Costing of Potential Policy Choices to Eliminate TB from the Mines in the SADC region

A case-study of South Africa

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Mining is a sector of huge economic importance in SADC

- Mining sector plays a significant role in the growth of SADC economies
  - Botswana: Diamond contributes 33% of GDP, 70-80% of export earnings, and about 50% of government revenues
  - Namibia mining contributes to 8% of GDP and provides more than 50% of foreign exchange earnings
  - South Africa: mining contributes 8.6% of GDP directly (mineral exports) and via coal mining contribution to electricity generation to 19% GDP
WHY IS TB IN THE MINING SECTOR SO DIFFICULT TO ADDRESS?
A complicated, cross-sectoral challenge

- TB is a health issue, and just one of many diseases
- It is in the mining sector, regulated by the Department of Mineral Resources
- It is private sector driven and requires industry involvement
- It is a cross border issue, both national and provincial
- Action requires consensus: by multiple governments, multiple sectors (health, labour, finance), private companies, civil society, labor unions and mine workers themselves.
- A strong economic case for action is key
HOW MUCH WOULD IT COST TO ADDRESS THIS EPIDEMIC?
SADC costing analysis: Objectives

- Uses South Africa as a case study to construct a model for cost calculations of a comprehensive package of interventions based on best available evidence

- Objectives:
  - To provide an analysis of possibly strategies to reduce incidence of TB and TB/HIV in mining communities
  - To provide a cost estimate for implementation
SADC costing analysis: Methods

- Literature review to establish evidence base for best-practice
- A series of non-structured qualitative interviews in South Africa (January and February 2012) with stakeholders
- Key assumptions related to significant cost drivers agreed in consultation with experts
- Unit cost estimates obtained from international best-practice sources and local actual costs from existing programs
Risk of TB disease

- Each person with active TB infects 15 others (WHO)
- Risk factors relative to general population:
  - Miners have 2x the risk
  - Miners with HIV have 3x the risk
  - Miners with Silicosis have 6x the risk
  - Miners with HIV and Silicosis have 18x the risk
- 80% of miners have latent TB
- 60% of miners with active TB are HIV+
- Silicosis risk rises at 1% per year (even after retirement)
Key statistics

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (U$D)</th>
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<tbody>
<tr>
<td>Total annual TB related health care cost</td>
<td>$213 million</td>
</tr>
<tr>
<td>TB - cost per case</td>
<td>$4,362</td>
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<tr>
<td>MDR – cost per case</td>
<td>$16,841</td>
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<tr>
<td>XDR – cost per case</td>
<td>$81,585</td>
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<tr>
<td>Loss of earnings (minimum, excluding bonuses)</td>
<td>$320 million</td>
</tr>
<tr>
<td>TB Orphans (59,400) in care</td>
<td>$213,333</td>
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<tr>
<td>Training (cost to mines of attrition)</td>
<td>$102.4 million</td>
</tr>
<tr>
<td>Loss of productivity (gold and platinum exports only)</td>
<td>$466 million*</td>
</tr>
</tbody>
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* Note: This equals 63% of Ashanti Gold’s total profit for 2010
WHAT IS AN APPROPRIATE, COST-EFFECTIVE RESPONSE PACKAGE?
Key components of a comprehensive approach

- Find and treat TB early
- Eliminate the main contributory factors to high-TB incidence
- Create an equitable legal and regulatory framework
- Provide fair redress for occupational disease
Find and treat TB early

- **Testing:**
  - Voluntary, comprehensive, including community engagement
  - All suspected TB cases, all HIV positive individuals fully investigated

- **Contact tracing:**
  - Cross-border policies are essential to target families and communities in addition to mine workers
Find and treat TB early (continued)

- **Treatment**: IPT for all PLHIV without TB as prophylaxis
- **Health facilities**: Mobile clinic services at small mines, fixed clinics at all medium and large mines
- **Health Information system**: Unique, secure record for every miner, includes contract workers (all have industry number), Add shift dust exposure level records
Eliminate contributory factors

- Housing conditions:
  - Essential for normalizing families, infection control and reduction of risky behavior
  - Up to 240,000 new units required for SA mines
  - Legislation exists with 2014 deadline

- Dust suppression:
  - Mainly gold mines
  - Limit total exposure, monitor and record silica dust levels on every shift

- Independent monitoring authority
Legal and regulatory frameworks

- Compensation and legislation require overhaul and consistency
- Requires a rethink of the accountability and monitoring authority that oversees legislation and compensation
- Develop new Office for Standards Compliance
  - Independent inspectorate
  - Monitoring, recording every shift at risk
  - Evaluating levies based on performance and risk

Appropriate, accessible compensation is key
The cost (gains)

- Cost of the TB epidemic in South Africa now: $884.9 million per year
- Cost if the comprehensive package of interventions were in place: $569.1 million per year
- Saving by implementing this package: ($315.8 million per year)
- Productivity increase: ($466.7 million) per year

- Total financial benefit: ($782.5 million per year)
Key messages

- Action to reduce TB is more cost effective compared to maintaining the status quo
- Many of the required commitments are already in place – just not implemented
- Action will have a significant regional impact
Action requires consensus by multiple governments, multiple sectors (health, labour, finance), private companies, civil society, labor unions and mine workers themselves.

SADC’s commitment is crucial

South African cost model can be adapted to other countries
THANK YOU

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