

SOUTH AFRICA'S TB BURDEN - OVERVIEW

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health

Department:
Health
REPUBLIC OF SOUTH AFRICA

South Africa's TB Burden

Global TB burden

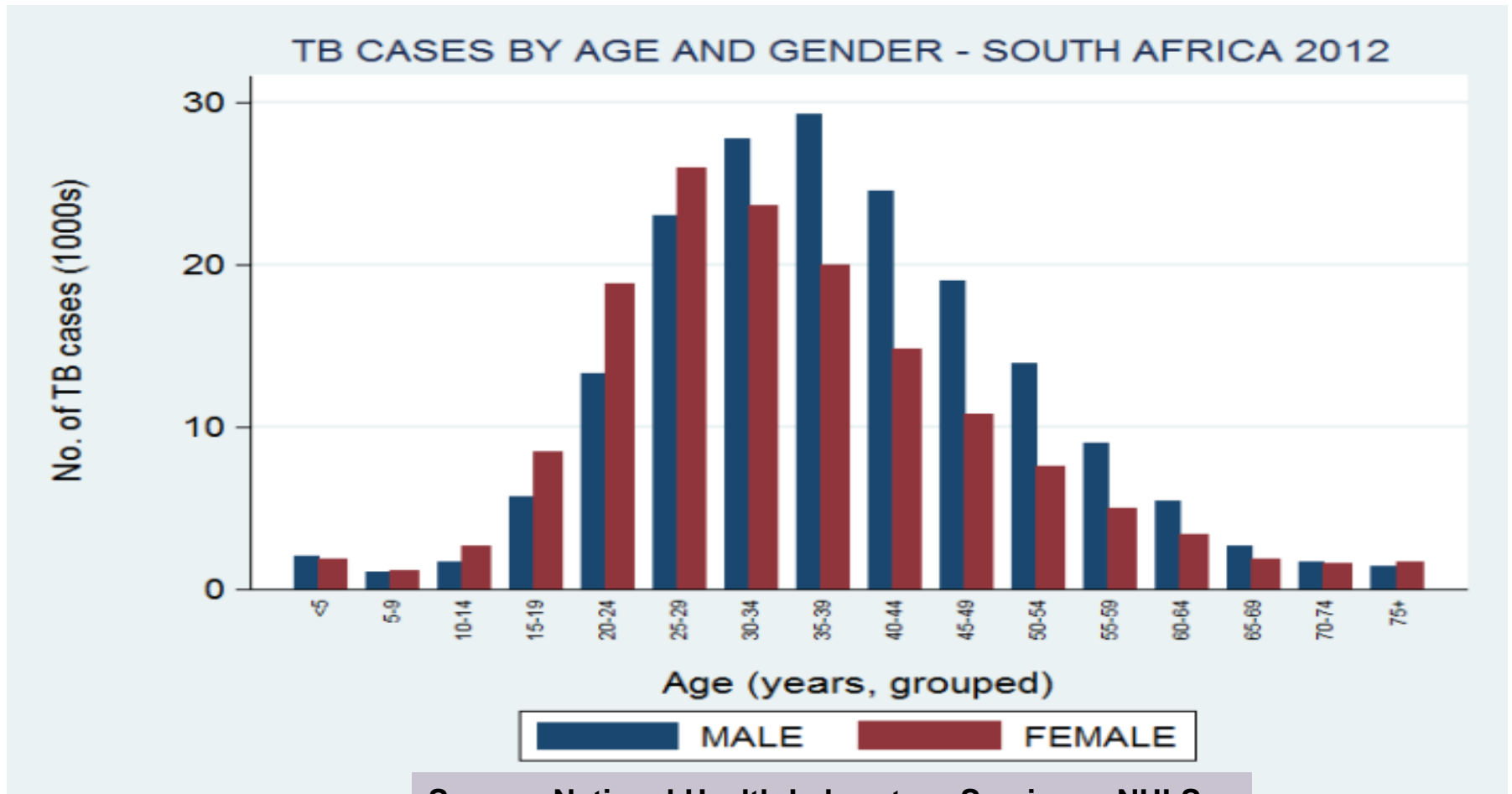
- 8.6 million TB infected persons in the world in 2012
- 80% of burden in 22 countries including
 - All BRICS countries (Brazil, Russia, India, China & South Africa), collectively accounting for 50% of cases
 - Five SADC countries (DR Congo, Mozambique, South Africa, Tanzania, Zimbabwe), collectively accounting for 12% of cases
 - Lesotho and Swaziland excluded because of small numbers, but have extremely high infection levels

Comparison among BRICS & selected SADC countries / 100,000 population (except where indicated)

Country	Incidence	Prevalence	% HIV+ Incident Cases	Mortality
South Africa	1,000	857	63	59
Zimbabwe	562	433	71	33
Mozambique	552	553	60	53
DR Congo	327	576	8	54
India	176	230	6	22
Tanzania	165	176	41	13
Russia	91	121	7	13
China	73	99	1	3
Brazil	46	59	17	3

Source: WHO Global TB Report, 2013

Distribution of TB burden by age & gender



Source: National Health Laboratory Services - NHLS

Populations at high risk of TB infection in South Africa

- People living with HIV & AIDS
- Miners
- Inmates (prisoners) in correctional services facilities
- Communities neighbouring mines
- Communities in informal settlements
- Children
 - Although it is hard to diagnose TB among children

Impact of the burden

Disease, Injury or condition	Proportion of total DALYs (%)
HIV/AIDS	30.9%
Tuberculosis	3.7%
[Combined]	[34.6%]
Interpersonal violence or injury	6.5%
Road Traffic Injury	3.0%

Source: Medical Research Council - MRC

Our response to date

Joint HIV/AIDS and TB National Strategic Plan, 2012-2016

- Launched by the President during commemoration of World AIDS Day in December 2011
- The NSP seeks to achieve a 20 year vision of:
 - Zero TB and HIV infections
 - Zero TB and HIV related deaths
 - Zero TB and HIV related discrimination
- Our vision is in line that of WHO's post 2015 Global Plan

Turning the tide against TB since 2011 – 3 key strategies

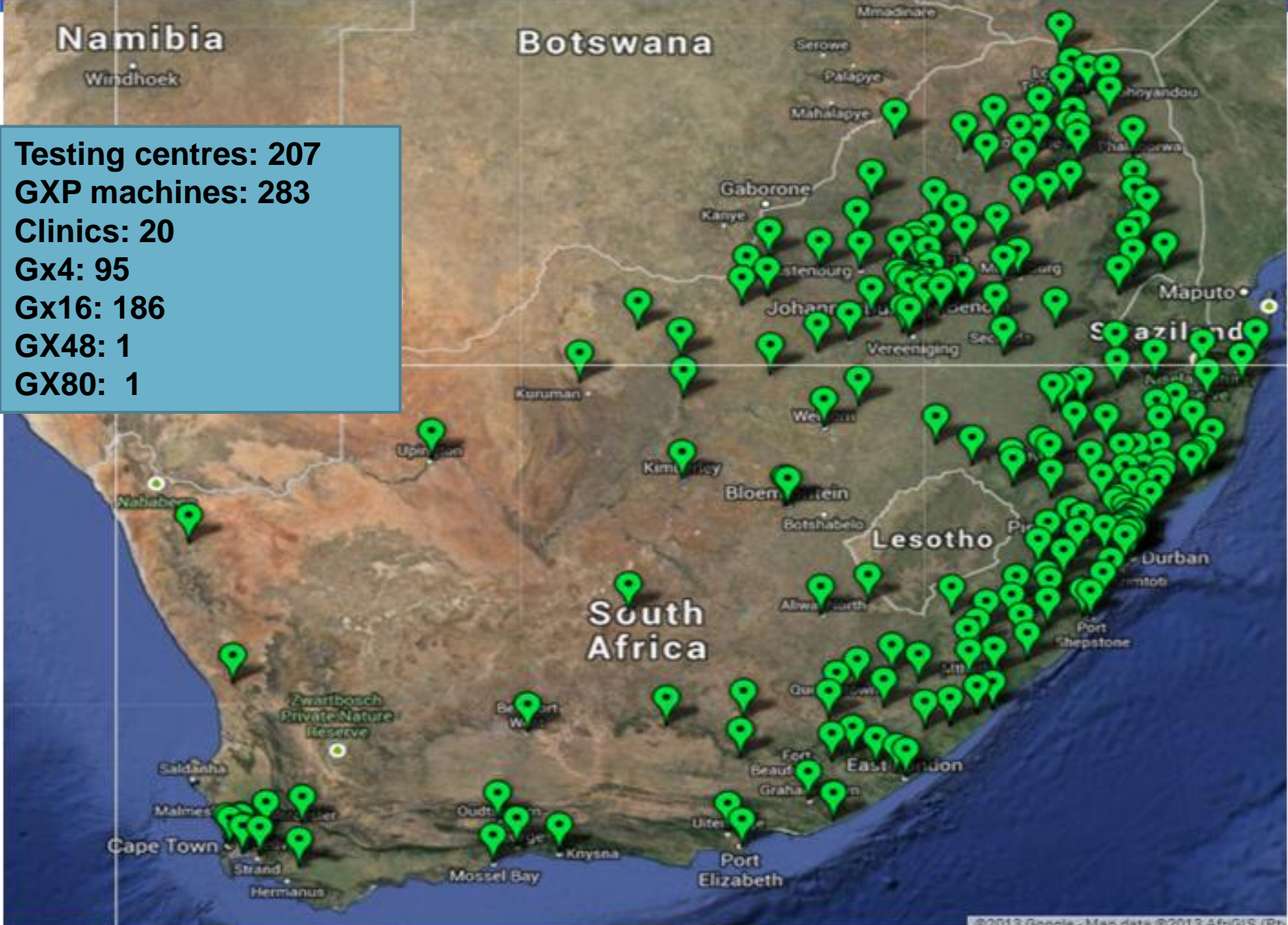
- Household & community based case finding using nurse-led & CHW supported teams
- Improved management of MDR-TB through “state of the art” units that meet high standards of infection control
 - Short term strategy
- Rapid and effective diagnostics using Genexpert technology

Outputs of household & community-based case finding

Output	Total
Number of households visited	105,179
Number of index cases found	30,694
Number screened	151,671
Number of TB suspects found	72,687
Number of TB confirmed cases	3,000

South Africa is an early adopter of GeneXpert technology

Testing centres: 207
GXP machines: 283
Clinics: 20
Gx4: 95
Gx16: 186
GX48: 1
GX80: 1

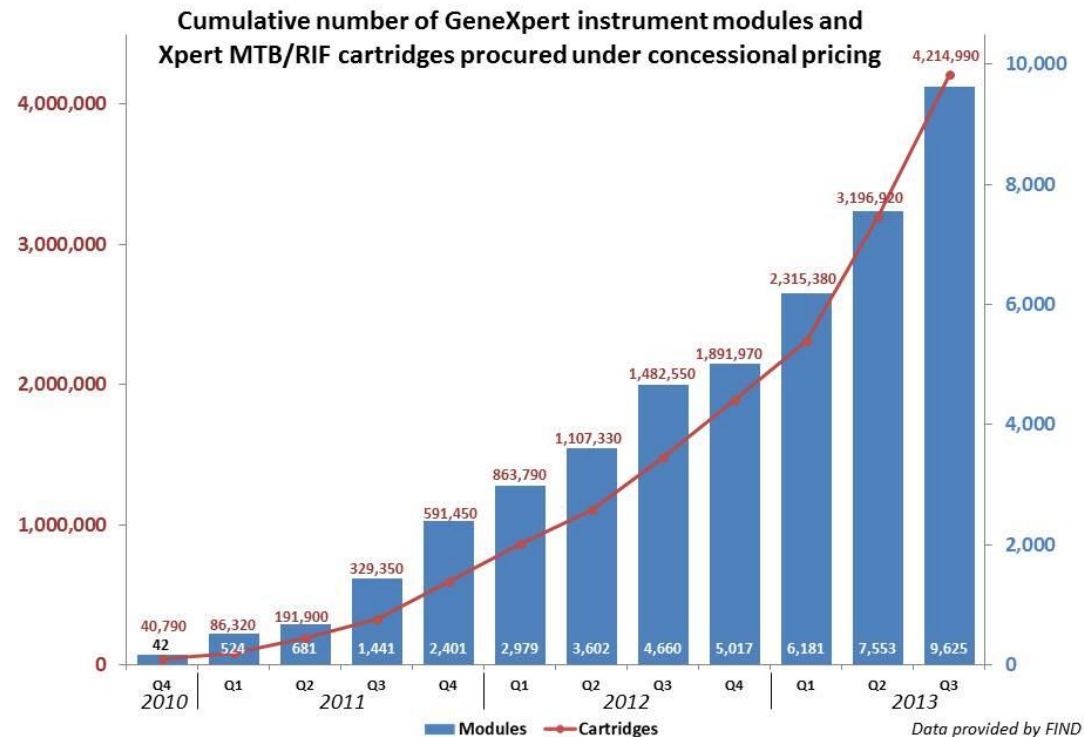


Genexpert test volumes in South Africa vis-a-vis rest of the world

- 4,214,990 global tests by October 2012

- 2,144,333 tests in South Africa (50%) by October 2013)

- 2,606,945 tests In South Africa by December 2013



As of 30 September 2013, a total of 1,843 GeneXpert instruments (comprising 9,625 modules) and 4,214,990 Xpert MTB/RIF cartridges had been procured in the public sector in 95 of the 145 countries eligible for concessional pricing.

TB detection rates using genexpert – From 1 March 2011 to 31 December 2012

Year	Total tested	TB detected	% TB detected
2011	206,005	34,560	16.78%
2012	658,806	93,930	14.26%
2013	1,742,037	202,880	11.65%
Total	2,606,945	331,382	12.71%

Source: NHLS

Rif resistance using genexpert – From 1 March 2011 to 31 December 2012

Year	Total tested	TB detected	% TB detected
2011	34,560	2,465	7.13
2012	93,930	6,793	7.23
2013	202,880	13,486	6.65
Total	331,382	22,746	6.86

Source: NHLS

Impact from current interventions

Reducing numbers – case detection

	2011	2012
Susceptible TB: Diagnosed	444,000	417,000
Susceptible TB: Treated	393,000	349,000
MDR-TB : Diagnosed	16,000	14,000
MDR – TB: Treated	5,643	6,494

Source: NHLS, ETR.Net & EDRWeb

Improving cure rates (but still below global targets)

Province	Cured		Percentage difference
	2008	2012	
Eastern Cape	60.9%	68.5%	+7.6%
Free State	70.9%	71.4%	+0.5%
Gauteng	78.7%	83.1%	+4.4%
KwaZulu-Natal	62.9%	74.4%	+11.5%
Limpopo	66.7%	77.0%	+10.3%
Mpumalanga	64.5%	76.3%	+11.8%
North West	65.6%	69.3%	+3.7%
Northern Cape	58.3%	68.2%	+9.9%
Western Cape	79.4%	82.4%	+3.0%
RSA	67.5%	75.4%	+7.9%

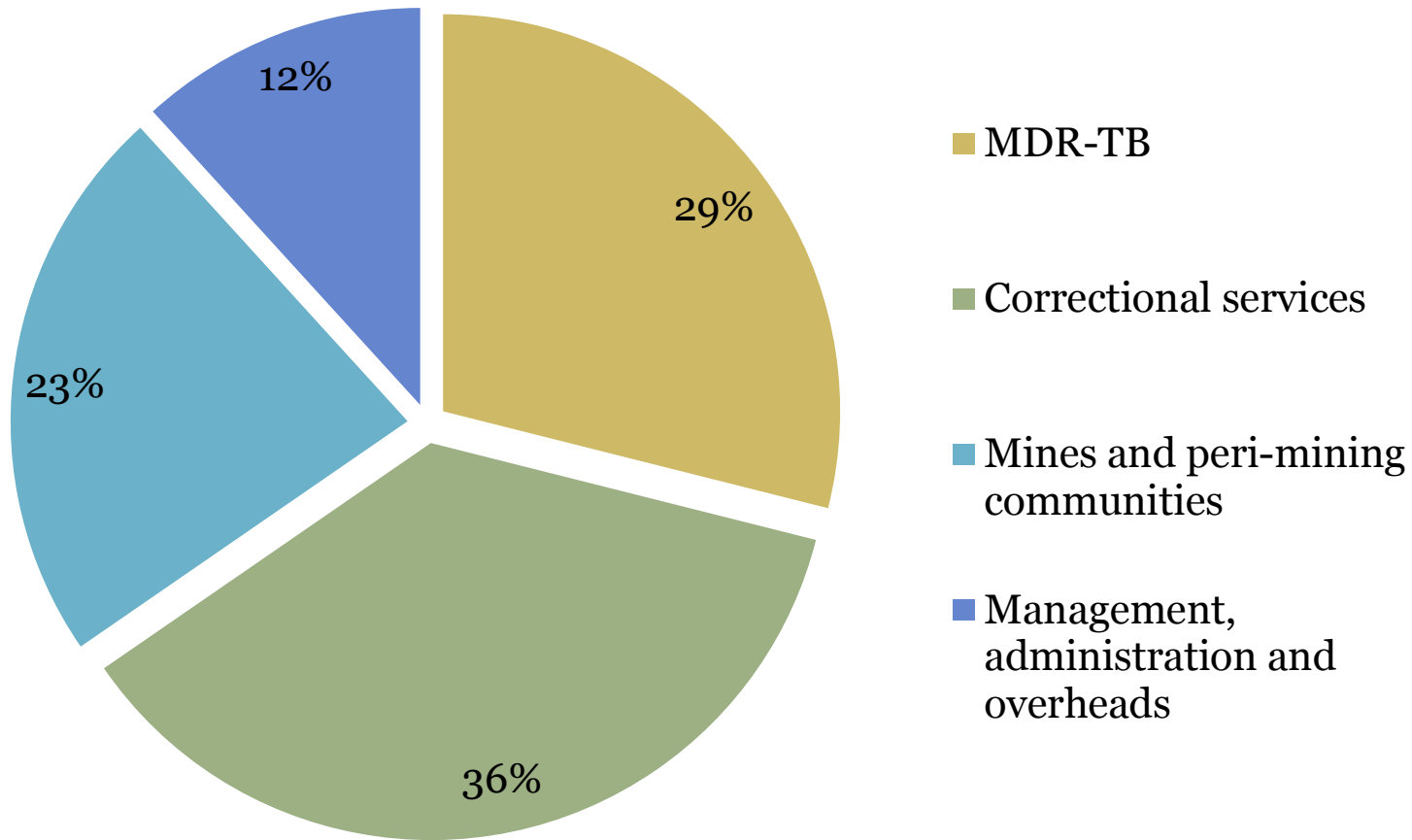
Eastern Cape, KwaZulu Natal, Gauteng & Western Cape carry about 75% of national burden. KwaZulu Natal success rate reached 80% in quarter 3, 2013, mainly due to expanded community outreach teams

**Scaling up the response – Global Fund grant =
US\$ 55 million ~ Half a billion South African
Rand**

Focus areas

- Three key, underserved populations:
 - People living with MDR-TB
 - Inmates in correctional facilities
 - Miners and peri-mining communities

Budget by service delivery area



Planned activities to address MDR-TB

- Increase access to MDR-TB treatment initiation from 31 districts to all 52 districts by 2016
- Increase access to municipal ward-level MDR-TB treatment management from <100 sites to 2,500 ward-level sites by 2016
- Establish a mHealth system to trace susceptible & drug resistant TB contacts, & patients lost to initiation and follow-up across all districts by 2016
 - Will include miners & inmates

Introducing new drugs & researching effective regimen for drug resistant TB using local resources

- With special permission granted by regulatory body (MCC),, South Africa is one of the few countries providing access to bedaquiline, new drug with potential to improve outcomes
- SA MRC: undertaking flagship clinical trial to develop a new MDR and XDR-TB regimen combining bedaquiline, linezolid, PAS and delamanid to treat patients over 9 months compared to current 24 months regimen
- This will augment current efforts to combat DR-TB in combination with other strategies (GeneXpert, decentralization of MDR treatment)

Burden of TB in prisons – From passive case finding in 2012

Province	Average number of inmates	Inmates infected with TB	Percentage
Eastern Cape	18,324	967	5.3%
Free State	15,932	716	4.5%
Gauteng	39,011	1,016	2.6%
KwaZulu Natal	26,594	987	3.7%
Limpopo	7,222	108	1.5%
Mpumalanga	7,798	255	3.3%
North West	6,966	201	2.9%
Northern Cape	5,440	163	3.0%
Western Cape	26,195	2,237	8.5%
South Africa	153,481	6,650	4.3%

Source: Department of Correctional Services - DCS



TB diagnosis and treatment at Pollsmoor Correctional Centre (March-December 2013)

- With Global Fund support, TB/HIV Care Association with Dept of Health placed GeneXpert at Pollsmoor and provided TB screening for inmates at admission, biannually and on exit
- **23,554** inmates were screened for TB symptoms
- **4,457 (19%)** had TB symptoms and GeneXpert test
- **292 (1.2% of screened, 6.6% of symptomatics)** diagnosed with TB
- **15 (5%)** diagnosed with Rif resistant TB
- **292 (100% diagnosed with TB)** started appropriate TB treatment
- Time from sputum collection to TB treatment decreased from July-Sept 2012 to the project period:
 - **From 6.5 days to 1.6 days for drug susceptible TB**
 - **From 26.5 days to 7.3 days for drug-resistant TB**

Infection levels are actually much higher

- WHO estimates TB infection among prisoners may be 100 times higher than in general population
 - In some instances, it may account for 25% of a country TB burden
 - Aurum Institute's study of 1,000 inmates found rates of between 2,400 and 7,300 per 100,000. Same study found undiagnosed TB of 3.4%

Planned activities in correctional facilities

- Increase TB/HIV awareness in correctional facilities in all 48 correctional management areas by 2016
- Increase access to TB/HIV prevention, diagnosis, and treatment by implementing the TB/HIV management guidelines in all 48 correctional services management areas by 2016
- All prisoners to be screened for TB on admission, twice during incarceration and on exit

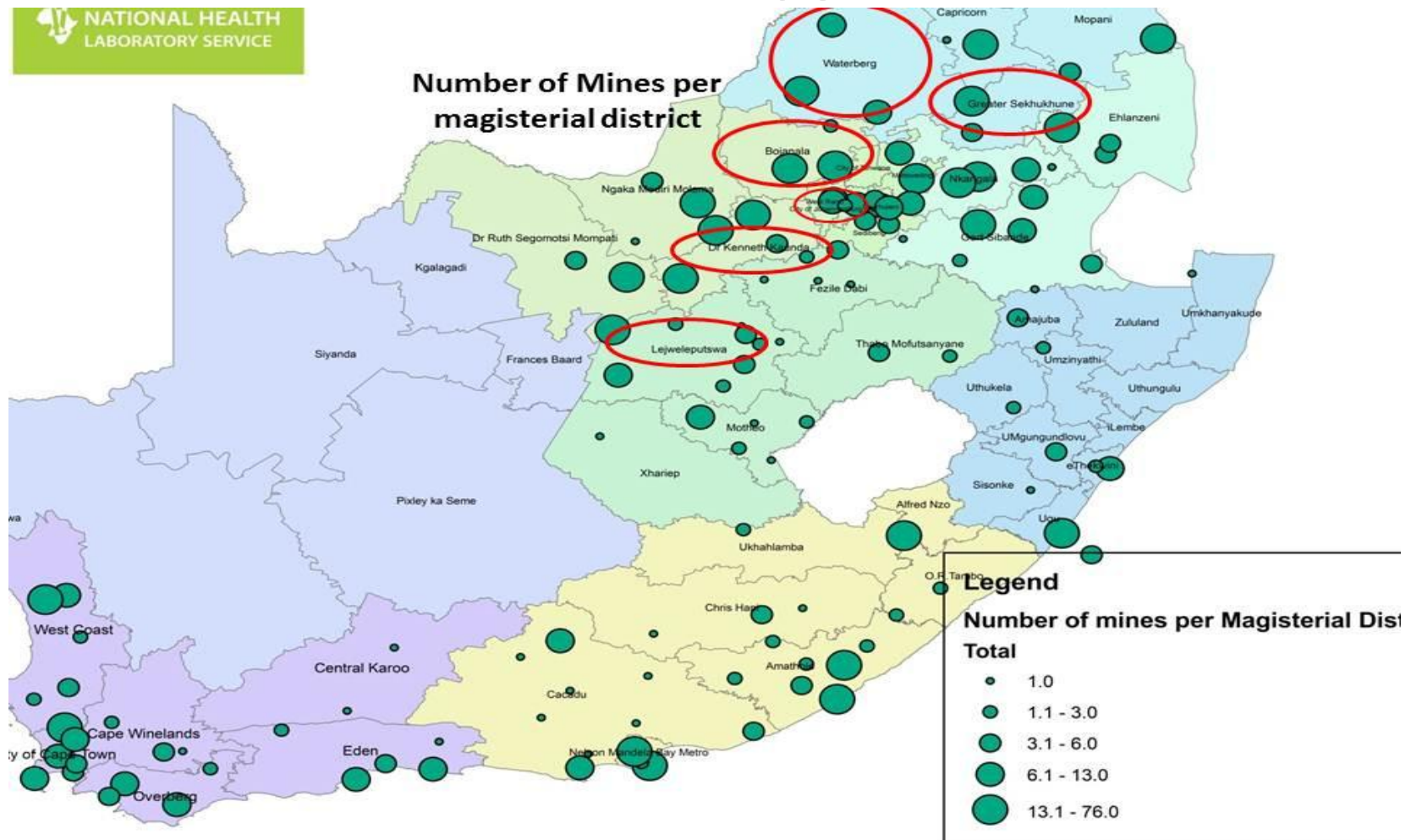
South Africa's mines – Head of the TB snake in SADC

- 41,810 cases of active TB in South African mines every year (8% of national total, 1% of population)
 - Highest incidence of TB in any other working population in the world
- 500,000 miners, plus 230,000 partners and 700,000 children are directly affected (SA mines)
- 20% of partners and children in Lesotho, Mozambique and Swaziland
- 59,400 orphans are currently in care as a result of TB related deaths in mining sector (plus 144,000 from HIV)
- 9.6 million work days lost each year to TB

Planned activities in the mines

- Ensure access for more than 500,000 miners to regular TB prevention, screening and treatment through:
 - Strengthened regulatory framework (review current legislation & close gaps)
 - Increased capacity to enforce compliance by mines using multi-disciplinary inspections that comprise officials from Departments of Health, Mineral Resources & Labour
 - Effective surveillance & reporting system
 - Regional Ministerial summit on TB in the mines to be hosted by the Deputy President on 24 March 2014

Focus on communities neighbouring mines



Planned activities in peri-mining communities

- Increase TB/HIV awareness in peri-mining with high concentrations of mines
- Increase access to TB/HIV prevention, diagnosis, and treatment in peri-mining communities in 6 districts with high concentration of mines by introduction of mobile units with Genexpert for TB/HIV screening, counselling, testing services

Expected impact over 2.5 years of implementation

1. TB treatment success rate (SS+) = 85% (*from base of 79%*)
2. Laboratory diagnosed MDR-TB patients on treatment = 75% (*from baseline of less than 50%*)
3. TB treatment success rate (MDR-TB) = 75% (*from baseline of 40%*)

Conclusion

- We have acknowledged the extent of our TB burden (part of a quadruple cocktail of epidemics that include HIV/AIDS, Non-communicable diseases & injury/violence)
- There is definite political will by government to lead from the front in seeking solutions, including mobilising resources to support interventions
- Success requires strong collaboration with partners such as Stop TB Partnership if we are to eliminate TB in our lifetime!

THANK YOU