

*Challenges in diagnosis and
treatment of drug-resistant TB*

Martie van der Walt



South African Medical Research Council

BUILDING A HEALTHY NATION THROUGH RESEARCH





Rapid diagnosis of MDR-TB: more change is needed

- **Current case finding strategy for MDR-TB**
 - **Provider initiated – weak link!**
 - **Patients/suspects at high risk**
- **Screening of drug-resistance among suspects – settings with high resistance**

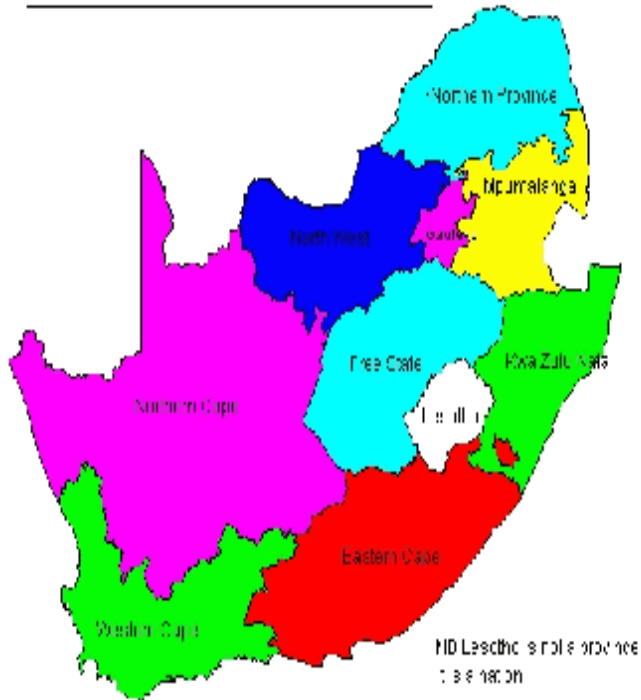
South Africa:

 - **2 same day specimens**
 - **Specimen 1: direct stain, if positive**
 - **Specimen 2: Proceed with drug-resistance testing**
 - **If positive, refer for drug-resistance treatment, full drug-sensitivity tests**
 - **Major change in laboratory procedures**
 - **LIMS, procedures, microscopy and molecular centres, specimen referral process, identification of specimens**
 - **Cost implications**



XDR-TB outcomes Eastern Cape Province (June 2008)

Provinces of South Africa



6 month period	October 2006	October 2007
Cases	44	91
Category	Point-prevalence screening among MDR-TB	64 MDR-TB 27 Cat I/II
Mortality before treated for XDR-TB	3 (1 transferred)	31
Overall mortality 6 months after diagnosis (treated + not)	17/44 (38%)	43/91 (41%)
Treatment started and still alive	19/40 (48%) (3 as outpatients) (18 months)	43/60 (72%) (8 months)
<p>October 2006 – Jan 2008: 277 cases, 61/277 (22%) died before treated 216 treated: 62 (29%) died within 6 months, 154 (71%) still on treatment and alive at June 2008 123/277 (44%) overall mortality at 6 months after diagnosis (treated cases + not treated)</p>		



PETTS Baseline results, 800 MDR-TB patients 7 countries

Drugs	% Resistant	Range across sites (%)
+ EMB and STR	48.1	34.8-88.6
≥ 1 SLD	41.2	32.6-64.7
+ FQ or INJ	22.2	10.0-54.4
XDR	5.6	0.8-23.5
All drugs tested* * DST results from 2005 and 2006	1.0	1 in each of 5 countries 3 in 1 country



Fully resistant TB

- **Natural consequence of treating XDR-TB and poor patient management (patient adherence)**
- **Warning signs?**
 - **High mortality among cases treated for XDR-TB**
 - **Non-conversion**
- **What to do with these patients?**
 - **Ethical dilemma, Life-long isolation, Sent home – infection control**
 - **Act now: New drugs are required, Compassionate use of drugs under development, Use of new drugs for XDR-TB / FDR-TB**