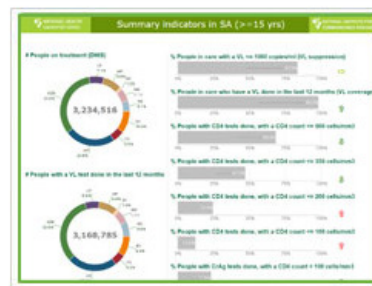
1. Geographic Distribution

[Calendar View](#) | [Fiscal View](#)



2. Integrated DHIS & NHLS

[Calendar View](#) | [Fiscal View](#)



3. Trends to Facility Level

[Rolling 12 Months View](#)



Downloads

Click on links below to get exportable Excel and/or pdf documents

1. Geographic Distribution

- CD4 by Province ([pdf](#))
- CD4 by District ([pdf](#))
- VL by Province ([pdf](#))
- VL by District ([pdf](#))

2. Integrated DHIS & NHLS

VL/CD4

- National ([Excel](#) , [pdf](#))
- Provincial ([Excel](#) , [pdf](#))

CrAg

- National ([Excel](#) , [pdf](#))
- Provincial ([Excel](#) , [pdf](#))

3. Trends to Facility Level

VL/CD4

- By District ([Excel](#) , [pdf](#))
- By Sub District ([Excel](#) , [pdf](#))
- By Facility ([Excel](#) , [pdf](#))

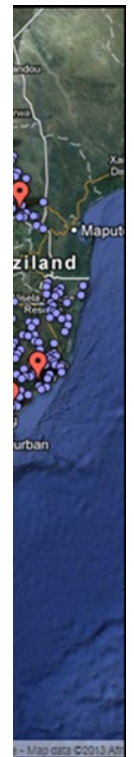
CrAg

- By District ([Excel](#) , [pdf](#))
- By Sub District ([Excel](#) , [pdf](#))
- By Facility ([Excel](#) , [pdf](#))



HIV M&E Metric Definitions

- Reflex
 - Nov nat
 - All scr
- CD4, C GeneX TrakCa
- Monitor dashbc



Laboratory M&E of AHD

High Burden of Advanced HIV Among Patients Seeking Care in South Africa • CID 2018:66 (Suppl 2)

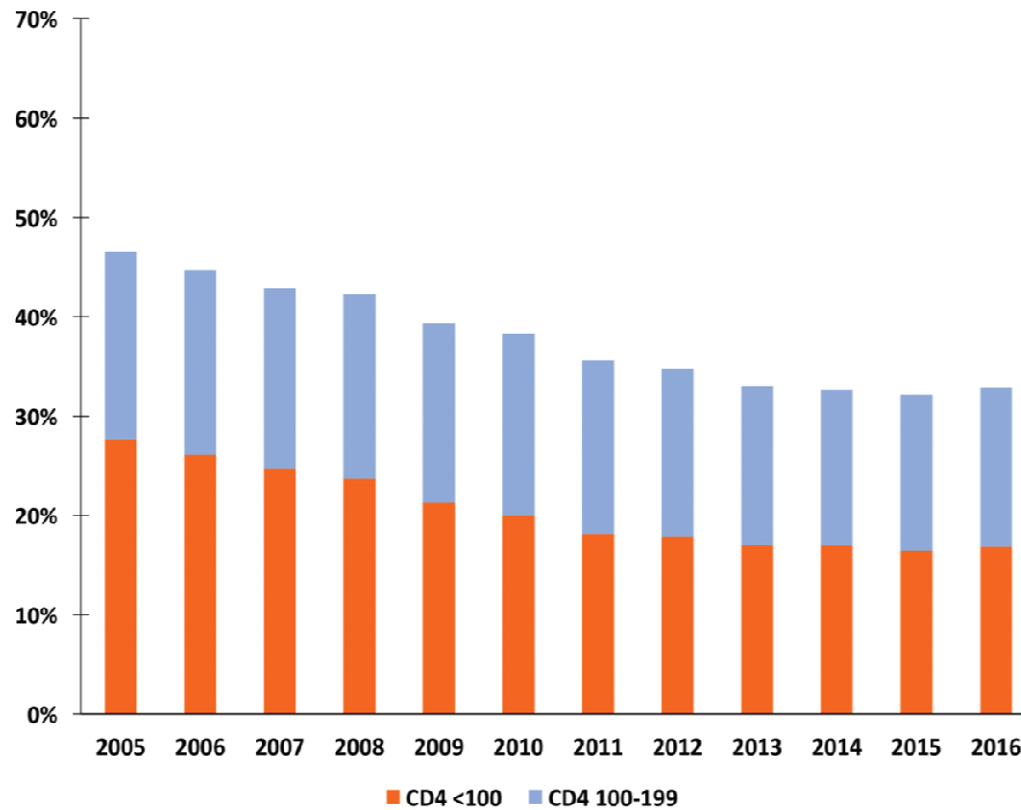


Figure 1. Proportion of patients entering care with advanced and very advanced HIV disease (first CD4 count test <100 and 100–199 cells/ μ L).

Laboratory M&E of AHD

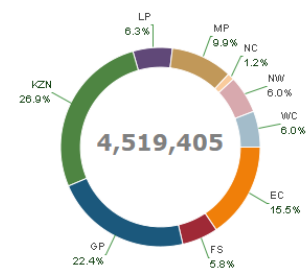
Summary Indicators |
 Provincial Comparison |
 Quarterly Trends |
 Map View

Quarter: Q1 2020

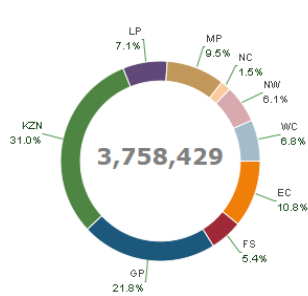
 NATIONAL HEALTH LABORATORY SERVICE |
 Summary indicators in SA (>=15 yrs) |
 NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

- Reflex C
- Now natio
- All pa scree
- CD4, CS GeneXp TrakCar
- Monitore dashboa

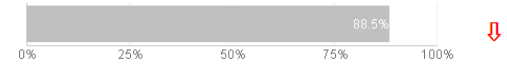
People on treatment (DHIS)



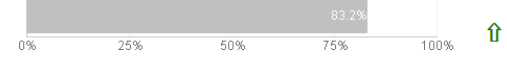
People with a VL test done in the last 12 months



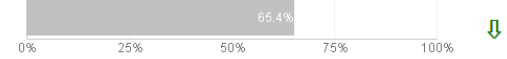
% People in care with a VL <= 1000 copies/ml (VL suppression)



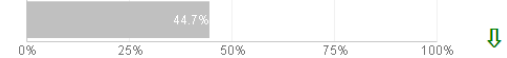
% People in care who have a VL done in the last 12 months (VL coverage)



% People with CD4 tests done, with a CD4 count <= 500 cells/mm3



% People with CD4 tests done, with a CD4 count <= 350 cells/mm3



% People with CD4 tests done, with a CD4 count <= 200 cells/mm3



% People with CD4 tests done, with a CD4 count <= 100 cells/mm3



% People with a CD4 count < 100 cells/mm3 and CrAg test done*



% People with a CD4 count < 100 cells/mm3 and CrAg test positive*



* Cumulative from Q4 2016



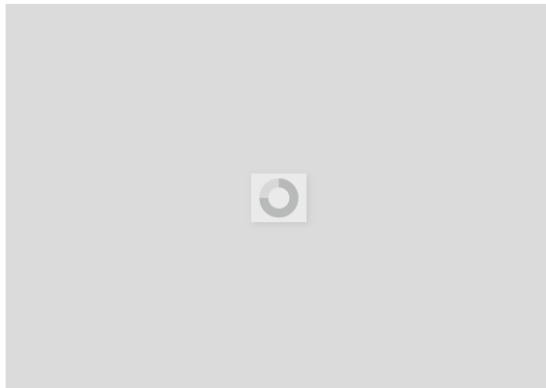
Laboratory M&E of AHD

Microbiologically Confirmed Pulmonary TB - South Africa

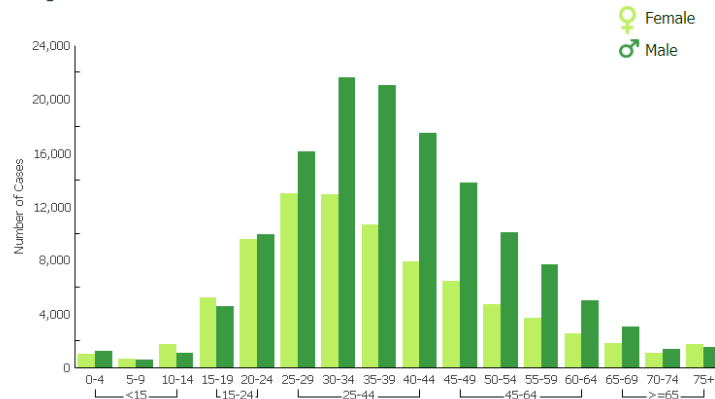
To access statistics prior to 2011, inclusive of KwaZulu Natal (KZN), [click here](#)

Select Year 2018

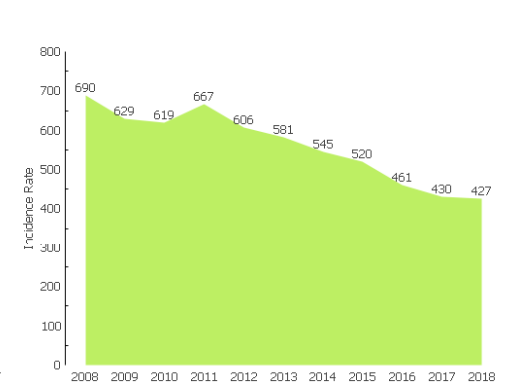
Incidence*



Age and Gender



Incidence Trend (per 100 000 population)

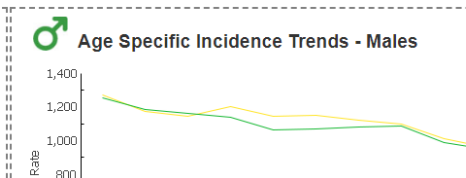


Incidence Trends (per 100 000 population)

Select Province(s)

Select Age Group(s) (All) <15 15-24 25-44 45-64 >=65

- (All)
- EC
- FS
- GP
- KZN
- LP
- MP
- NW
- NC



Laboratory M&E of AHD

Summary Statistics 1 Feb '17 – 25 May '20

- Reflex CrAg screening implemented in 2016
 - Now operational at all CD4 laboratories nationwide
 - All patients with CD4 < 100 reflexively screened for CrAg
- CD4, CSF and CrAg patients identified. GeneXpert results stored in NHLS electronic *TrakCare* system
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CrAg reflex tests run:

887,397 (98.8%)

Positive reflex CrAg tests:

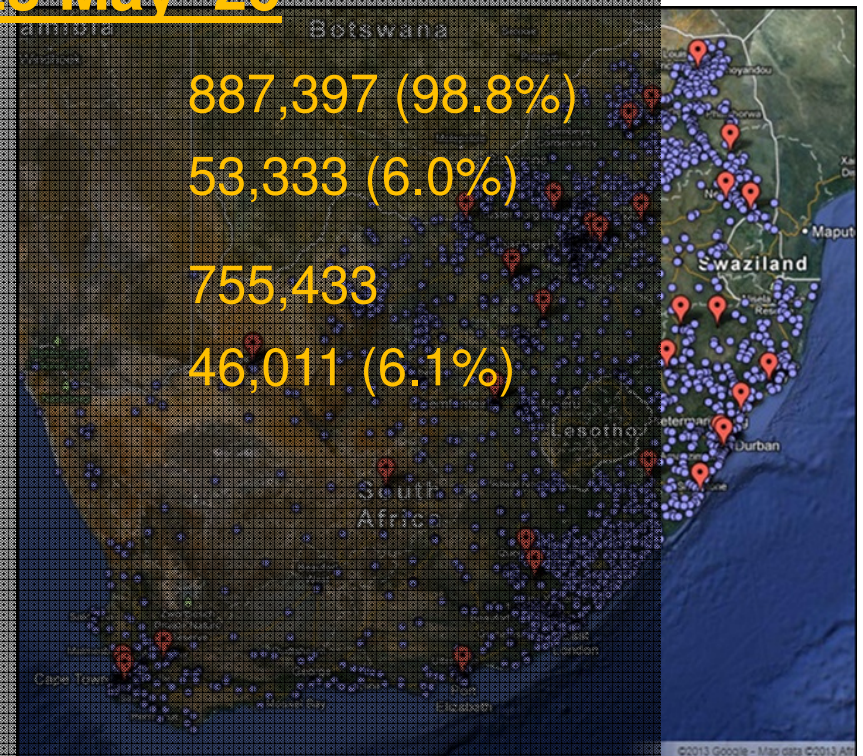
53,333 (6.0%)

Eligible patients screened:

755,433

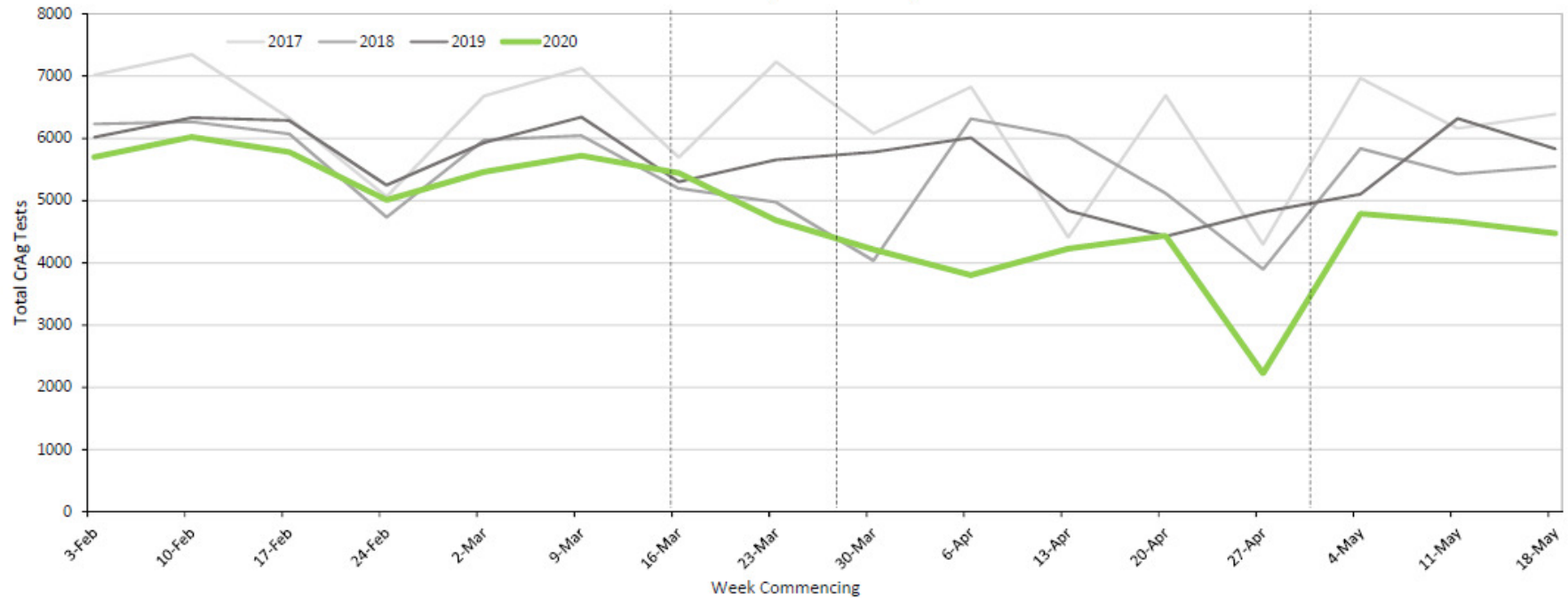
CrAg+ patients identified:

46,011 (6.1%)

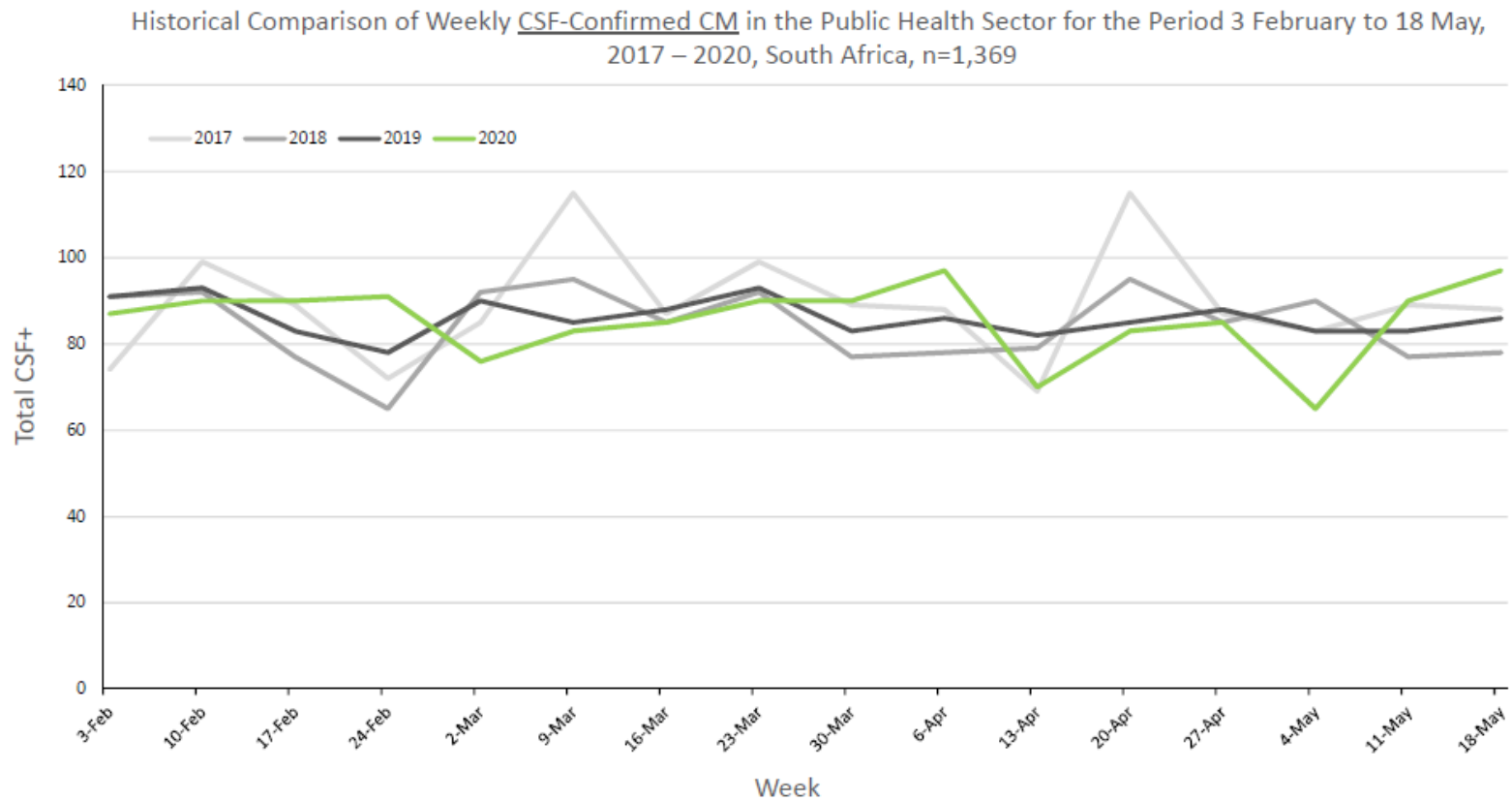


Laboratory M&E of AHD

Historical Comparison of Weekly CrAg Tests in the Public Health Sector for the Period 3 February to 18 May, 2017 – 2020, South Africa, n=72144



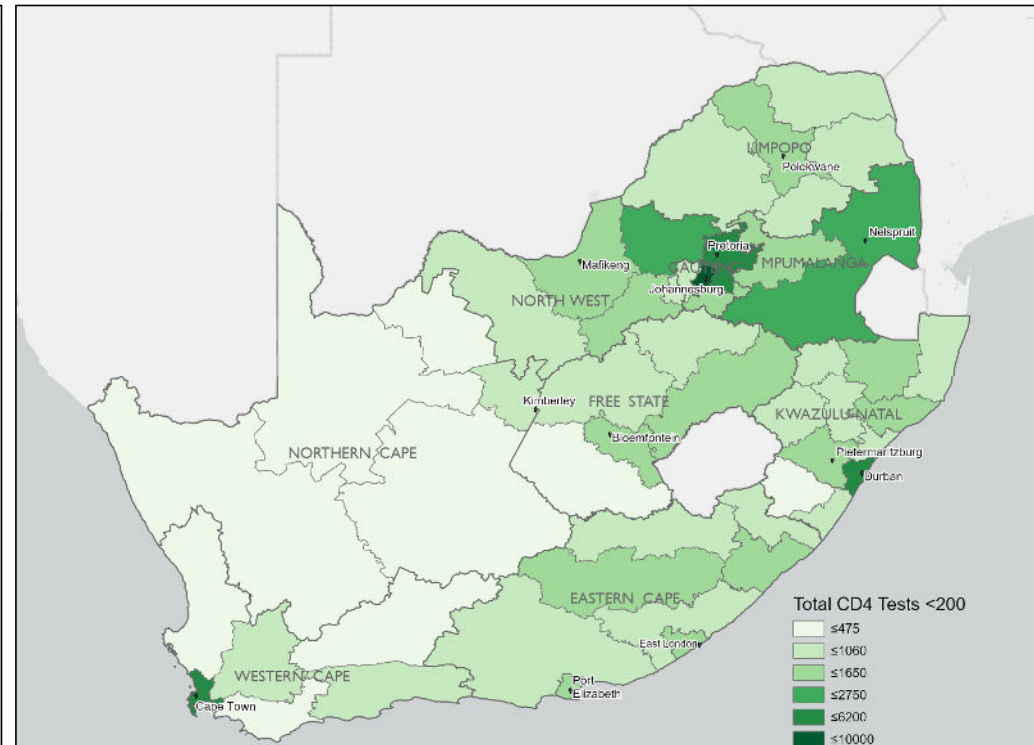
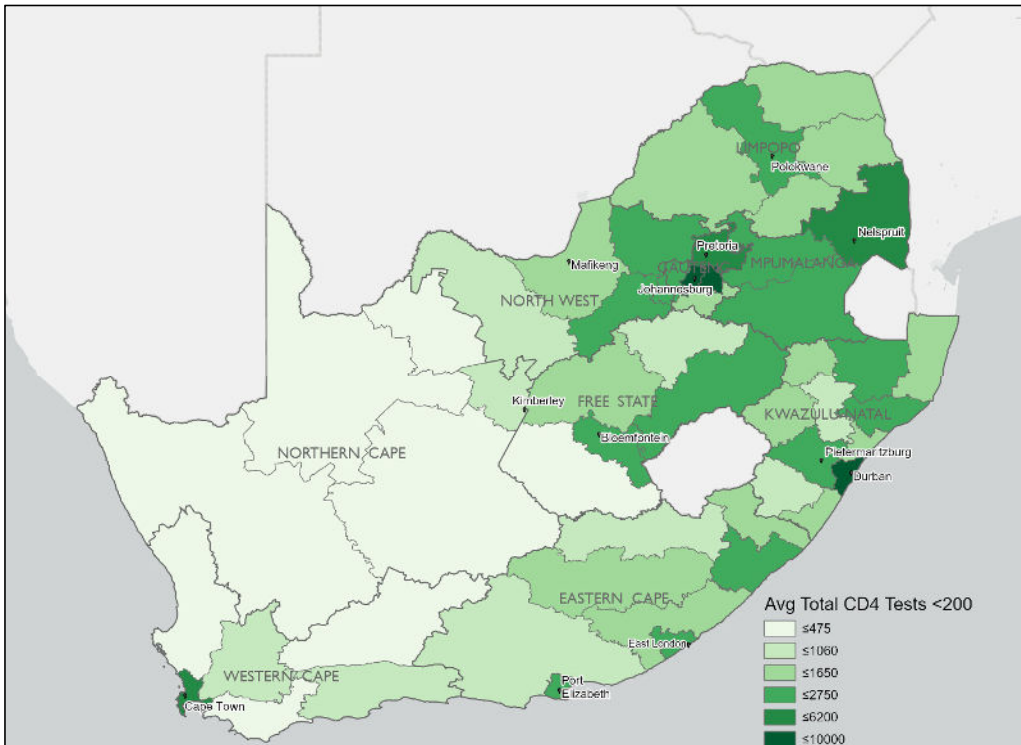
Laboratory M&E of AHD



Laboratory M&E of AHD

Average Total April/May CD4 Tests < 200 cells/ μ L by District

Total April/May CD4 Tests < 200 cells/ μ L by District

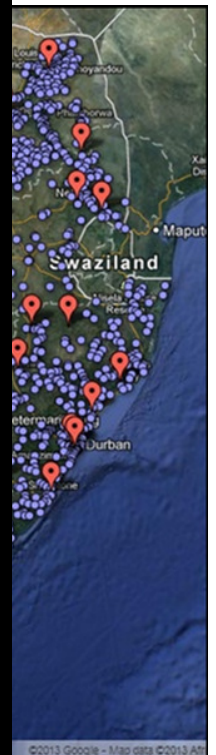


Laboratory M&E of AHD

Summary Statistics 1 Feb '17 – 25 May '20

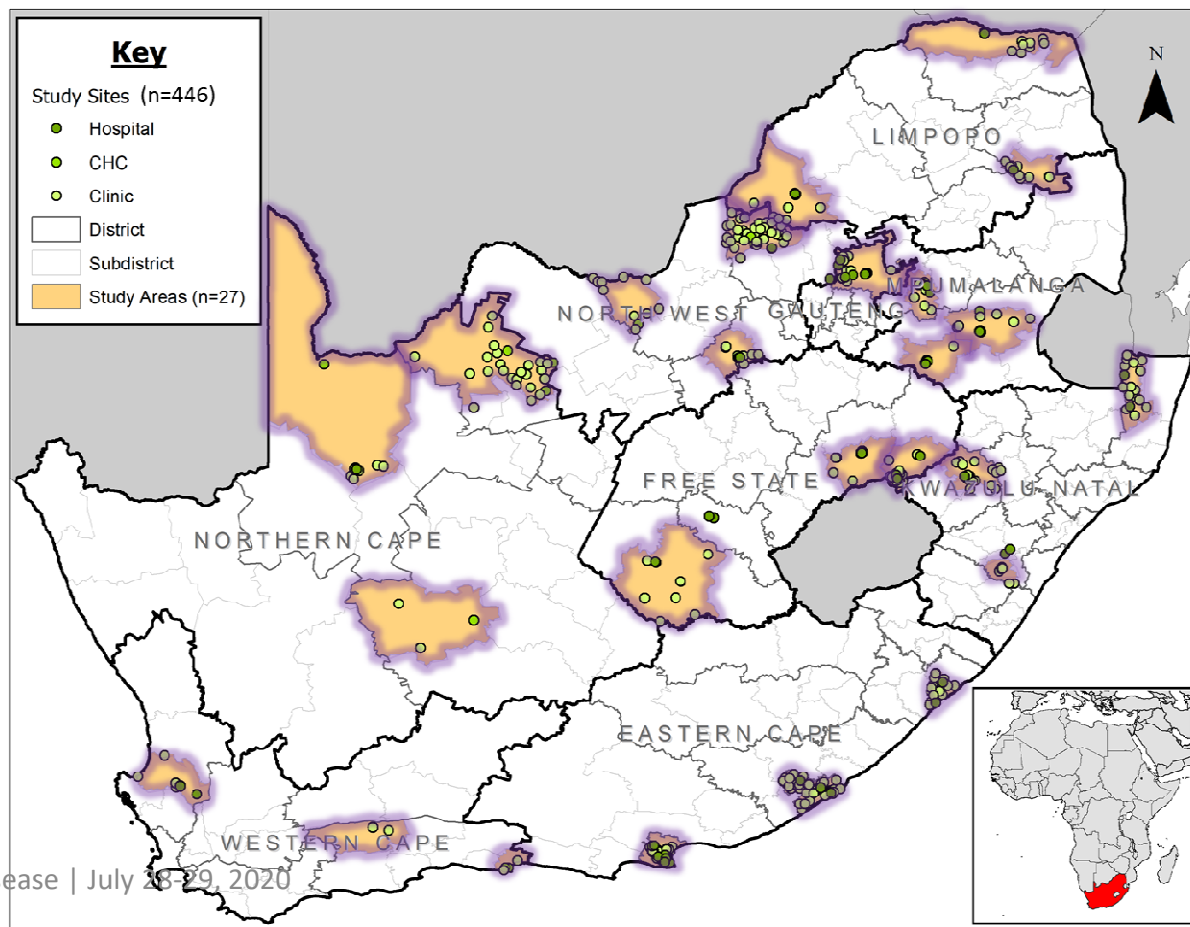
- Reflex CrAg tests run:
 - Now done nationally
 - All patients screened
- CD4, CSF, GeneXpert, TrakCare
- Monitored dashboard

CrAg reflex <u>tests</u> run:	887,397 (98.8%)
Positive reflex CrAg <u>tests</u> :	53,333 (6.0%)
Eligible <u>patients</u> screened:	755,433
CrAg+ <u>patients</u> identified:	46,011 (6.1%)
CrAg+ <u>patients</u> on fluconazole:	???
CrAg+ <u>patients</u> CM-free survival:	???

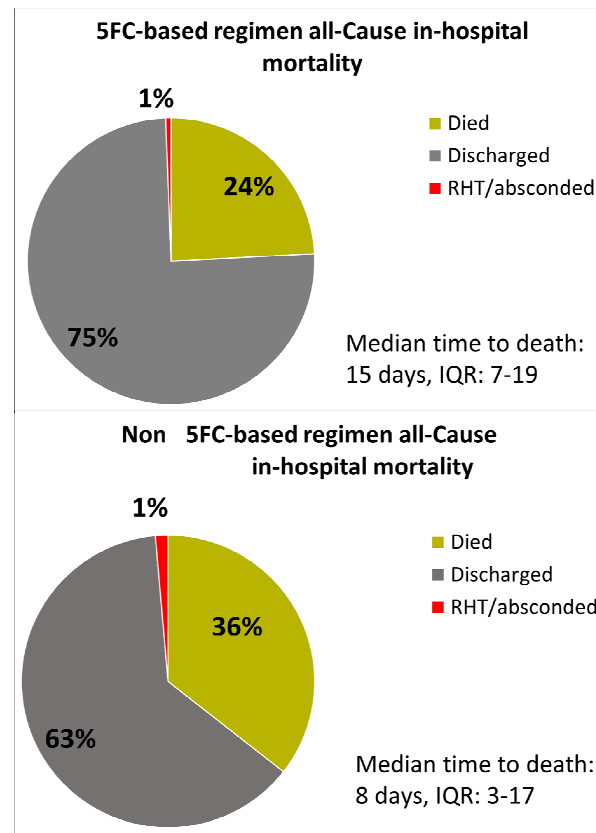


CAST-NET study evaluating treatment and clinical outcomes of CrAg+ patients in 27 sub-districts

- Retrospectively collecting clinical data in 27 sub-districts on >4500 CrAg+ patients from medical records
- Assessing:
 - Appropriately testing for meningitis
 - Initiation of antifungal therapy
 - Retention in care
 - Development of meningitis and 6-mos survival
- Operational gaps identified and then addressed in a cluster-randomised trial at 64 facilities assessing a package of programmatic interventions



GERMS surveillance for cryptococcal meningitis indicators and monitoring expanded treatment



Summary and future steps

- National M&E of AHD facilitated by:
 - Integrated national laboratory information system
 - Established enhanced surveillance platform for CM (GERMS)
 - Funded evaluation study for CrAg screening
- Challenges
 - No unique identifier in health system
 - Dashboards and surveillance systems not fully integrated
 - Indicators not all focused on people with AHD
 - No integration of laboratory data with electronic medical records except in WC
 - Poor quality data in medical records or missing records
- Future steps
 - Report indicators specifically for people with AHD
 - Integrate AMR data
 - CRT to test package of interventions to improve CrAg screening programme